



2016

Global Reach, Local Markets: The Challenges of Leading Global Innovation

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**Global Reach, Local Markets:
The Challenges of Leading Global Innovation**

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Senior Honors Thesis
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May 16, 2016

Abstract

This Global Studies honors thesis addresses how managers and leaders of global firms manage innovation across multiple markets. Current research on multinational corporations provides an understanding of different kinds of innovation and the ways to attend to multiple markets. However, there is less documentation of how these innovation strategies are actually implemented on the ground and the tensions that these efforts might produce. Therefore, my research focuses in particular on the challenges and tensions faced by leaders of global firms as they implement transnational innovation strategies. This study is based upon in-depth interviews with 20 participants who held positions in global companies in the pharmaceutical and technology industries as well as academics whose work addresses organizational management and innovation. Results from an analysis of these interviews across and within these two industries provide insights into the literature on multinational corporation global innovation and leadership across international borders.

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Acknowledgements

To Professor Franko, my advisor, who helped me navigate this process since I began considering an honors thesis my sophomore year, thank you for your constant support and your thoughtful insight into the complexities of writing a senior honors thesis. I have greatly appreciated your encouragement all along the way and your desire to constantly push my thinking beyond my comfort zone. Professor Razsa, thank you for nurturing my early ideas for this project and for helping me to transform those ideas into concrete goals and hypotheses. Professor Chan, thank you for your helpful guidance and ideas particularly toward the end of this process. To my parents, Monica and Michael Higgins, thank you for your love, patience, support, and for always believing in me – I could not have done this without you. Thank you also to my grandparents, Priscilla and Victor Claman, for your love and support and for coming to my thesis defense. I thank my sisters, Becky and Mika, and my friends for keeping me smiling throughout this process. Finally, thank you to all of my professors, past and present, whose passion for their research inspired me to create my own.

Chapter 1: Introduction

In an increasingly globalized and interconnected world, new forms of innovation and strategy within multinational firms have evolved to address the needs of consumers worldwide. Various theories of innovation seek to address how global companies can capture the value of growth and opportunity in new markets while also providing for the needs of core consumers in their home country's markets. Every market has distinct and varying needs and wants, and firms must innovate and customize for local consumers if they hope to remain competitive in the coming decades. For example, these days, rather than innovating in developed countries such as the United States and then selling these innovations to developing countries, the reverse approach is also important (Govindarajan and Trimble, 2012). That is, multinational organizations can gain a competitive advantage from developing strategic innovations that target developing countries; they can then use those insights and innovations to be even more competitive around the globe. Although there have been significant advances in innovation and management theory, my research focuses specifically on the organizational systems, structures, and leadership strategies that enable multinational firms to implement successful global innovation strategies to provide for the needs of multiple markets around the world.

Research Question

My research question addresses how multinational companies employ organizational structures and systems in multiple country contexts for successful implementation of global innovation strategies. I look specifically at leadership,

operations, and innovation in the technology and pharmaceutical industries. My research examines how multinationals in these industries explore multiple markets, how they create information flows between local partners and global firms, how senior managers lead transnational innovation initiatives, and how they maintain global brand while also providing for consumers in new geographic markets.

Significance of the Research Question

Through my investigation of this research question, I hope to improve our understanding of how to address the needs of multiple consumers across international borders. Further, I aim to contribute to the literature on the management of innovation on a global scale. Although prior research has examined different kinds of innovation strategies and cross-cultural tensions associated with leading across borders, there is little research on the implementation strategies that leaders can employ to address those challenges. I look more closely at the implementation of global innovation strategies and how multinational companies employ organizational structures and systems in multiple country contexts to successfully implement these strategies. Specifically, I examine how these innovation strategies are managed on the ground through the use of formal structures, such as local teams, as well as systems, such as specific methods of communication and information transfer. I look specifically at two industries – technology and pharmaceuticals – to expand upon current research as to how managers explore new global markets, create information flows between local partners and global firms, lead transnational innovation initiatives, and maintain global brands while also providing for new consumers.

In their book, *Reverse Innovation*, Govindarajan and Trimble (2012) suggest that additional research is needed to understand the implementation of innovation across developed and developing countries. Their work provides insights into the steps that multinationals can take to shift a portion of the company's focus and attention to local market customization. For example, they suggest relocating some executives to developing countries and assigning them to oversee these markets in the Global South. Firms may also increase their spending in emerging markets to focus on innovation for local needs. Specifically, multinationals may need to undertake field experiments to try out their ideas and to better understand local knowledge and needs. Further, it is important that multinationals increase their knowledge of emerging markets within the firm itself, this could entail hiring leaders with experience and expertise in these specific markets. In addition, employees of global companies could be assigned specifically to the investigation of the other countries to fully immerse themselves in these cultures to best understand them (Govindarajan and Trimble, 2012).

One strategy for implementing locally customized innovations that seems to be employed in many instances is the use of local growth teams (LGTs) located in particular markets whose role would be to analyze and understand the needs of these consumers and then create new innovative products for this specific market (Govindarajan and Trimble, 2012). LGTs would not be in lieu of current organizational strategies but rather would supplement them. Govindarajan and Trimble suggest hiring outside the organization to better undertake idea generation and truly apply a "clean-slate" approach to consider local market needs.

Through my interviews with senior management as well as through academic research, I explore some of these implementation strategies that leaders of global organizations employ and the tensions and challenges they face in managing across cultural borders. In this way, my research contributes to our understanding of global innovation strategies to better address the needs of multiple global consumers. I also provide insight into how multinational corporations from the technology and pharmaceutical sectors manage local and global relationships to provide consumers from different markets with products for their particular needs. Additionally, by interviewing senior leaders of global firms, I improve our understanding of how leaders of multinational corporations manage cross-cultural boundaries, including the kinds of ways that they learn to adapt their styles and strategies to manage different constituencies.

Personal Motivation for the Research

My interests in cross-cultural innovation management stem from my work both at Colby and abroad and from time spent in work settings as well. As a Colby Freshman, in Dijon France, I was fortunate to learn a great deal about French culture and how to navigate across borders. I lived with a host family and felt entirely immersed in this new culture and environment. This was where I truly developed an appreciation for the importance of understanding various cultural contexts.

Additionally, during my semester abroad in Geneva, Switzerland, I interned for a global strategy consulting firm where most of my work involved attending sessions at the United Nations (UN) and summarizing my findings from these meetings for my boss and her clients. During my work with this firm and at the UN, I undertook an independent

research project, which examined the impact of foreign direct investment on developing countries. My work at the UN as well as my research project abroad as a Colby Junior truly sparked my interest in the relationship between developed countries, such as the U.S., and developing countries, such as those in Africa that I studied for this research project. I was particularly drawn toward understanding how multinational organizations can serve needs in various different parts of the world simultaneously and how it is possible to see and manage these diverse opportunities in a way that improves the company's effectiveness overall – how serving multiple markets can be helpful for customers and can improve the performance of the firm overall. When originally thinking about global innovation I was especially intrigued by the notion of serving the underserved – that is, serving consumers in developing country markets or small market spaces not previously served by large companies. Global innovation strategies that focus specifically on meeting consumer needs in various communities across the globe address this relationship between developed and developing countries. Overtime, my investigation into global innovation broadened to also consider how organizations with global reach strive to adapt to local needs, and in this way serve multiple consumers, whether or not they were previously underserved.

My interest in business management and strategic analyses of firms' internal operations stems from an integration of my global studies and economics courses. In particular, my economics of globalization coursework has helped me to better understand the factors that affect multinational corporations today – such as the global value chain and intellectual property rights. Further, coursework for my managerial economics minor

has complemented my work in Global Studies and has helped me to better comprehend the management of global firms.

I became particularly drawn to the topic of global innovation strategy during my studies at the Tuck Business School where I participated in a rigorous summer business management program the summer prior to my junior year. One of the classes that I took while at Tuck was taught by Vijay Govindarajan, one of the scholars who developed the theory of reverse innovation that has launched my investigation into the management of global innovation for my thesis. I began to read his book immediately after the course was over, was interested in the ideas, and wanted to learn much more.

For these reasons, I have been intrigued by global innovation strategy and have become more and more convinced that understanding how to implement strategies for country cultures that are not our own - are not based solely upon American customer needs -- will be beneficial for those in different countries. Through this work, I improve our understanding of how to create effective organizational systems and structures to effectively innovate and provide products for consumers in various global markets. I also shed light on the tensions these organizations face as they strive to serve multiple markets and the ways in which organizations in different sectors, such as technology and pharmaceuticals, might employ different strategies to manage these tensions. Ultimately, with my research, I contribute to efforts that help guide multinational corporations toward a set of best practices when implementing a global innovation strategy - showing how to best provide for multiple communities across the globe while maintaining global brand and reputation.

Chapter 2: Literature Review

To ground my research on the implementation of cross-cultural innovation strategies in global companies, I draw upon three relevant streams of research. First, there is the research directly on the topic of innovation strategies. This is important literature to understand for the purposes of juxtaposing newer approaches to innovation with more established theories of innovation in the field. Second, there is research on multinational firms and specifically on the management of global-local tensions. Third, there is research on the importance of local customization to address the specific needs of different consumers in various market spaces. Together, these three streams of research will inform my work on the use of organizational structures and systems in multiple country contexts to implement global innovation strategies. I provide an overview of each research stream in turn.

Innovation Strategies

Understanding different innovation strategies in large corporate settings is key to understanding how multinational companies might choose to organize systems differently to manage innovation across borders. Large companies are often considered entrenched and unlikely to change (Tushman and O'Reilly, 2002); innovation, in general, is a difficult concept to effectively manage. Numerous scholars have tackled the subject of innovation and have explored different approaches to innovation in large firms and in firms that cross international borders, lending insight into the kinds of strategies multinational organizations may choose to employ.

Reverse Innovation. Govindarajan and Trimble introduced the term “reverse innovation” (2012) to refer to the process by which innovation originates in emerging markets, rather than in markets that are more established. Reverse innovation thus goes against the typical understanding of how the world does and should innovate as promoted by other scholars such as Tushman and O’Reilly (2002). Instead of innovating in wealthy countries and then transferring this technology to the developing world, reverse innovations are developed first in the developing world and then generally spread to developed countries.

The theory of reverse innovation was first developed based on the understanding of a need for consumer customization, particularly in emerging markets. Developing world needs are not equivalent to the needs of consumers in emerging markets; one must take into account differing conditions that create demand for different types of products (Govindarajan and Trimble, 2012). It is no longer sufficient to create lower-end models of rich-country products and market these models in the developing world. It is necessary instead to address differences in geography, culture, language, government, and infrastructure (Govindarajan and Trimble, 2012). Further, by examining and targeting different developing country needs, multinationals have the opportunity to reconsider their own biases and assumptions and thus, to innovate more effectively using these insights from their work in developing countries to be more competitive in their home marketplace.

The most prominent authors within the field of reverse innovation are the two academic scholars who developed this theory themselves, Vijay Govindarajan and Chris Trimble. Their *Reverse Innovation* (2012) gives an overview of the theory itself and the

means by which a company could go about implementing it. Govindarajan and Trimble then move into a series of case studies to show how senior management in numerous multinationals have been able to tap into emerging markets successfully using their theory.

There are many examples of reverse innovation that have effectively scaled from emerging markets to the developed world. For example, Kiva is a microfinance enterprise that makes it easy for entrepreneurs in developing countries to acquire loans to help lift themselves out of poverty. This program has expanded its reach to U.S. citizens in need of microfinance loans as well (Carus, 2012). Similarly, the product Gatorade was originally developed in South Asia to aid cholera patients with hydration. It then spread to the U.S. and around the world as a hydrating sports drink. Another innovation we can point to as an example of reverse innovation is the Tata Nano, an electric car originally created for price conscious consumers in India that has now spread to markets in the U.S. and Europe (Govindarajan and Trimble, 2012).

While there are few direct critics of the strategy of reverse innovation, there are some who have argued that the concept is not entirely new and further, that it is not applicable to organizations that are not multinational in scope. For example, Phillips argues that reverse innovation is a strategy that only addresses the needs and expansion of multinational organizations and does not offer solutions for smaller companies looking to break into the emerging market space (Phillips, 2013). The above examples of reverse innovation provide some evidence that one key management structure for implementing global innovation strategies are local teams. Further, these examples suggest that the communication between corporate headquarters and these teams is critical to the

implementation of this global strategy. However, further research and fieldwork could contribute to a better understanding of the mechanisms that may need to be in place in order to better implement global innovation strategies.

Frugal Innovation. “Frugal engineering,” a term coined by Carlos Ghosn, CEO of the Renault-Nissan Alliance, refers to innovating cheaply in resource-constrained environments (Radjou & Prabhu, 2013). Similar to the theory of reverse innovation, frugal innovation supports the idea of “doing better with less” (Radjou & Prabhu, 2014). Frugal innovation is a disruptive growth strategy that looks to create value for consumers and businesses by reducing the use of scarce resource while still addressing the qualities most valued by Western consumers: quality, sustainability, and affordability.

Frugal innovations break free from traditional ideas behind innovation in Western companies. Typically, innovation in Western companies requires a high consumption of natural resources to create expensive premium product offerings. As researchers have recently argued, these types of solutions no longer cater to the realities of American and European markets; consumers are constrained by their budgets and are looking for products that are not harmful to the environment. Frugal innovations are often inspired by offerings in emerging markets, where multinationals have long had to provide for low-income consumers in resource-constrained environments (Radjou & Prabhu, 2013).

Similar to Govindarajan and Trimble, Radjou and Prabhu call for structural and cultural changes within multinational organizations to undertake this type of innovation (2014). Unilever is one example of a frugal organization; led by CEO Paul Polman, Unilever’s strategic orientation has been altered to reduce environmental impact and

resource usage while providing more affordable, high-quality products to consumers worldwide (Radjou & Prabhu, 2014).

Disruptive Innovation. More generally and not necessarily in the context of global research, scholars have focused on the idea of “disruption” as a source of innovation – how firms can engage in “disrupting” dominant pathways to provide an alternative to customers that meets an unrecognized need at minimal cost to the customer. This concept of “disruptive innovation” is attributed to general management scholar Clayton Christensen, who originally wrote the *Innovators Dilemma* (1997); his book discusses the need for adoption of new technology and business models to meet future needs of consumers or the need for “disruptive innovations.”

The theory of disruptive innovation has since been applied to other market sectors including but not limited to the original semi-conductor industry (Christensen, 2010). From this view, the idea is to engage in disrupting dominant markets with new products and services that can then spread to serve the more traditional buyer. Although some of Christensen’s theory may overlap with that of Govindarajan and Trimble in that they both are concerned with disrupting dominant markets, the orientation is different. Where Govindarajan and Trimble focus on disruption abroad through innovation in emerging markets, Christensen’s theory focuses on disruption in dominant markets and is not specifically tied to the needs of emerging or developing country markets.

Christensen’s theory of disruptive innovation can be complemented by the arguments of Schmidt and Druehl (2008). Schmidt and Druehl purport that disruptive innovations may not be immediately disruptive, as Christensen’s works propose. Rather, innovations diffuse in varying ways through a market; they can encroach on the high end

of an existing market, on the low end, create a fringe market, or create a detached market. In this way, disruptive innovations may not immediately disrupt a current market, rather, their impact may vary.

Glocalization. Another approach to innovation and one that is oftentimes considered in a global context is what may be referred to as “glocalization,” a term popularized by sociologist Roland Robertson (1995), in which firms gain access to emerging markets by modifying or altering their current technologies (developed for wealthy countries) and then marketing these technologies in emerging markets. By adopting glocalization, Ghemawat’s (2007) aggregation theory purports that similarities across geographical regions can be exploited to create economies of scale. These economies of scale can effectively address differences amongst different geographical regions, without innovating specifically and only for focal markets (Ghemawat, 2007). Although not effective in all situations, glocalization can help to address the needs in various rich countries. Further, some developing countries that have similar needs to their wealthy counterparts may be able to use rich world innovations effectively. As an example of glocalization, we can consider the brand of Colgate, which is widely applicable to markets around the world who connect with the brand’s value of physical beauty (Govindarajan and Trimble, 2012).

Glocalization might be considered a complementary approach to reverse innovation because it suggests that some innovations that originated in developed countries may transfer effectively to the developing world. As Govindarajan and Trimble (2012) suggest, multinational giants that understand when to use which kind of strategy will be particularly effective in a global marketplace. Critics of this two-sided approach

could argue that this is an extremely difficult dichotomy to manage across borders and to understand which strategic approach to use when. Most markets are dynamic and in some cases, such as new technologies and the life sciences, highly uncertain making it difficult to know from which direction the innovation might originate.

Using this dual strategy approach, however, involving both reverse innovation and glocalization, companies might be able to work to understand and address the needs of customers in the developing world first, and then create a solution more generally (Govindarajan and Trimble, 2012). That is, it is important not to assume that innovations from the developed country will necessarily apply to developing country needs. For example, the high-end product of electrocardiograms, which are widely used in the developed world, are not an effective product for some developing markets such as India because they are heavy, expensive, and have extensive power requirements. It is not necessarily effective to alter existing products from the developed world to be used in the developing world. Rather, firms should look closely at the needs of the people in a particular market and come up with new technologies specifically tailored to meet these needs (Govindarajan and Trimble, 2012).

Acceleration. John Kotter, a famous management scholar, has recently written the book *Accelerate* (2014), which focuses on how to build and execute innovative ideas in large corporations through creative management structures and systems that enable the ideas of those closest to the work to gain exposure and visibility to senior management. As Kotter's (2014) work shows, it is critical to be intentional about the management structures in place to enable senior leaders to seriously consider innovations as part of their larger strategy. As Kotter (2014) explains, large corporations are often resistant to

innovation and also do not have the management structures in place to enable good ideas from those closest to the customer to be heard by senior leaders.

To address the constraints in technology transfer, Kotter and colleagues recommend a management process in which an established company explores new areas of business while continuing to utilize existing business capabilities. A multinational organization can create an organizational structure that has separate units, such as the local growth teams that are engaged in exploratory business, while others are tasked with continuing to exploit current capabilities within the firm. These various units must be unified with an executive team that is integrated across these units. Businesses that are able to manage this simultaneous organizational separation and integration are known as “ambidextrous organizations” (O’Reilly & Tushman, 2004).

Of course, there are many potential fears and issues that come along with any kind of innovation, particularly if the firm has been successful in the past (Tushman and O’Reilly, 2002). Many firms fear losing money in the creation of a new type of technology. However, if they can design and produce products based on lower fixed costs and with potentially higher volume in poor countries, these low cost products can often earn the same or even better margins than their higher cost counterparts (Navarro, 2006). Further, firms may be concerned about cannibalization of premium offerings with new reverse innovation offerings. However, competing at multiple price points can help a firm to become more competitive across the world and compete in a larger array of market spaces. In order to overcome these fears, the firm must consider the high costs to inaction. By ignoring potential opportunities for innovation entirely, incumbent multinational giants empower the growth of emerging market companies. These local

companies can capture emerging markets before their multinational counterparts do, and multinationals will struggle to catch up and gain a portion of the global market share (Govindarajan and Trimble, 2012).

In sum, many different theories of innovation have been proposed by management and organizational scholars, some of which have addressed the specific issue of global innovation, whereas others have not. As I am interested in global innovation but am open to considering theories that emerge from other literature that more generally addresses the tensions inherent in managing across multiple consumer contexts, whether global or otherwise, I provide this backdrop as a primer to my research and as a reference to refer back to when interviewing senior managers about global innovation. No one particular theory fits all interviewees' experiences nor those of a firm but rather, these theories provide useful frames of reference for the ideas that the interviewees share.

Managing Multinational Corporations

This discussion of innovation strategies requires a complementary literature on multinational corporations. Given that my research will be investigating innovation in the context of multinational organizations, it is important to not only consider the literature on different innovation strategies but also the literature that specifically focuses on the challenges faced by multinational corporations. Research suggests that multinational corporations or MNCs face many challenges associated with executing their strategies on a global scale.

One major challenge that MNCs face is simply the fact that people are working across time zones, geographies, and cultures. For example, it may be difficult for those

closest to the customer to be heard by senior leaders due to the fact that people are working far apart from one another, making coordination difficult. There is often a tension that exists between global and local market concerns; according to a number of scholars studying multinational organizations, global and local activities must be well coordinated, In particular, the coordination across borders of knowledge, ideas, and information is a topic of interest that has intrigued scholars who study multinational teams and knowledge management in complex uncertain environments and is relevant to my research.

Bartlett and Ghoshal (1998) examines how, in an ever-globalizing world, firms must employ a global strategy to manage and organize themselves across borders in order to remain competitive. These scholars illustrate the importance of a transnational strategy where the competitiveness of a firm is reliant on its ability to employ a carefully planned global strategy. In related work, according to Garvin and Levesque (2008), multi-unit enterprises face four main issues associated with operational coordination: consistency, customization, division of responsibilities, and definition of field manager responsibilities. They argue that to maintain a firm wide brand, managers must constantly focus on aligning their decisions with those of the larger corporation. In addition, they argue that management practices must be customized based on geographies; varying demographics, skill sets, and wages, amongst other factors, require leaders to adapt their management styles to manage workers in different locations.

Garvin and Levesque (2008) also address the tensions that exist when dividing responsibilities amongst firm managers; in particular, this issue tends to create conflicts between global corporate headquarters and local business units. The solution to these

problems, according to Garvin and Levesque, is a clear definition of roles within the multi-unit business as well as the use of managers as “information funnels” to create manageable data flows and interconnectedness between business units and corporate headquarters.

Although much research has focused on multinational organizations and their operations from a central home-country perspective, little has addressed how innovations actually transfer from one country to another and the use of information flows across teams. Research by Haas and Cummings (2015) can lend insight here as their work examines resources such as time and attention and how multinational teams must be thoughtful when executing their work across both geographic and time boundaries to utilize these invaluable resources efficiently and effectively. Their conclusions are helpful in considering how management will form synergistic relationships between its local teams and the larger multinational organization to create a mutually beneficial relationship that adds value to the firm rather than creating tension.

Additionally, research by Grossman and Rangan (2001) shows that centralized organizational units need to maintain consistency and standards within a firm while also customizing for local needs. Their research looks specifically at non-profit organizations and their operations; however, similar tensions and ideas apply whether one is examining the management of nonprofits or multinational corporations. They discuss the tensions that exist due to business unit’s desire for autonomy in tangent with its need for affiliation with the global corporation as a whole in order to gain access to firmwide resources. Strong business units require strong leaders which often lead units to become increasingly autonomous, disrupting the cohesiveness of the larger corporation.

Grossman and Rangan argue that to create a sense of unity and integration, managers should share information and best practices across business units, ultimately strengthening the larger entity as a whole. The ability of multi-site organizations to accommodate for business unit autonomy while also creating a sense of integration and unity can determine the overall success of a firm; as Grossman and Rangan caution, “sustainable balancing of [autonomy and affiliation] can only be achieved by constant and diligent management” (336).

Finally, Kanter’s research (2010) gives readers a better understanding of the leadership challenges faced by the individuals who must actually manage these tensions across cultural boundaries. Identifying key factors such as uncertainty, complexity, and diversity, Kanter addresses specific aspects of globalization that alter the ways leaders must operate in a world that is becoming ever more interconnected. Her work suggests that it is critical for leaders to understand how to adapt or alter their leadership approach when working across cultures.

Local Customization in Global Firms

In addition to the literature on innovation and on multinational firms, research on why firms should customize their products for local needs is also relevant to consider here. Global organizations must address the distinct needs of local and regional markets to create the best products for consumers. In addition, marketing and merchandising must be based on the demographic of the specific consumer base, varying by geography (Garvin and Levesque, 2008). The need for local customization, particularly in developing countries, within global innovation strategies stems from five needs gaps that

exist today in the developing world that create opportunities for clean slate innovations to be successful. Govindarajan and Trimble (2012) describe these specific gaps in their book and argue that these gaps between developing and developed countries open up opportunities for customized innovation to take place.

First, markets require the fulfillment of the performance gap, where products must meet real needs for consumers in these countries, but at a price that is reasonable for them to afford. An infrastructure gap also exists, where a lack of reliable infrastructure in developing countries creates opportunity and an environment for breakthrough technologies to be implemented immediately, without being burdened by existing models and infrastructure. There is also a sustainability gap in developing countries, similar to the infrastructure gap, since, without previous infrastructure in place, emerging markets are an excellent place for developing countries to immediately implement environmentally sound technologies. Further, developing countries face a disproportionate number of environmental challenges in comparison to their developed counterparts; they therefore depend on environmentally sound technologies to sustain their economic growth. A regulatory gap can also be filled with reverse innovations in emerging markets. Developing countries do not have the same highly regulated systems in place, which can hinder the ability of firms to innovate; thus, developing countries can actually offer a more hospitable environment for trying out new products or services because they face fewer regulations than firms operating solely in developed countries. Finally, a preferences gap between developed and developing countries can create a need as well; differences in tastes and needs around the world often require “clean-slate” innovation or products developed specifically for the needs of those in poverty that offer

multinational companies opportunities in emerging markets as well (Govindarajan and Trimble, 2012). In sum, great opportunity exists for firms who choose to innovate and create technologies to address specific global market needs.

There are a number of reasons why firms might undertake an innovation strategy that requires local customization and partnerships, but oftentimes refrain from doing so. Typically, marginalized markets are often ignored because their size appears too small to justify the costs of research and development to create products for them. However, creating innovations for the developing world can close the needs gaps previously identified, serve needs that are greater than they first appear, and can offer insights that can help a global company's business overall. Further, the cost to multinational giants of ignoring industry shifts and the needs of the developing world are incredibly high as these needs often represent areas of market growth and potential. In addition, rich world infrastructure will eventually age and even the developed world will adopt these sorts of innovations when existing assets require replacement (Govindarajan and Trimble, 2012).

By drawing upon these streams of research and my own study, I contribute to the field of innovation in multinational organizations by improving our understanding of how organizational structures and systems are managed in multiple country contexts to successfully provide for multiple consumers across different geographic and cultural contexts. My focus is specifically on the question of how to manage innovation across international borders and to study the systems and structures used to manage innovation in the field. This research explores how MNCs explore new geographic markets, create information flows between local partners and global firms, how senior management leads

transnational innovation strategies, and how MNCs maintain global brand while providing for the underserved.

In order to build on the prior research on different innovation strategies, management of multinational firms, and local customization, I offer several predictions that stem from the previously mentioned research streams. I note that whereas the first two hypotheses are expectations about what may be commonly seen across the two contexts I study – the technology and pharmaceutical industries – the last predication does make a distinction between the two. There, considering the role of the political and regulatory environment which I expect is generally more stringent in the pharmaceutical industry than in the technology industry, I expect to find more restraint with respect to the use of partnerships as a means of local customization in global innovation strategies for pharmaceutical companies as opposed to technology companies. My hypotheses follow:

Hypotheses:

1. Leaders of global innovation strategies must manage tensions between addressing the needs of consumers in emerging markets while also maintaining firm-wide standards, brand, and reputation and often do so through the use of local partnerships.
2. Global leaders in multinational corporations must adapt or change their leadership styles in order to lead innovation initiatives across cultural contexts.
3. Technology firms are more likely to be open to engaging with local partners than their pharmaceutical counterparts due to the risks that they may endure

**Table 1:
Summary of Innovation Strategies Presented in Literature Review**

Innovation Strategy	Author	Definition
Reverse Innovation	Vijay Govindarajan and Chris Trimble (2012)	Global companies innovate for the distinct needs of emerging market consumers
Frugal Innovation	Carlos Ghosn (2006)	Global companies create innovations and reduce their use of scarce resources while still addressing the qualities most valued by consumers
Disruptive Innovation	Clayton Christensen (1997)	“Disrupting” dominant pathways to provide an alternative to customers that meets needs at minimal cost to the consumer
Glocalization	Roland Robertson (1995)	Global companies create groundbreaking innovations for developed market consumers, then sell in emerging markets at reduced price points
Acceleration and Ambidextrous Organizations	John Kotter (2014), Charles O’Reilly and Michael Tushman (2004)	Intentionally creating management structures to enable senior leaders to consider innovations as part of larger organizational strategy

Chapter 3: Methods

This research is based on data collected between the months of January and March of 2016. My target population for the interviews was leaders within global organizations who have been involved in managing innovation strategies across multiple country markets for their firms. Research included interviews with senior managers of multinational firms within the technology and pharmaceutical industries. Interviewees in the technology space came from organizations ranging from finance technologies and medical technologies to computer, sound, and imaging solutions. Pharmaceutical interviewees included individuals who held senior-level roles in their organizations such as Chief Executive Officer, Chief Financial Officer, and Senior Vice President of Research and Development. Interviewees drew from a variety of experiences including those in large, and successful organizations, medium-sized organizations, as well as more entrepreneurial or start-up type organizations.

Data

The data for this research is based upon interviews with top-level global executives in technology and pharmaceutical companies; all of the interviewees held positions that were at the C-level (corporate level), such as Chief Executive Officer, Chief Technology Officer, Chief Commercial Officer, Chief Financial Officer or were senior-level executives, holding other positions (e.g., Executive Chairman, Senior Vice President).

My sources for these interviews came from names that were suggested to me through my faculty advisors at Colby, through professors whose courses I took at Tuck

Business School, through executives I met after attending an executive program at Harvard Business School on innovation, and through prior work and/or family contacts. I employed a snowball sampling technique, in which, following an interview, I asked for additional possible names. To track interviewee possibilities, I created a spreadsheet of possible subjects and their contacts and then followed up oftentimes with these senior leaders' assistants in order to schedule interviews. In doing so, I created a short overview of my work, which I include in Appendix A, to give some information about the focus of my research but not so much as to influence interviewees in any particular way.

In total, I created a possible list of about 35 interviewees and ultimately, was able to interview twenty of them. Interviews lasted on average approximately 45 minutes in length. All of these interviews were done remotely, with managers who operated in various locations across the globe ranging from the United States to Greece to South Africa.

Through my interviews with senior management as well as through academic research, my research and interviews were designed to further an understanding of global innovation strategies that are employed to meet the needs of consumers in multiple market contexts. In particular, I focused my interviews on exploring the kinds of tensions and challenges global leaders face in managing across cultural borders. By employing a comparative perspective, my interviews also aimed to investigate the kinds of organizational strategies that may be generalized and those that may not, as leaders pursue innovation strategies across the globe. Finally, through my interviews with senior leaders of global firms, I sought to ask questions that contribute to our understanding of how leaders of multinational corporations manage cross-cultural boundaries, including

the kinds of ways that they learn to adapt their styles and strategies to manage different constituencies.

Thus, in line with the hypotheses previously outlined, my interview protocol was organized around the following three questions:

1. Is there tension between innovating to meet the needs of multiple consumers across geographic borders versus maintaining brand reputation worldwide; if so, how would these be described?
2. What kinds of tensions do managers involved in global innovation strategies face in terms of adapting their own personal leadership style as they cross market cultures?
3. To what extent do managers use local partners to implement their global innovation strategies? Are there tensions associated with doing so? In particular, how does the firm protect intellectual property when engaging with local partners?

More specifically, my interviews were organized around the protocol and sample questions that can be found in Appendix B.

Analytical Strategy

Throughout my interviews, I sought to stay grounded in my work by asking my interviewees for examples of what they were describing. This way, I could try to understand more fully their own perspectives on how they put in place structures to manage across borders or what kinds of experiences they had encountered when adjusting their own leadership styles across international borders. After each interview, I wrote up

detailed notes, trying to capture as much detail as possible from the conversations. This resulted in approximately 35 pages of notes.

In order to analyze my notes, I worked inductively with the data, looking for patterns in the kinds of comments that were made separately in each sector. I then recorded these as “themes” under each research question and created an outline that had themes and beneath each, specific details from the participant conversations. Following, I looked across my interviews from both sectors to look for themes that were similar. Using this process of comparing within and across the detailed notes and the subsequent outline, I was able to discern what was and was not generalizable from my sample interviewees. My results were then organized by interview question and by theme, as written in the chapters that follow.

In addition, I tried to remain open to unexpected ideas, not only in the themes that emerged but in the topics that my interviewees wanted to discuss. For example, whereas I had arrived at three research questions that I wanted to focus on for my research, as I worked through my notes, it became obvious to me that a missing category was how my participants thought about innovation in the first place. Respondents also addressed in their interviews the ways in which they defined innovation in their global context and, also, the importance of creating a culture of innovation to be successful as an organization. Because this was new and not planned, I added another results chapter that is introductory in nature and addresses these unexpected ideas that arose in my interviews. While these unexpected themes that emerged in my interviews did not necessarily speak to my three research questions, they ultimately reflected some of the

preliminary literature review that I engaged in, including working definitions and conceptualizations of innovation.

Finally, while I began this research with a specific interest in “serving the underserved,” due to the snowball sampling technique that I employed along with the range of firms from which I ultimately was able to gather interviews, the final focus of my research ended up being much broader than originally anticipated. That is, I did not just focus on how innovations travel from one part of the world to another - for example, from underserved countries to developed world markets. Thus, while I began with a specific interest on “reverse innovation,” what I ultimately adopted was a broader look at innovation, which, in the end, seems more reflective of the various kinds of innovation strategies employed by multinational organizations in global contexts.

Table 2: Firm Characteristics

	Pharmaceuticals	Technology	Other - Academic
Percent of Respondents	40%	40%	20%
Business Areas of Focus	Pharmaceutical consulting, biosimilars, IBS, ophthalmic products, respiratory condition products, vaccines, central nervous system products	Hardware, software, digital production solutions, financial technology solutions, wireless technologies, healthcare imaging technologies, electronics	Globalization, innovation, execution, strategy, management, organizational behavior
Size	500 – 80,000 employees	100 – 400,000 employees	n/a

Chapter 4: Results – Conceptualizations of Global Innovation

The overarching question that has guided my research is: How do global leaders manage innovation across multi-cultural contexts? My interviewees addressed this at various points in my interviews with them, oftentimes circling back to three key topics: their own definitions of innovation, the significance of creating a culture of innovation, and importance of building certain kinds of structures to cultivate innovation in their organizations. These were central issues in their minds that were raised in response to my broader question about leading and managing innovation in a global arena. Addressing these specific issues seemed to precede or provide the necessary grounding to my more nuanced questions regarding managing local and global tensions, altering one's leadership style, and pursuing local partnerships. Therefore, I begin with these three themes that emerged as central in this first findings chapter.

Looking across interviewer responses, definitions of innovation seemed to span a number of themes. According to my interviewees, innovation is about more than just the products and services that a firm provides to a consumer base. Innovation can also be about distribution and selling. The key to success, is determining what aspects of innovation should be done where – there are certain aspects of innovation that can be centralized and standardized across regions, while other aspects require a more localized view.

Definitions of Innovation

Definitions of innovation varied across my two industries of interest. Professionals in the technology field explained that innovation was the development and delivery of *new* value for customers and, further, that it involved the “organic” creation of new technological products and services. Respondents explained that the crux of innovation for any technology-driven organization is finding the intersection between what is technically possible for a company and what consumers value most. Under this theme of delivering new value to customers, innovation in the technology world often signifies creating a new capability or component that did not previously exist.

Interviewees of technology firms also spoke to the notion of “organic ideation” or the process of forming ideas. There was a sense among interviewees that some of the greatest ideas are not scheduled, but rather, that they were stumbled upon. As participants described, after a firm’s initial success with a particular innovation, the process of innovation often tends to shift; rather than searching for the next best idea, the process instead begins to revolve around adapting current technologies to new settings and improving upon that current successful technology. One of my interviewees pointed to the iPod as an example of an initial great product, from which other products, such as the iPhone, were then able to develop. Thus, innovation can occur in an organic fashion – by altering and reworking products over time to fit a new setting and through business model alterations that continue to utilize that same great initial idea.

In my interviews with leaders in the pharmaceutical industry, the definitions of innovation differed from their technology counterparts in several respects. First, interviewees from the pharmaceutical sector supported the notion that their job in

innovating was to create new pathways to address existing problems; thus, there was less discussion of solving unknown problems, as was the case in the technology space.

Innovation, for these individuals, focused on understanding current problems in medicine and in health, and then finding new ways to address these issues.

However, similar to those in the technology world, managers of pharmaceutical firms argued that innovation could go beyond the product itself; business model innovation was also integral to successfully innovating in the field of pharmaceuticals. Innovation in a business model could mean taking successful products to markets in which they had yet to participate or in slightly altering a successful product to transform it into an innovative product in an already established market. One manager spoke in particular about her experience bringing an infant formula to two very different markets. While the formula itself did not change when shifting markets, the quantity in which the product was sold as well as the price point were adapted to fit the needs of the new market.

Across all of my interviews I found that interviewees stressed the importance of moving beyond a view of innovation that is solely product-driven. Yes, it is important to create new technologies and new formulas to address pressing issues in our current society, but products themselves can only do so much if the business model is not innovative as well. As we delve further into the data, we will see this theme emerge again and again – it seems that innovation can and should occur at every stage in a business in order for a firm to be successful and remain at the forefront of its field.

Creating an Organizational Culture of Innovation

In addition to discussing their own definitions of innovation, participants described a general and pressing need, which was to establish a culture of innovation across cultural contexts within a firm. They discussed how to create such a culture that fostered ideation, and in so doing, a number of important themes emerged.

Among my respondents from the technology field, there was some disagreement as to how and whether firms should truly take on the risks associated with being explicitly innovative. The majority of my respondents, however, favored a more risk-prone culture and argued for the creation of explicit goals and programs around innovation that could ultimately increase patents and filings. These respondents advocated strongly for creating a culture of innovation – that is, creating shared norms that support the idea that peoples' new ideas are highly valued. This kind of culture, they argued, can jumpstart and incentivize the innovation process. In an effort to promote an innovative culture, one firm instituted a reward and recognition program whereby individuals who shared their inventions and received approval for them could be part of a team that brought their ideas to inception. In addition, it set aside a specific period of time every month for employees to innovate and even provided them with coffee and pizza to show appreciation for their ideas.

Other firms in the technology field did not put an equivalent emphasis on innovation, but instead were more conservative with their approach to innovation. Leaders of these firms underscored the importance of being fiscally responsible and promoting stable innovation. Rather than taking large risks and building out radical products, these firms followed a more risk-averse business model that focused on

stability rather than originality.

While there was a dichotomy between risk-loving and risk-averse firms that arose across my interviews with leaders in the technology field, most technology managers stressed the importance of information-sharing across an organization as a key factor in successfully fostering an innovative culture. According to participants, keeping people informed and involved in the ideation process will lead to stronger, more effective, and ground-breaking ideas. One manager noted that he encouraged his coworkers to grab a beer with one another and become friends; he emphasized that socializing within the larger organization would cultivate relationships and help create a community where people felt comfortable bouncing ideas off of each other. Most interviewees also noted that in order for individuals to feel comfortable in the ideation process and have a clear understanding of their roles, it was important to streamline and assemble a set of common objectives across the larger organization. This way, individuals would be more apt to share ideas with other employees who they felt were working toward a common goal with them.

According to my interviews, there are clear differences in how a manager in the technology industry versus the pharmaceutical industry creates a culture of innovation. In pharmaceuticals, idea management and maintaining an innovation culture over extended periods of time is key due to the extended innovation lifecycle required to develop a product. While in the technology space an innovation from its birth takes on average 2.5 months to 2 years (Thomke and Reinertsen, 2012) to get to market, in pharmaceuticals, an idea has to be nurtured on average about 12 years before it is even accessible to patients (California Biomedical Research Association) . Thus, the management of ideas

and an innovative culture is integral to turning an idea into a therapy; this is especially trying as employees must be motivated to engage in the work or a single objective for years on end. A number of participants in my study referenced the length of the innovation lifecycle in pharmaceuticals and how it affected the way leaders of organizations managed a given organization's culture. My interviewees also stressed that the risk profile of a given pharmaceutical company tends to shift over the course of its innovation lifecycle.

In particular, participants from the pharmaceutical industry stressed the importance of creating a corporate culture of innovation during the early-stages, when pharmaceutical companies are just beginning to develop new ideas and technologies. When pharmaceutical companies are in their early stages of growth, managers and employees must understand that innovation is messy and not always linear and further, that the pathway forward is generally both incredibly difficult to predict, lengthy, and fraught with extreme levels of uncertainty. Given these particular challenges associated with this industry, respondents explained that the ability to create an organizational culture that encourages risk-taking and exploring new ideas often comes from the example that leaders set within their organizations from the start. As they explained, leaders in this sector must be fearless, passionate, and work with a certain conviction. Words like "commitment," "dedication," and "focus," were used to describe global leaders who were able to take the ideas of their employees and run with them into the daunting early stages of drug development.

Successful managers in the pharmaceutical industry were described as fostering a culture of innovation through two-way dialogue, participation, and urgency within their

organization, similar to that which managers in the technology world raised as integral aspects to an innovative culture. Managers of pharmaceuticals also noted the importance of appreciating different styles of thinking to foster ideation; certain individuals generate ideas more effectively by working quietly on their own, while others prefer to bounce ideas off of others. Irrespective of where the idea originates, in order to create a corporate culture of inclusion and one that values innovation from all different types of individuals, managers must account for these differences in work and thinking styles. One manager suggested that in meetings they allowed employees to think quietly on their own about an idea for a certain period of time, and then gave them time to share these ideas with other members of the group, thus addressing both types of individuals' learning and thinking styles.

A common concern that arose from my interviews with leaders in the pharmaceutical industry as opposed to those in the technology space was the reality of a shifting risk profile within an organization as it matures. Once a product is commercialized and an organization achieves a certain level of success, the small and innovative company that it once was becomes a new company – one that often loses track of its discoverable abilities and one in which innovation can grind to a halt. The organization may shift from one that was a growth engine with a single-minded focus on product discovery, approval, and launch, to a mature and successful company that may want to preserve what it has created. Thus, it may become resistant over time to the culture of innovation it tried to cultivate early on.

According to my interviewees, this desire for preservation of past achievements can be the greatest detriment to innovation and can contribute to a loss of focus and,

ultimately, if not checked, a loss of market share. After a firm spends considerable time and energy on creativity and taking risks, the comfort of success is tempting. In addition, growth must be preserved in order to maintain current channels of investments and to stay ahead of competition. Product commercialization requires entirely new areas of business that did not exist during the innovation stage of the business. Some companies attempt to combat this reality and maintain both the innovative arm and the commercial arm of the organization. As some of my respondents suggested, after reaching successful commercialization with a given product, the key to remaining innovative and mitigating the change in an organization's risk profile is to cultivate a string of other new products in the pipeline. One leader in particular believed that his company could bridge this gap between innovation and commercialization because of the innovative platform that his company boasts; he believed that by harvesting this innovative platform for multiple drugs, his company could continue to innovate into the foreseeable future, commercializing products for which the company's current infrastructure allowed.

Across both sectors, then, the similarities were most obvious when comparing the responses of managers who discussed the significance and processes for cultivating a culture of innovation during the early stages of the discovery or product development process. However, given the longer life cycle of pharmaceutical products and the relative uncertainty and complexity of the science involved, sustaining this momentum over time among employees seemed to require additional effort, including incentive structures and systems that were more heavily managed in the pharmaceutical companies than in the technology companies. Overall, however, the prevailing wisdom appeared to be that a culture of innovation was a necessary condition for success and for sustainability in the

marketplace. Even those who did not advocate strongly for this kind of culture or who erred on the risk adverse side due to financial constraints or pressures toward conservation noted the significance of ideation and a culture of innovation, particularly early on.

Creating an Organizational Structure to Encourage Innovation

Technology. My technology global managers described the importance of organizational structures in and across their firms in order to encourage and cultivate a fertile environment for global innovation. In technology, respondents discussed the need to purposely create separate kinds of subunits within firms to enable global innovation, whereas in pharmaceuticals, the discussion was more about the kinds of overall type and size of companies that were more focused on innovation versus commercialization.

In order to cultivate an organizational environment that fosters innovation across country contexts, managers in the technology field underscored the importance of creating an organizational structure that would enable rather than stifle innovation. For these managers, connecting to the outside world and the customer in particular was seen as vital to the creation of new and innovative technologies. In addition, mitigating the risks that come along with innovation was imperative. As such, many of my participants employed a similar strategy to connecting with markets in order to recognize areas of emerging value – this strategy involved the creation of small teams or a single autonomous innovative unit whose sole focus was to innovate beyond the technologies the company had already marketed and operationalized.

The idea behind autonomous business units is to maximize innovative capabilities

within a firm while reducing risk for the larger organization. In one firm that creates technological financial services products for customers, the manager I spoke to operated his innovation business unit “like a start-up.” The team was funded separately from the larger organization and was comprised of a group of diverse individuals with varying backgrounds in an effort to generate ideas that were fundamentally different from what the larger organization had already created. Establishing this separate business unit structure seemed to help address one of the issues that frequently came up in my discussions with managers – innovating within established businesses. A number of managers spoke to the tension of innovating within well-established businesses. As they described, oftentimes, c-suite (senior level) executives shy away from innovation because it feels risky to them and could disrupt an already successful business that is the driver of its profits. For example, one respondent explained that hiring individuals who understood the local markets to lead these smaller business units would create a more efficient and innovative business model strategy. In this way, executives in the larger organization could continue to focus on strategic initiatives for the firm while the smaller business unit could focus on the creation of new value through innovative product development.

The autonomous innovation business unit structure could isolate innovative ideas and projects from the larger business unit, thereby creating a safe space for building and testing concepts without inflicting potential damage on the mother brand. Employing a separate business unit solely focused on innovation can allow a company to take risks without harming the reputation or success of the larger organization. Thus, for my technology respondents, it was often the case that their companies found structural solutions to the problem of cultivating innovation.

Beyond creating a separate business unit for innovation, the actual operations and leadership of the unit also become critical to success. Managers underscored the importance of remaining connected with the larger organization by way of the innovation arm's management in order to retain funding and legitimacy. Many of my interviewees called for managers of the smaller business unit to operate as the liaison between the larger organization and the innovative arm. They could do this through their own liaison roles and/or through communication structures such as regular meetings that enabled them to update those in senior level positions in the established base of the firm as to the progress they were making and/or the resources they needed.

Further, to maintain a certain degree of autonomy, the technology interviewees told me that the manager should take on what one person described as a “bicultural approach.” This sort of leadership would include transferring the larger organization's ideals to the smaller autonomous unit to serve as guiding principles. Simultaneously, the manager must also continuously foster an entrepreneurial culture within the autonomous unit. In nurturing this liaison, the manager of the smaller innovative unit should report directly to the CEO or a c-suite level manager of the larger organization. This relationship will not only keep the flow of communication open between these separate units, but will also ensure that the innovative unit receives adequate funding, and that executives remain excited about the innovation that is happening apart from the larger organization.

Many technology respondents saw an autonomous innovation unit, which may reside in different geographic regions, as an adequate solution to global innovation risk; it was mutually beneficial to both the innovative side of the business and to the larger

organization as a whole. While the innovative arm could remain alive and vibrant in creating an entrepreneurial culture that encouraged risk-taking and idea generation, the larger organization could maintain its trusted image without taking on the risk of innovation, and while still claiming to be innovative. This sort of structure came up as an ideal solution to convincing management to provide adequate funding for innovation, particularly in established businesses.

In a similar vein, some of my technology interviewees believed that creating numerous autonomous business units that each specialized in different regions would be another way to create a successful structure for global innovation. These autonomous teams would work with a specific consumer base in a given geographic region to determine a need in the market and to assess market dynamics. They would speak with customers, develop partnerships on the ground, and test out ideas. They could adapt and create new technologies directly applicable to emerging value in a given region. In this way, innovators would be closer to the market geographically and thus, would be able to more successfully innovate for the needs of a particular market.

Other managers I interviewed in the technology field found that creating a single global research and development center was more effective in the innovation process. This R&D team would be comprised of individuals coming from varying cultural backgrounds that brought together different experiences and views to create innovative and groundbreaking ideas. Testing and labor-intensive work with the technologies would then be undertaken in the markets for which these products were made. Their argument was that concentrating the innovative function of an organization in one particular location would allow for all of the brightest, most creative minds to work together and

collaborate, rather than being scattered across the globe. This sort of collaborative and diverse structure required a different sort of role for managers – one that focuses on aligning a diverse set of individuals to come up with the ideas that effectively serve actual market needs.

Many technology managers seemed to struggle with similar issues when leading the innovative side of their businesses, whether as a subunit or larger R&D center. As the interviewees explained, oftentimes, individuals involved in R&D are “super engineers” or just want to create the next most original and groundbreaking idea. Managers agreed that having a solely innovative culture was not enough to drive success. Product development strategy could not just be centered on great path-breaking ideas; it needed to first and foremost aim to fulfill specific consumer and market needs. Further, products should be developed to serve the largest markets with the most commercial potential. For example, one manager whose company creates radiology technology for consumers across the globe spoke to the importance of developing products with commercial potential. He stated that after assessing where the largest markets would be for his company’s technology, products were then either adapted or developed from scratch to meet needs in that given geography. If a specific feature or product would only be applicable in Malaysia, for example, he said his firm was unlikely to prioritize the its development because the commercial potential was much less than that which existed in American or European markets.

Pharmaceuticals. My pharmaceutical interviewees seemed much less concerned with the consumer-side of the business, and thus, creating autonomous units for innovation was not an organizational strategy typically employed in the field according to

my interviewees. According to managers I interviewed in pharmaceuticals, the trend in pharmaceutical organizations is to centralize research and development centers, typically in the United States or Europe, to address underlying science of the work in areas such as chemistry.

This sort of organizational structure that is centralized rather than separate from the larger organization or scattered in numerous locations can, in part, be attributed to the location of information hubs. A number of participants stressed the importance of locating the research and development where research universities and capital investment are located. This way, R&D centers could have access to the most novel and forward-thinking scientific ideas and also to the capital necessary to fund their innovation exploits.

One can point to a difference in the way a pharmaceutical company innovates from its technology counterpart as an underlying reason behind this type of organizational structure. Typically, a pharmaceutical company has a specific area of expertise, a technology that it has developed, and a proprietary method of developing a drug. One manager described the way in which pharmaceutical companies innovate as “haphazard,” in that rather than solely relying on the needs of certain consumers, companies tend to match their technologies and abilities to meet the biology of a certain condition. Once a company has successfully developed one therapy, it will often capitalize on its current technology and platform to target other diseases, keeping the drug discovery engine running. In this way, innovation is central to the overall business and would not run as effectively as an autonomous business unit. Further, because companies tend to match their technologies to emerging health needs, it is less important

to have a number of teams on the ground addressing local problems as it is to have research and development individuals together in a concentrated location working tirelessly to match a firm's technologies to a particular disease.

Beyond the organizational structure within a firm itself as it relates to innovation, my pharmaceutical interviewees also pointed to the size and stage of development of a given organization as significant when analyzing the best organizational design to generate ideas and to develop new drugs. While some participants supported the notion that pharmaceutical companies could indeed operate both the innovative and commercial side of their business simultaneously, others claimed that the reality of the industry is that smaller pharmaceutical companies are oftentimes the engines for innovation, while larger, later-stage companies tend to buy innovations from such firms and commercialize them. Larger companies have the infrastructure and capacity to acquire products or company — and then bring technologies to market. As such, these large established companies will tend to identify an unmet need in the market that they would like to fill, determine what smaller biopharmaceutical company is addressing this need, and then bring the innovation in-house.

Following the acquisition of programs, technologies, or companies, these larger pharmaceutical companies will often then add staff to the innovation project and build it out to commercialization. Smaller companies, on the other hand, are more inclined and able to innovate with a certain level of creativity and entrepreneurial spirit that is more difficult to foster in well-established organizations. Pure innovation, according to many of my pharmaceutical managers, truly stems from academic hubs like universities, and these individuals tend to move to small companies, to receive early-stage funding to

pursue their ideas. Smaller organizations take on large risk by nurturing their new technologies from birth, whereas the structures and systems of larger pharmaceutical organizations are generally designed for commercialization and so, are willing to pay a premium to minimize the risk associated with innovation.

Comparing these two sets of respondents reveals some clear differences in how managers of technology versus pharmaceutical companies tend to foster innovation through the structures they put in place (or acquire) in their firms. In technology companies, the focus was on creating protected spaces such as subunits charged with coming up with new ideas that were intentionally separated from the larger firm or, in a similar fashion, by creating a protected R&D center for that same purpose. In contrast, in the pharmaceutical companies, while innovation was also highly valued, the organizational structures were designed for the implementation or commercialization of innovations, rather than, in general, the very earliest stages of idea generation. Instead, therefore, larger organizations to appropriate other smaller firms that were themselves already intact innovation incubation structures and then commercialize therapies from there. In both cases, the structures – whether bought or made in-house – were designed to protect spaces for the cultivation of innovation as well as minimize the risk that the larger organization might face when straying from its core business in order to innovate.

Chapter 5: Results - Serving Multiple Customer Needs

When participants commented on the challenges of serving multiple customer needs, three tensions emerged that seemed to span the experiences of managers in both technology and pharmaceutical industries. Although not all of my interviewees' organizations operate in underserved markets, the themes regarding tensions they faced seemed broadly applicable. These themes included concerns regarding a) the potential for dilution of market position and brand, b) the ability to innovate in an efficient manner globally, and c) an entrenched mindset within management that could stifle innovation.

Serving Multiple Customer Needs: Brand and Reputation

In the technology field, as is common in many other industries, one of the challenges faced by managers is to protect the brand of an organization. When creating an emerging technology, how do you balance addressing the largest market possible without diluting brand or cannibalizing margins? In other words, a number of my participants wrestled with the concern that new innovations might negatively impact the sales of an existing product by inadvertently catering to existing consumers rather than expanding to attract new consumers. As respondents explained, the challenge of innovating is maintaining that core business with great brand equity or name value of a brand, avoiding the alienation of customers, while also coming out with new products. Some managers argued that to offset potential brand dilution due to their exploration into different innovative solutions and products, firms could create a stratified line of products with varying levels of features based on consumer need, thus gaining the largest possible market traction. Firms could then price their products of varying sophistication at

different levels so as to create an array of products for the various needs and levels of affordability of consumers.

An example of a successful product differentiation to gain broad market traction is General Electric's (GE) Electrocardiogram (ECG). GE's initial goal with the ECG was to create a product for the needs of an underserved population in rural India. The ECG was ultimately marketable on a global scale and adopted by developed countries; smaller individual practices in developed markets purchased the machine due to its lower price point (Immelt, Govindarajan, Trimble 2009). From there, GE adapted its ECG's capabilities and features to address a larger consumer market (Winter and Govindarajan, 2015). GE's ECG ultimately branched into four different prototypes, which were sold at different price points to varying consumers around the world (Govindarajan and Trimble, 2012).

In a similar vein, some managers in technology firms made the case that when designing products to begin with, a firm should create innovations that could span multiple geographies. One manager said that his best case scenario for innovation was developing products suited for the developing world but also "good enough" and highly sought after in the developed world, a technique that firms like GE have come to master. Others opted to address issues of reputation dilution by launching an entirely separate brand oriented toward the innovative side of the business. This way, the innovative brand could have the funding and resources of the larger organization and would be marketed to new customers, while also allowing the company to protect and preserve the quality of the mother brand.

Still, even with these kinds of structural solutions, managers expressed concern

over brand dilution with new technological innovations have led some companies to innovate “safely.” In an effort to continue innovating but also mitigate risk, firms may add incremental value to already successful products instead of seeding new lines of products. This strategy could help keep a firm current, tailoring or updating products to the needs of newer consumers, while also reducing the potential dangers associated with more radical forms of innovation.

The pharmaceutical managers I interviewed were also concerned about dilution of brand reputation but had a very different conception of brand from their technology counterparts. While brands such as Apple and Oracle denote a certain reputation that encourages (or dissuades) a customer from purchasing their product in the technology world, pharmaceutical customers will not necessarily purchase a drug because a particular firm made it. For pharmaceutical consumers, the importance of corporate brand loyalty is overshadowed by the importance of whether or not regulators have given a drug their stamp of approval.

According to my interviewees, the brand of each particular drug stands separate from the brand of the larger organization; doctors and patients identify with a specific product brand much more so than the company brand as a whole. Pharmaceutical companies will spend extensive amounts of time and a great deal of capital in order to create awareness for a particular drug; pharmaceutical companies move from product brand to product brand. For each particular product brand, the timing and lifecycle of the product is significant. Companies can extend the brand of a particular product by carefully timing the release of a new product that is an improvement upon its predecessor. The key here is to launch the improved product late enough in the previous

product's lifecycle so that it does not cannibalize sales, but early enough that a competitor does not come out with an improvement sooner. Innovation then tends to occur in an area where a firm has had prior success; pharmaceutical companies capitalize on the successful brand of a particular product by developing new drugs that fall into a similar therapeutic category and by tying new products to that successful and innovative product. An example of the importance of a particular product brand is the ADHD medication Ritalin, which is owned and produced by Shire. Individual consumers trust and recognize the brand Ritalin, which is the brand for the individual product itself, but are typically unfamiliar with the brand of the larger organization, Shire.

The company's brand in the pharmaceutical industry is typically more important for attracting employee talent and creating shareholder value than it may be for attracting consumers who gravitate more toward the brands of isolated products. Still, it is possible for pharmaceutical companies to build a certain degree of corporate brand loyalty across products. Through different forms of Corporate Social Responsibility or by donating drugs to a particular cause, for example, firms can demonstrate to consumers that they operate their business responsibly and so, build overall brand loyalty associated with a particular company.

Pricing decisions across international boundaries can also serve to hurt or improve a firm's reputation. According to my pharmaceutical interviewees, upholding a company's brand is even more challenging across international markets because each market has its own idiosyncrasies. Oftentimes, this challenge is dealt with through pricing; negotiations with healthcare insurers or governments (depending on the country) affect the resulting price and ultimately, the brand of the firm as well. While low prices

for a particular drug in one market may bring about reduced profits, company brand is often improved by a given firm providing a product at low or no cost to those who cannot afford the cost of a particular drug. In this way, by building loyalty for the firm, a pharmaceutical company may offset the reputational risk that it might otherwise incur when engaging launching innovative extensions to its brand.

Serving Multiple Customer Needs: Global vs. Local Trade-off

“I find that some of the best innovations are locally driven,” said one of my technology interviewees when discussing the difficulties of balancing efficiency and customization when innovating for a global market. Many of my interviewees, particularly from the technology field, struggled with the desire to remain efficient and streamline production while also using local knowledge to truly capture a specific consumer market. While centering innovation in one location can provide certain efficiencies for firms, particularly in production, centralization means giving up customization . Managers described various techniques for addressing this global vs. local tension; the location of each firm on this spectrum of global vs. local control was highly variable amongst my interviewees.

Some technology managers stressed the importance of efficiency over creating tailored products. These firms tended to develop products in one central location and then would customize the commercial side of production as a way of catering to different markets. Thus, the actual product did not change across borders, but rather, the messaging, price point, and sales method, were tailored based on geography. One manager, whose firm develops healthcare technology products, discussed how different

consumers had varying expectations depending on geography. He found that doctors in private practices looked for efficiency, cost-effectiveness, and time-efficiency. In contrast, healthcare markets such as those in Europe and Asia that are not privatized, were home to doctors who were more focused on the quality of care rather than increased productivity. As such, he found that tailoring the messaging and sales method depending on the consumer base was incredibly important for attaining considerable market traction.

Other technology firms my interviewees spoke about fell in the middle of the global-local spectrum. My interviewees explained that this allowed them to remain efficient and capitalize on economies of scale but also create relevant products. These middle-spectrum firms would typically use a generic base technology developed to span multiple geographies, and then would leverage local relationships and development labs to develop out the product for a specific consumer base. In a similar vein, some managers I spoke to established centralized R&D centers, stripped products down to their simplest form, and then worked hand-in-hand with end users, and through various iterations, developed features reversely for their needs. Managers noted that this method helped to account for technical requirements that must sometimes vary depending on cultural and regulatory environments.

On the other end of the spectrum were managers I interviewed in technology who were staunch supporters of localization and believed that teams that were geographically closer to the consumer could create the best products. For these firms, local idea generation was valued more than cost-efficiency. Managers of these firms said that true innovation does not come from someone sitting in an office in the US or Europe. Rather, it comes from “someone under a mango tree in rural Uganda, really absorbing the local

needs and culture.” This difference in value placed on localization in a particular firm could in part be due to the backgrounds of the managers and leaders themselves. I found that managers who were more personally involved in or conscious of local community needs tended to instill these values in the corporate culture of their firm. In contrast, leaders who seemed more preoccupied with efficiency and productivity might be more inclined to stress centralization of operations within the firms that they managed.

As these technology managers explained, their firms were organized such that the heavy lifting in idea generation happened in the field. Managers used teams of skilled individuals to work with the communities for whom a product was being developed. These teams listened to the potential customers, bounced ideas off of them, and once a tailored solution was created, would adapt it based on client feedback and experiences. According to these individuals, at the heart of building relevant products for consumers is having deep local knowledge. While maintaining a heavy local footprint was vital to these managers, their role was to also ensure that the firm’s innovative arm was not “reinventing the wheel;” they also helped to create a space for knowledge sharing, and allowed for the provision of global expertise to various local teams. Other interviewees described using different strategies for product development depending on the product itself. Thus, amongst my interviewees, there was not consensus on one best strategy, but rather, a set of possible approaches that would help them be cost-effective in their operations while simultaneously providing relevant products to the client.

The global versus local dichotomy in the pharmaceutical world is conceptualized very differently from the technology space. Products themselves do not tend to change drastically depending on their geography. This lack of product customization in

pharmaceuticals can in large part be attributed to the fact that most diseases do not fundamentally change in a patient depending on location. Some do, but the underlying biology and chemistry of human beings does not, in contrast to the very different needs seen in the technology field across geographies.

In lieu of product adaptation, pharmaceutical managers tend to focus their efforts toward business model innovation on the commercial side. These managers stressed that innovation was not just about product development, but rather, about the distribution, selling, and advertising of developed products. For example, varying regulatory environments allow for products to be positioned differently depending on a given market. Biotechnology companies work through negotiations with regulators to enable their product(s) to treat (according to the label) as many indications as possible. In this way, the same drug can be positioned to treat different ailments depending on regulatory environments. Managers of pharmaceutical firms also pointed to the importance of innovation in the delivery of a product. Drugs come in all different forms and can be administered orally, through injection, inhalation, or as topical treatments. If a medication is brought to market, but the form of administration is not acceptable to the market it is trying to serve, the product may not be successful. Further, packaging and advertising preferences for pharmaceuticals may also vary by location. Different cultures may find certain types of advertising more appropriate than others – for example, according to one of my respondents, Japan and the Middle East tend to prefer more conservative advertising as compared to their American counterparts. Therefore, tailoring this aspect of the product can help a product gain traction in a particular market.

My pharmaceutical interviewees also described how sales force adaptation is

another way that companies can customize and innovate around the commercial side of a product. For example, in North America and Western Europe, the role of the sales force is fundamentally educational – they work with physicians to explain benefits and side effects of a given product. In other parts of the world like China, India, and Brazil, sales are more transactional in nature, as representatives focus on *selling* the product to the physician rather than *educating* them. In this way, hiring and training sales forces based on geography can be effective in customizing a product’s image to a particular consumer base.

According to pharmaceutical respondents, pricing is another way in which firms innovate on the commercial side for a specific consumer base. In negotiations with health insurers or governments (depending on the location), pharmaceutical companies will vary the price of their products based on local needs for the product, ability to pay, and capital required to recuperate R&D costs. In some cases, if negotiations do not reach a pricing outcome that is deemed adequate (covering manufacturing costs, for example), then the product may not be launched there at all. In this way, an appropriate pricing strategy may allow for a broader acceptance and availability of this innovation on a global scale. However, if pricing negotiations are unsuccessful, the innovation may be constrained in its availability, limiting its potential benefit to patients.

Serving Multiple Customer Needs: Entrenched Mindset

A third tension that arose during innovation particularly for my technology interviewees was managing the established business and what they described as an entrenched mindset of management, while continuing to foster innovation. This tension

seemed to be less of a concern for pharmaceutical managers for whom the development and acquisition of new drugs seemed to always be central to the business model.

In technology companies, interviewees pointed to the delicate balance that leaders had to manage between protecting an organization's previous successes while remaining at the forefront of the industry in innovation. This tension arose in large part due to the differences in cognitive thinking between c-suite executives and that of the innovators in the business. According to respondents, in larger, more established companies, the majority of employees, and in particular, executives, wanted to protect the status quo; moving away from the norm and being truly innovative entailed entering the "fight of your life with management." Established companies, respondents said, tended to eventually fall into a cycle of incremental innovation rather than investing in new technology.

As my respondents explained, an entrenched mindset within management is an obstacle that can lead to insufficient funding of radical innovation; executives tend to focus heavily on retaining market share and current customers, which can come at the expense of generating new income and new ideas. The monetary and reputational value that a technology could bring to the firm was of utmost importance to executives. Tasked with delivering visible results to shareholders, high-level management is often concerned with what would happen to the profit model if a new idea were brought to the platform.

In this way, as my interviewees explained, leaders will often organize their innovation strategy around financial quarterly reporting and shy away from radical innovation that could potentially harm current profits or cannibalize margins on already successful products. However, in order to retain market share, a number of my

interviewees pointed to the importance of investing in new opportunities and developing products that were truly original. Innovators within an organization seemed to starkly contrast the risk-averse and entrenched mindsets of managers; they were excited about creating technologies that were “cool” or “exciting,” but not necessarily those that would have certain value for consumers.

To address this disparity in cognitive methods of thinking about innovation, some managers advocated for a focus on the business model of the technology itself. A manager’s role was thus to align the value they saw in the industry with the value that could be actualized by the company given its structure, brand, and infrastructure. This meant paying careful attention to the operations behind innovating – who would manage the innovation, how would a flow of communication remain open between innovators and executives, how much risk the firm was willing to take on and so on. These sorts of questions would allow leaders to ensure that decisions about innovation were not being made based on personality, impulse, or what was politically or financially convenient. While doing this, managers also had to be sure that they were not simultaneously over-constraining the innovators in their company. Accordingly, respondents suggested that innovation should not be implemented purely on the basis of cost and reputation. Time constraints and generating short-term shareholder value should take a backseat to idea generation and innovation itself.

Serving Multiple Customer Needs: Innovating for a Specific Consumer Base

While respondents in both sectors emphasized the need to manage their established brands and innovate efficiently on a global scale, managers also addressed the

challenges that arose when innovating for a specific consumer base. The tensions inherent in addressing the specific needs of consumers varied across the technology and pharmaceutical industries. Thus, managers in these fields had different ideas and methods about how best to develop relevant products for consumers.

A trend that arose amongst managers, particularly in the technology sector, was to stress the importance of communication in creating the best possible products for consumers. This trend is something that we will delve into further in Chapter 7 when we examine the importance of local relationships, but we will touch on it briefly in this chapter as it pertains to innovating for a specific consumer base.

Technology managers insisted on the practicality of dialogue in the innovation process. Keeping an open flow of communication with different groups such as clients, analysts, scholars, reporters, and other influencers, seemed central to best understand the technology trends within the industry. Additionally, remaining up-to-date on recent technological findings seemed to help these firms maintain a breadth of understanding for scientific and academic knowledge. After dialoguing with key influencers, managers suggested returning to the drawing board with ideas, and then determining what innovations, within the capabilities of a firm, were actually possible. The dialogue does not stop at the ideation step in the process. Rather, once a product has been developed, many of my respondents recalled using beta releases and collecting customer data and feedback to adapt the product to better fit a needs gap in the market.

For pharmaceutical managers, the trend amongst my respondents when innovating for a specific consumer base revolved around certain motivations that dictated the diseases (indications) that a firm might target. Important drivers for the selection of a

specific indication included: clinical trials, competition, need, and previous experience as a company. As my interviewees explained, there are numerous diseases that are similar, and thus, a company's selection criteria for the disease has as much to do with its organizational strategy as it does with the disease itself. When determining a need in the market and also when developing a technology itself, pharmaceutical managers also stressed the importance of dialogue.

Similar to dialogue in the technology space, when innovating, interviewees stressed that dialogue in the pharmaceutical world needs to focus in part on the customer – in this case, on the patient or physician. When patients have a particular need, physicians can help explain to a company the real symptoms that a drug should address, and then a company can innovate to address these symptoms. However, pharmaceutical researchers and managers can also determine a needs gap or jumpstart the creation of a new drug through communication with academic scientists. Staying informed on the findings of academic scientists (who are working outside the company itself) and then capitalizing on potential partnerships and collaborations can help pharmaceutical companies remain at the forefront of the industry, addressing needs in the market with new and innovative science.

Some pharmaceutical companies attribute so much value to this communication with academic scientists that they actually sponsor research at universities. In return for a financial investment, a company might receive rights to be informed first of data from a study, giving the company a jumpstart on the competition. This sort of academic research, according to participants, varies from that which can be found on the R&D side of a given pharmaceutical company. While pharmaceutical company research is

constrained by the company's goals and is highly targeted, academic research is not constrained to making a particular medicine. Rather, researchers can address fundamental scientific questions that can, in turn, lead to entirely new areas of applied and basic understandings in the field.

Beyond determining a need in the marketplace, pharmaceutical interviewees reported that their firms had similar processes for innovating around a particular gap. Typically, a pharmaceutical company has a specific area of expertise or a technology that they have developed in a certain scientific area along with a proprietary method of developing a drug to treat a target. Once a need is identified in the market, companies then determine if and how they can capitalize on their expertise to make an improvement over the current standard of care. If the company believes it can address the needs gap given its capabilities, it will start by targeting a narrow set of diseases within that needs gap. Starting out with a narrow scope allows companies to more easily show early proof of concept, which, in turn, can help it raise capital for clinical trials. This capital can also eventually be used to expand the company and the product suite to address other diseases within the needs gap identified.

In sum, both technology and pharmaceutical company global managers stressed the importance of dialogue to address a particular needs gap in the market. However, my interviews show that in the context of the marketplace and differing industries, global managers in technology and pharmaceuticals implement different processes to innovate around consumer needs.

Table 3: Serving Multiple Consumer Needs

Research Question 1:

Is there a tension between innovating to meet the needs of multiple consumers across geographic borders versus maintaining brand reputation worldwide; if so, how would these be described?

	Pharmaceuticals	Technology
Major Themes		
Maintaining Global Brand and Reputation	<ul style="list-style-type: none"> • Brand often exists for individual drugs more prominently than for entire company • Organization’s brand can, however, be positively impacted by CSR and fair pricing strategies 	<ul style="list-style-type: none"> • Develop products with the ability to span multiple geographies • Varying features and pricing strategies for different levels of affordability
Global vs. Local Trade-off	<ul style="list-style-type: none"> • Operational efficiencies are critical to consider • Products are not typically adapted; commercial side may be tailored via marketing, sales force, administration, pricing 	<p>Spectrum of Views:</p> <ul style="list-style-type: none"> • Cost efficiency > adaptation and tailored solutions – centralize development, alter commercialization • Middle ground – centralize R&D, adapt product features and commercialization • Localization > efficiency – teams on the ground, work directly with end-users
Entrenched Mindset	<ul style="list-style-type: none"> • Prior organizational success and size can be barrier to change innovation 	<ul style="list-style-type: none"> • Executives’ desire to protect status quo versus encouraging environment for innovation
Innovating for Specific Consumer Base	<ul style="list-style-type: none"> • Importance of external communication –with consumers and academic hubs 	<ul style="list-style-type: none"> • Importance of internal communication

Chapter 6: Results - Global Multi-Cultural Leadership

This study also focused on the question of, what kinds of tensions do managers involved in global innovation strategies face in terms of adapting their own personal leadership style as they cross global market cultures? When responding to this question, participants told me stories about how they adapted their own personal leadership style to suit the local culture they were working in or crossing into. Looking across these stories, major themes emerged and, for the most part, these did not differ significantly by sector.

In both sectors, managers found that interacting with people from different backgrounds and cultures was a necessity and an everyday task that they attributed to the kinds of roles they held as global leaders of multinational corporations. Further, as explained in Chapter 4, for many of my participants, staffing individuals in local markets for whom products are being developed (and sold) is critical to the production of relevant products for consumers. Therefore, they need to manage these individuals who may come from very different cultures. Beyond improving one's own leadership capacity for managing a diverse group of employees, adapting management styles across cultural boundaries was also mentioned as extremely important as these managers engaged in business negotiations in different geographies.

In Chapter 7, I examine how local partnerships play an important role in the innovation process. In this chapter, however, the focus is primarily on how mastering the art of management across borders was critical to the success of my respondents as leaders.

Time Commitment

One theme that arose for my participants was the importance of time commitment toward understanding the varying backgrounds of employees. According to managers in both sectors, it makes good business sense for leaders to spend time with the individuals who are most closely connected to the end users, particularly those who operate in or are from a market different from the manager's home market.

One respondent pointed to this commitment to understanding other cultures as a fundamental driver of her success; she claimed that she had been successful in her career because she had spent significant time in the territories in which her company worked and adjusted her leadership and communication style as she traveled across countries. As she explained to me, once you understand a particular culture, you can manage people differently on the ground through different incentives, compensation, and forms of motivation. Specifically, variation in how people from different nationalities prefer to be managed involved how different cultures view authority and how they view gender differences. As my respondents emphasized, every geographic region is different.

Active Listening

While business models and processes can be put in place to facilitate good leadership, according to my participants, an agile leader is one who is able to create an inclusive culture. In doing so, participants in both industries stressed the importance of careful, active listening as critical to effective leadership. As my respondents explained, if employees know that a leader will listen to them without judgment, then leaders will be able to create a more open environment for innovation. Additionally, in listening to

employees and understanding their knowledge, values, and abilities, leaders will be able to better adapt their expectations and requirements accordingly. One manager noted that some of her best conversations with employees were in informal settings where she could more easily listen and communicate with her employees. Her ability to effectively demonstrate her capacity to listen created an environment in which her employees felt comfortable coming to her with issues or ideas. More generally, interviewees were cognizant of the intersectionality of identities and communication styles, such as the degree of assertiveness or confrontation when expressing one's ideas.

Common Corporate Culture

Although adaptability, according to respondents, is critical to effective leadership across borders, the maintenance of a common corporate culture was also emphasized in my interviews; this common culture was described as critical to remaining a cohesive and integrated organization. According to one manager, leaders must instill a common corporate culture, while remaining accommodating and recognizing multiple cultural contexts of employees. Leaders might synchronize timelines, company strategies, and overall objectives across borders. But, at the same time, it was clear that maintaining strong knowledge of cultural expectations so as to better lead and work with different country cultures was paramount. Another manager observed that while he was respectful of the various cultures of his employees, he maintained the same basic principles of open communication, clear goals, and mutual respect – no matter in what geography he operated in.

Relying on Local Leadership

When managing across borders, a number of participants noted the importance of capitalizing on local partnerships. Although we will discuss local partnerships further in the next chapter as it pertains to innovation in particular, my respondents emphasized the importance of relying on local leadership so as to better *understand* local and cultural expectations in a given geographic location. One manager noted that when working overseas he tried to bring as few American cultural expectations as possible with him. Further, through the guidance of local leaders, he was able to better adapt to the beliefs and values unique to a particular geographic region.

Managers across both industries valued similar attributes in successful leaders of transnational innovation strategies. These attributes introduced by respondents included time commitment to understanding different cultures, active listening to individuals within an organization to create a corporate environment of trust, maintaining a common corporate culture across borders, and capitalizing on local partnerships to better understand the varying cultures that comprise the makeup of an organization. In each of my interviews, managers placed significant value on their ability to adapt to different cultural needs as a key contributor to their success as leaders. In sum, as one of my interviewees aptly stated, the art of management is “managing people the way that they need to be managed, not necessarily the way that it is easiest for you.”

Table 4: Global Multi-Cultural Leadership

Research Question 2:

What kinds of tensions do managers involved in global innovation strategies face in terms of adapting their own personal leadership styles as they cross market cultures?

	Pharmaceuticals and Technology
Major Themes	
Significant Time Commitment	<ul style="list-style-type: none"> • Face-to-face interactions improve internal organizational trust, fosters idea flow
Leaders as Active Listeners	<ul style="list-style-type: none"> • Create a better understanding of linguistic, social, cultural differences that exist
Maintenance of Common Organizational Culture	<ul style="list-style-type: none"> • Consistent standards and values strengthens unifies organization as a whole, even while operating across country boundaries/cultures
Relying on Local Leadership	<ul style="list-style-type: none"> • Local leadership helps improve understanding of local and cultural expectations of geographic regions

Chapter 7: Results - Partnerships

The third question that I sought to answer through my interviews with managers was how local partnerships were employed in the implementation of their innovation strategies. Specifically, my question was: to what extent do managers use local partners to implement their global innovation strategies? Are there tensions associated with doing so? In particular, how does the firm protect intellectual property when engaging with local partners? Respondents from both the technology and pharmaceutical industries placed significant value on the role of local partners as both informants and business representatives. However, they were also wary of the intellectual property risks that are associated with partnering. Managers differed in their strategies to mitigate this notable risk.

Partnerships: Benefits and Roles

Participants across both sectors discussed how the local partnerships enabled them to assess different market needs; the focus, however, varied. In pharmaceuticals, discussions centered around the ability of a global firm to broadly apply a technology it had developed to various markets. In contrast, in technology, innovations were not limited by a certain formula but rather, by the company's own capacity and infrastructure to address global market needs. In addition, respondents in both technology and pharmaceuticals discussed how local partnerships served different roles in their management of innovation—but this too differed by sector. Finally, participants discussed the importance of intellectual property and its relationship to local partnerships.

In the pharmaceutical space, unmet needs are massive: many diseases have yet to

be cured, individuals are living longer lives and thus need medicines to help them continue to live beyond life expectancy, global interaction has facilitated the spread of disease, and the quality of life for a patient can always be improved. Further, incredible ideas and scientific discoveries exist within the pharmaceutical industry. The tension in pharmaceuticals is the matching of a great scientific technology with an unmet need that will allow technology to have the largest impact possible. A critical aspect to success in different geographies in order to understand such needs and to implement solutions is partnering with the right local entities. From the start, partnerships can help companies better understand a given market, the needs there, the competition, drug approval processes, reimbursement schemes, the regulatory path, and commercialization methods. With these local partnerships, pharmaceutical managers are better able to address a given consumer need within the scope of the global brand. Further, they are better able to navigate the complex and locally-driven processes that envelop drug development.

As discussed in earlier chapters, since it is the case that much of the innovation within product development itself is centralized in pharmaceutical companies, partnerships on the commercial side of the business are essential in order to effectively bring a product to a specific market. The way in which local partnerships are used tends to vary based on the country in which a product is being approved as well as the size of the company itself. Distribution partnerships can be drawn upon if a given firm does not have existing infrastructure in place in a particular location. In addition, local knowledge can be critical to developing marketing strategies in a given region. As one interviewee explained, while certain geographies are more physician-oriented because you need a prescription for certain drugs (such as in the United States), places like India and China

might need a different marketing strategy because pharmaceutical products are sold more to affluent parts of society who pay for their own drugs, rather than to the masses.

Production and manufacturing partnerships exist because some countries require that a drug be produced domestically if it is sold in that country. In addition, making products locally has its strategic advantages, including avoidance of input tariffs and certain regulations. One pharmaceutical manager pointed specifically to a technology transfer product, whereby the technology a firm had developed in R&D was transferred to a partner, and the partner would then make the product locally.

Respondents also explained that local partnering in the pharmaceutical sector depends heavily on the size of the pharmaceutical company itself. According to respondents, many mid-sized and small companies will often find a local partner to help them with forward integration into a given market. This way, these smaller companies can focus on what they are best at – R&D – while the partner can work on marketing and selling the product in a region where they have core expertise. In contrast, managers noted that larger pharmaceutical companies tended to have local teams wherever they plan to distribute a product. Their sales force, with significant local knowledge and infrastructure on the ground, could help them to tailor the product to the needs of that market and culture without necessarily needing to rely heavily on local partnerships.

Finally, while most pharmaceutical managers noted the importance of partnerships for commercialization, some also explained that partnerships could facilitate a more efficient R&D process. In the development process, clinical trials can also be undertaken in different parts of the world other than in the U.S. For example, one of my respondents explained that when conducting trials for seasonal vaccines, the ability to

operate in different geographies significantly accelerated the development timeline because his firm was able to access infected patients throughout the year instead of only in the winter months in the Northern hemisphere. As such, if a firm is able to conduct clinical trials on a global basis, this can speed up the R&D process as a whole and create a faster road to commercialization.

In the technology industry, my respondents explained that innovations are not necessarily required to center on a company's current scientific technology or formulas. Rather, innovation in these companies could address any unmet need in the market. However, the key to successful and efficient innovation in technology companies is determining a needs gap in the precise market where one wants to serve an unmet need and then aligning infrastructure and expertise to meet that need. Managers often bridge the gap between consumer needs and company capabilities. A number of managers described how they met directly with customers to determine what needs they hoped the given product could fill for them. Managers then brought this information back to R&D to determine to what extent the company had the capacity to address that specific need.

As my interviewees explained, local partners in the technology industry serve two main roles in the innovation process of global companies. First, they might serve as informants – to help a company better understand the market needs, opportunity, and competition. Local partnerships can provide deep local knowledge to technology firms to help create or alter technology to provide tailored and relevant solutions for customers. Local partners can also serve as representatives for larger corporations. Local entities, through their familiarity with the market, can help to obtain business for the larger company and help to facilitate a relationship with the company and the end user.

A number of my technology respondents pointed to the use of local partnerships such as local sales teams or distributors, as a vehicle through which they could become better informed about a given market and its potential opportunities. According my participants, market knowledge should be based on a deep understanding of local needs, which often vary dramatically by geography. Managers stated that some of the most valuable input when creating products came from those partners closest to the customer. Even managers with global sales teams advocated for the value of local partnerships. As they explained, partners on the ground have familiarity with the region and can help map the competitive landscape, impart insights on how to address a particular consumer base, how to gain an advantage over competitors, and on the nuances of a particular region's cultures and values.

In addition, my interviewees pointed to the value of local partnerships in helping those in the larger organization understand the markets and how to implement innovative solutions. Local partners might even help to train and teach teams from the larger organization who are working on the ground in a given location. Familiarity with local regulatory protocol can also aid in making a service or product allowable in a given location. In this way, local partners who can help multinationals navigate foreign regulatory protocol were described as integral to a firm's global success. Respondents pointed to alliances with hospitals, academic sites, and research centers as well as business alliances such as those with local resellers and manufacturers as critical sources of information for innovating effectively. Further, before bringing a product to market in a specific region, a number of managers suggested identifying and collaborating with key influencers in a given market. These opinion leaders are those who would adopt a firm's

product first and would later serve as an example for the rest of the field. As such, their opinions would be key when building a product. In sum, my interviewees felt strongly that local partners could provide market intelligence, knowledge, and scaling ability.

Beyond the role of informant, local partners in the technology space were also described as serving a representative role during the sales process. As my interviewees explained, in markets with a different language or with different cultural norms than the home market of a company, global firms will tend to foster relationships with local companies to act as representatives in the region and to help opportunities emerge and progress there. Further, global businesses tend to depend heavily on the efficacy of partnerships because regional sellers have relationships with the end users that, in turn, bring sales for the larger company. Local partnerships can also provide technical support in a given region for local customers. According to technology managers, partners on the ground can prove useful in certain markets if they have an existing established brand and local connections. The larger multinational company might provide capital, expertise, and products and the partner would stamp the products with their brand so customers would feel comfortable purchasing them.

Partnerships: Intellectual Property Risks

Respondents in both the technology and pharmaceutical spaces advocated for the importance of local partnerships in the efficiency and efficacy of innovation strategies. However, the creation of local partnerships does not come without risks that have the potential to seriously impact a firm's profits and market share. For both technology and pharmaceutical firms, the most important asset that they lay claim to is their intellectual

property. Thus, when working with local partners and sharing information, ideas, and market insights, my interviewees conveyed that great caution must be taken to protect proprietary information.

According to technology respondents, when working with staff and regional partners, one must be incredibly careful about the information that is shared regarding new products. This is particularly important in the early stages of the innovation cycle. During these stages, information-sharing should be primarily one-sided; that is, firms should collect information from their partners, but remain vigilant and refrain from exposing too much about the future. There is a delicate balance that leaders must manage between maintaining partnerships and relationships, not over-sharing a firm's ideas, while still gaining information from partners to help the organization cultivate ideas for new products. Because the protection of ideas is central to the survival of a technology firm, some managers suggested centralizing R&D so as to better protect a firm's innovations. Some of my respondents stated that they chose not to create R&D centers in certain parts of the world because they were concerned about idea appropriation. As one interviewee explained, "we keep our research concentrated and closely-guarded because if our technology is stolen, we will be out of business."

In the pharmaceutical space, concerns about protecting the firm's unique assets were also related to how they engaged with partners. As these interviewees explained, one of the biggest challenges for the industry relates to intellectual property protection. The very first step to innovation in pharmaceutical companies, which illustrates the importance of intellectual property in this industry, is a Freedom to Operate Assessment. This assessment determines whether an idea like the one a firm is proposing has already

been patented, how close this firm's molecule is to another patented molecule, and how well this product could theoretically be protected around the world. In relation to partnerships, controlling intellectual property involves tightly regulating who has the formula to make a specific product and the mechanisms to make it. As one respondent noted, "while the discovery of the product is in the patent, the full recipe is not;" often, important know-how required for the production of a drug is not fully available to anyone other than the patent-holding company. Intellectual property can be protected through the use of reputable partners, which can be discovered through a thorough investigation and due diligence process or can be developed over time through long-term relationships.

One pharmaceutical manager pointed to a general need to increase global awareness and appreciation for innovation and intellectual property rights in the industry. As this interviewee explained, innovation can and should occur in any country, but it is focused in places such as the U.S. and Western Europe because policies elsewhere need to be altered. In many places around the world, intellectual property is seen as an asset that can be traded in negotiations. It is in the best interest of all countries to protect one others' intellectual property because this, in turn, will result in a reciprocated protection of the hard work and research of domestic innovators when they bring their ideas abroad.

My interviewees also expressed that illegal copying of drugs is a major issue in the pharmaceutical space. As these respondents described, many companies, centered in locations such as China and India, make generic versions of drugs that are of high quality and are sold to the broader population for a lower price by these companies. If a country only receives expensive drugs in return for protecting intellectual property, this is unlikely to lead to stronger intellectual property regulation. Rather, as my interviewees

advocated, to incentivize a bolstering of intellectual property regulation, firms and policy-makers alike should disseminate the idea of reciprocal protection; if a country bolsters its regulations at home, countries abroad will also strengthen their regulations, creating a better global environment for innovation as a whole.

My pharmaceutical interviewees also explained that when working with local partners, outsourcing production and selling pharmaceutical products in a particular country largely depends on the strength of the intellectual property system in a given geographic region. Additionally, the strength of the judicial system comes into play when determining where to outsource and sell. If an intellectual property contract is put in place but the judicial system is weak, it is unlikely that there will be strong repercussions for a violation of that contract. As a result, companies are deterred from producing and doing business in that given country or geographic region. Further, if a patent is not enforceable in a particular geographic region due to a weak intellectual property or judicial system, companies may be reluctant to sell in that country anyway because product replication is a likely outcome. In this way, weak intellectual property systems are actually a detriment to innovation. If a firm cannot be sure that it will be able to sell its own innovation without someone else replicating the product, this in turn reduces incentives to innovate for that particular market.

The issue of selling in geographies that protect property rights versus providing medicines at affordable prices to consumers is a difficult dilemma, one that a number of my respondents reported struggling with on a regular basis. Some respondents were pessimistic about the outlook of intellectual property rights protection in some areas of the world. They argued that in certain countries, the reality is that intellectual property

cannot be protected. Thus, the cost of doing business in that area is recognizing that your intellectual property will be vulnerable to copying or to government authorization of a generic because the pricing policy does not favor domestic consumers. If a company decided not to do business in a country because of a weak intellectual property regime, it is likely that another firm would come in and corner that market for a particular need. Others argued that intellectual property was also a moral issue in the pharmaceutical industry; the provision of certain medicines should be a basic human right, according to these respondents. In this way, protecting intellectual property to promote innovation can also be seen as restricting access to certain medicines for certain populations. While there was no consensus on how to actually manage this dilemma, it seemed that managers dealt with the issue on a case-by-case basis, depending on the company, the region, and the medicine being sold.

Brazil is one example my respondents shared of a geographic region that could benefit highly from a strengthening of its intellectual property regulation. While Brazil has made significant strides in innovation, Brazilians, my interviewee explained, tend to do research for the sake of publishing. While publishing is a viable reason to undertake research, Brazilians could also benefit from commercializing their research. Thus, if Brazil was able to bolster its intellectual property regulations, not only would it likely incentivize an increase in investment and foreign business within its borders, but it could also profit further from its own unique innovations.

In sum, both the technology and pharmaceutical interviewees stressed the importance of vigilant protection of intellectual property rights when operating on a global scale. While technology respondents seemed to focus on intellectual property as it

related to their local partnerships, pharmaceutical managers focused primarily on the regulation of intellectual property itself. While intellectual property risks may be inherent in the innovation process in both industries, it seems that a bolstering of regulation could help to incentivize innovation and could lead to a wider dispersion of new ideas and products across the globe.

Table 5: Managing Local Partnerships

Research Question 3:

To what extent do managers use local partners to implement their global innovation strategies? Are there tensions associated with doing so? In particular, how does the firm protect intellectual property when engaging with local partners?

	Pharmaceuticals	Technology
Major Themes		
Partners as Informants	<ul style="list-style-type: none"> • Help to better understand a given market, local needs, competition, drug approval processes, reimbursement schemes, regulatory path, commercialization methods 	<ul style="list-style-type: none"> • Provide deep local knowledge for product adaptation; help to better understand market needs, opportunity, competition
Partners as Representatives	<ul style="list-style-type: none"> • Commercialization partnerships – production, manufacturing, marketing, distribution, R&D efficiency • Dependent on company size 	<ul style="list-style-type: none"> • Help obtain business for larger organization, facilitate relationships between company and end users • Partnerships with local sales teams, distributors
Intellectual Property Risks	<ul style="list-style-type: none"> • Need to tightly regulate who has specific know-how required to produce drug in certain geographies 	<ul style="list-style-type: none"> • Balance between maintaining local partnerships and gaining information from partners without over-sharing

Chapter 8: Discussion

This thesis focused on understanding how to manage innovation globally and sought to uncover the kinds of tensions and challenges managers face when leading across markets globally. To do so, I engaged in a process of exploration through in-depth interviews with top level leaders in two sectors – pharmaceuticals and technology. Using a comparative lens, I sought to uncover key themes that were similar across respondents from both of these sectors as well as differences. As innovation is central to my work, I begin with a discussion of how my respondents defined innovation across the two sectors. Following, I discuss the main themes that addressed the core research questions that were central to my work. My first question examines the tension between innovating to meet the needs of lower income consumers versus maintaining brand reputation worldwide. Second, I analyzed the kinds of tensions managers involved in global innovation strategies face in terms of adapting their own personal leadership style as they cross market cultures. Finally, I asked respondents about their use (or lack thereof) of local partnerships and of the management and mitigation of intellectual property risks associated with partnering locally. After highlighting the key themes for each research question, I discuss how these themes that emerged from my results reflect and/or extend prior literature that relates to my key findings.

Conceptualizations of Innovation

To begin, I focus on the results of my research with respect to core definitions of innovation and I follow with how my findings relate to prior literature. Many of my respondents emphasized that innovation requires delivering new value to the market. This emerged as a key theme in both sectors that I studied when respondents discussed their definitions of innovation. In the case of technology, respondents focused on the delivery of new value by finding the intersection between what was technically possible for a company and what the consumer valued most. Respondents also spoke to a less dramatic form of innovation that involved adapting and improving upon current successful technologies to address new problems. Pharmaceutical respondents similarly discussed altering successful products to address new markets but also discussed creating new pathways to address problems that existed already in the market. In both cases, my results suggest that there is a keen focus on innovating in ways that ensure that the companies attend to what consumers value most.

In some respects, these conceptualizations of innovation mirror prior research and in other respects, they do not. Respondents in my sample characterized innovation with definitions that reflected a combination of efficient innovation, which is somewhat reflective of frugal innovation (Radjou & Prabhu, 2013) – where the focus is on efficiently engaging in new ideas – and also the underpinnings of reverse innovation (Govindarajan and Trimble, 2012), where an idea is taken from one market segment, be it a technology or an idea, to serve consumers in another market. In the former case, respondents seemed focused on cost-effective innovation, which is reflective of concepts central to frugal innovation. In the latter case, respondents also discussed the idea of

spreading their good ideas to new markets, mirroring the foundations of reverse innovation. I note that in my interviews my respondents did not emphasize in particular innovation that stemmed from emerging markets and then moved to developed country markets.

Across both sectors, a number of respondents advocated for a conservative approach to innovation that could be termed “incremental innovation” (OECD, 2002). Respondents stressed the importance of taking risks while remaining ‘safe’ - that is, innovating without undermining their successful reputation or alienating core consumers. Thus, my results suggest that leaders face very real tensions associated with innovating for new markets and so, in some respects, they were eager to follow an approach that was both efficient and effective. I will return to this notion of risk-taking as a central theme throughout my discussion, when I address the organizational structures respondents have employed to carefully manage innovation.

For a majority of my respondents, the importance of creating an organizational culture of innovation across their global companies was mentioned without my prompting. Although my focus was largely on the structures that support innovation, as I will describe next, my participants also emphasized the significance of having core values and beliefs that were reflective of the larger organization’s culture even when operating in multiple geographies. Prior research on culture suggests that culture can be thought of as the informal structure of a firm or the norms and beliefs that govern the ways in which individuals behave (Schein, 2010). Research on innovation suggests that culture is critical to enabling a company of any size, industry, or geography to succeed

and, if correctly and thoroughly instilled across the organization, can provide a firm with a significant competitive advantage over the opposition (Tushman and O'Reilly, 2002).

In my sample, I found that there were some differences in how my respondents talked about the importance of culture and there were some similarities as well. In terms of similarities, both sets of respondents talked about the importance of appreciating different backgrounds, viewpoints, and ways of thinking, and they discussed the value of having people from different backgrounds and country contexts in order to do so. Prior research has found that diversity is related to innovation. For example, work by Ayres and Nalebuff (2003) has shown that teams that are composed of people from different backgrounds do tend to come up with more innovative solutions to complex problems; groups made up of individuals with varying perspectives will generally outperform those more innately talented. Similarly, a number of my respondents explained that they tend to hire diverse teams of individuals when establishing teams so as to generate a wider range of potential ideas for product development.

While technology managers suggested that their firm was either risk-prone or risk-averse in relation to the ways in which they innovated, pharmaceutical managers spoke to a shifting risk profile. In technology firms, results from my interviews suggest that it is the executives who determine the risk profile of a given firm. In contrast, in pharmaceuticals, the stage in the firm's cycle of innovation or product life cycle governs how resistant or prone a firm might be to developing radical innovations. These differences suggest that there may be ways in which the organization's culture can shift with time, depending upon the development stage of an innovation. These results extend prior work and suggest new opportunities for research as well. Although many scholars

seem to discuss organizational culture as an innate aspect of the work environment (Schein, 2010), it seems that future research could examine in greater depth how that organizational culture naturally evolves and is dynamic, depending upon the stage of a company's innovation efforts.

As expected, respondents did have a lot to say about how the structure of their firms had encouraged or might encourage innovation. A central theme here was that global managers felt the need to determine how to enable creativity to flourish in their firms. There were some differences in how this played out across the two sectors. In particular, a number of technology managers pointed to the creation of innovation subunits whose role would entail connecting to customers while also mitigating risk for the larger organization. In essence, these subunits could be seen as safe spaces for innovating and testing concepts. Some technology interviewees, similar to most of my pharmaceutical company interviewees, advocated for a centralization of R&D centers to allow streamlined and efficient collaboration for idea generation. Further, a number of pharmaceutical respondents attributed the size of a company to largely affecting its innovative capabilities; smaller companies were viewed as engines for innovation while larger, later-stage companies were more focused toward the purchase and commercialization of innovations.

My findings echo the research on innovation and MNCs, which has emphasized the tensions that managers face in creating structures that enable them to garner new ideas from the field while also maintaining mechanisms that allow for efficiency and consistency across markets and product lines. For example, prior research by Kotter (2014) suggests that large companies do have difficulty encouraging innovation and so,

should find ways to structurally enable creative ideas to get to senior management. In his work on “acceleration,” Kotter discusses the idea of creating separate filtering units that would encourage and then sift through new ideas before they came to management for consideration (Kotter, 2014). This work is a new approach to encouraging innovation and could be applied to strands of what I heard from my participants. That is, in technology, there was an emphasis on ensuring that subunit structures were in place that were closest to the customer and then allow for ideas to filter up. However, these respondents were less specific about how, exactly, that filtering would occur.

On the other hand, in the global pharmaceuticals companies, there was a greater emphasis on centralization to ensure that efficiencies would be managed appropriately. These findings reflect some of the research by Grossman and Rangan (2001) who argue that multinational firms need to ensure that ideas developed by separate units or functions are “integrated” into the larger corporate structure. It seems that for pharmaceutical companies, at least in my sample, integration was a key concern that could be addressed, at least in part, by centralizing R&D. Some of my findings and the tensions that managers seemed to be facing in developing these kinds of “ambidextrous” structures (Tushman and O’Reilly, 2004) reflect early research on large corporations that emphasized the need for both “integration” and “differentiation” (Lawrence and Lorsch, 1986). While differentiation within the organization would allow for autonomous business units to attend to various market segments, they needed to be sufficiently integrated into the larger corporation for the business model to be successfully implemented.

These findings suggest opportunities for future work. Future research might explore if and how global managers strive for integration and differentiation using

different structures that both promote innovation and also allow for efficiencies and coordination of operations. Given the differences that I found across sectors, additional research might explore if and how structures might need to change with the kinds of products offered or with the stages of an innovation's life cycle.

Serving Multiple Customer Needs

My second set of research findings revolved around the question of how to effectively innovate to meet the needs of multiple consumer bases. One of the core findings was the tension that global managers faced regarding the desire to help their firms serve multiple customer needs without undermining the global company's brand and reputation. For example, in the technology space, respondents spoke to creating similar products with numerous variations of features and pricing to address varying levels of affordability. Others believed that creating products that could span multiple geographies would allow for companies to address multiple needs without diluting the larger organizational brand.

According to my respondents in pharmaceuticals, brands of each individual product are not necessarily linked to the brand of the larger organization. Thus, marketing and messaging tends to revolve around bolstering the brand of a specific product rather than that of the larger firm itself. However, some participants believed that the brand of an organization could be positively or negatively affected depending on the ways in which the firm chose to operate. For example, respondents pointed to corporate social responsibility (CSR) programs and pricing policies that were favorable to lower-income consumers as ways to improve brand reputation for the larger organization.

My findings align well with prior research on innovation that has examined similar tensions regarding how global companies can attend to varying needs in different geographies. For example, the research on glocalization suggests that innovations originating in established markets can be transferred to the developing world and enable firms to address needs in both developed and emerging markets (Robertson, 1995). Similarly, the work on reverse innovation speaks specifically to the idea that innovation created originally for emerging markets can ultimately be scaled and appropriated by the developed world (Govindarajan and Trimble, 2012).

Further, some of my findings reflect the research stream on Corporate Social Responsibility (CSR). For example, results from my interviews with pharmaceutical senior managers suggest that they were interested in the CSR of their firms, as they considered ways in which their products might need to be modified depending on local markets given the price point of the products being offered and the demographics of markets. Their comments reflect some of the tensions discussed in the literature on CSR, which has shown that those companies that engage in CSR initiatives may reap positive benefits for the company's reputation. However, there are limits to the effectiveness of this kind of activity if it is not carefully managed (Bhattacharya and Sen, 2001). Clearly, serving multiple markets at once, which is often the case in global companies, presents challenges for global managers that are much more complicated than simply bifurcating or segmenting the market and running operations in separate business units; the integration of these strategies and operations are important to consider as well.

My findings also suggest that serving multiple customers entails some tensions that are unique to multinational companies - specifically, the tensions associated with

globalization versus localization – which parallel some of the research on MNCs. As my respondents told me, there are significant incentives associated with customizing products for local needs in different country contexts. At the same time, since MNCs possess a global brand and global operations, thoughtful consideration must be paid to how brand and operations are managed on a global and local scale.

In my technology interviews, a spectrum of views surfaced on this topic. While some respondents placed a high value on tailoring products specifically for a given market, others were more focused on creating the most efficient or cost-effective strategy for a firm's operations. In the case of pharmaceutical companies, because the formula behind the medicine itself did not tend to shift depending on the geography in which it was being sold, adaptations occurred on the commercial side of the business. A majority of my participants pointed to the importance of altering marketing, sales force, administration, and pricing strategies based on the needs in a certain geography, in order to capture the largest market share possible in a given part of the world.

These findings seem to echo the international research conducted by Garvin and Levesque (2008) focusing on global - local tensions within MNCs. Their findings reflect responses from my pharmaceutical managers who believed that tailoring the commercial aspects of innovation was essential for success in different geographies because varying demographics affect values and needs. Research findings by academics such as Govindarajan and Trimble (2012) tend to fall on the local customization end of the global versus local trade-off spectrum. Their work points to five needs gaps that create opportunities for customization and should encourage firms to create innovations that are adapted for local needs (Govindarajan and Trimble, 2012). Further, Allen (2012)

advocates for localization as well, suggesting that “differentiation is found in what you do for your customers each day” (Allen, 2012; p. 1). Thus, scholars who focus on MNCs have recognized trade-offs associated with operating on a global scale for some time. My results also suggest that perhaps how organizations decide to address these needs gaps may actually stem from the prior organizational experiences of the global managers themselves.

Another key issue that has surfaced in scholarly literature is the extent to which the management in large companies can become cognitively entrenched in a conservative mindset and have difficulty changing or moving in innovative directions (Tushman and O’Reilly, 2002). Govindarajan and Trimble (2012) suggest that one of the critical concerns for any company trying to innovate is the extent to which the organization can actually change its “dominant logic” of operating, based on previous successes and antiquated beliefs. Dominant logic can serve as a self-imposed constraint in the pursuit of novel innovation (Govindarajan and Trimble, 2012).

In my interviews, however, only the technology managers made any mention of entrenched mindsets in response to my questions. For example, the technology leaders discussed how a desire to protect the status quo and prior successes of a firm by executives within the organization could stifle the innovation process, particularly within larger technology organizations. In contrast, for my pharmaceutical interviewees, rather than pointing to an entrenched mindset as a tension inherent in innovating, they stated that a desire to protect the status quo might come at a certain juncture in the company's lifecycle after the firm has produced and commercialized a successful medicine. This difference in perspective was surprising and may call for further research to better

understand why and how such resistance to change may be more or less prevalent in different industries.

A final key finding regarding my question about serving multiple customer needs revolved around themes associated with how companies innovated for a specific consumer base. This is similar to the prior theme regarding global-local market tensions but here, the emphasis is on how companies actually did that work. In both instances, global managers repeatedly mentioned the significance of communication to ensure that they were indeed serving the needs of particular consumers. Interestingly, in the case of the technology firms, respondents emphasized internal communication, whereas in the case of the pharmaceutical firms, respondents mentioned external communication more often as a necessity for remaining at the forefront of the industry in terms of coming up with innovative and exciting ideas that could serve global markets.

Prior research on communication within multinational companies has shown that effective internal and external communication are critical to innovative performance in organizations (Kivimaki et al., 2000). Other research on teams working in uncertain contexts, such as healthcare, has shown that finding ways to increase the flow of information and ideas within teams and business units is critical to organizational learning and to solving complex problems (Garvin, Edmondson, Gino, 2008). While difficult, my respondents felt this knowledge transfer was key to the success of their innovation.

In the case of the pharmaceutical companies, the emphasis on external communication with academics reflects the need to learn from outsiders whose work delves into information regarding various scientific areas. Berchicci (2013) claims that it

is critical for organizations to have information that comes from beyond the boundaries of the firm itself in order to solve complicated problems. His work demonstrates that a reliance on external R&D (to a point) improves the innovative performance of a firm (Berchicci, 2013). Thus, my findings do echo prior research on the need for information-sharing both within and beyond the organization. However, the differences across the sectors in terms of the emphasis that respondents placed on internal versus external communication was unexpected and may warrant further research.

Leading Across Cultures

One of the core questions I had in this research was the how managers actually lead in a global environment. Across my interviews, I heard how critical it was to become effective at adapting one's leadership style to suit local customs and cultures and, additionally, how this took time, patience and active listening to learn how to do. In both sectors, respondents shared stories with me about how they learned the local culture, sometimes through experiences such as sharing a meal with local customers, partners, or clients, and sometimes through hearing others' experiences.

These stories and reflections are consistent with scholarship on leadership that has stressed the importance of learning about other cultures and demonstrating empathy in one's work. The skills needed to manage globally are discussed as "managing cross-culturally." Scholars have found that the need for "culturally adept" employees is on the rise and that cultural intelligence is malleable and can be learned (Ramsey & Lorenz, 2016). Prior research suggests that, similar to the stories that I heard in which people learned to modify their leadership behavior, people who have high Cultural Intelligence

(CQ) – an ability to operate in multi-cultural environments and groups and to interact cross-culturally – are able to adjust “in the moment” and so, adapt effectively (Ramsey & Lorenz, 2016).

From a business and organization-level perspective, respondents discussed the need to understand local customs and adapt, all the while maintaining a common corporate culture across international boundaries. The need to maintain this balance reflects research by Grossman and Rangan (2001) that demonstrates that while customizing leadership depending on geography is important, maintaining consistent standards and values across an organization can help unify and strengthen the firm as a whole. Additionally, Kanter’s research (2010) suggests that it is critical for leaders to invest time with employees in the locations in which the firm does business. Face-to-face interactions will facilitate an environment of trust within the organization and allow managers to engage in “identity work” whereby leaders will come to better understand the linguistic and social differences of employees that exist across borders. Leaders who acknowledge, understand, and adapt to these differences, according to Kanter, may in fact enable and encourage individuals to express their ideas and innovate (Kanter, 2010).

The challenge of managing across cultures reflects a prior tension discussed, which was the theme of serving multiple customers both globally and locally. The tension that firms face when creating products with a global brand that are also tailored to fit specific markets parallels the duality that leaders must manage when leading across borders; managers must maintain a certain equilibrium between the global corporate culture while adapting management to fit needs within different cultural environments. In these ways, my findings reflect previous scholarship and suggest that, with future

research, there may be some additional insights that could be gleaned as to how these kinds of culture-crossing activities that global managers must engage in constantly impacts their own leadership style over time and perhaps even their own identities.

Managing Local Partnerships

The results from my research also revolved around the core question of, to what extent do managers use local partnerships to implement their global innovation strategies. Here, I found that my interviewees were very interested in discussing the benefits and roles of having partners when managing across geographic regions and across cultures. One key role emphasized in both sectors was the function of partners as informants who could help a company better understand a particular market, its needs, opportunities, and competition. Additionally, managers in both sectors suggested that local partners could also serve as representatives on the commercial side of the innovation process. In this way, local partners could help the organization obtain business by facilitating relationships with the end-users, and could also help with the implementation of relevant distribution mechanisms and marketing strategies.

My findings are reflective of some of the prior research on partnerships or strategic alliances. For example, prior research has demonstrated that firms enter into alliances or partnerships in order to gain access to new information and resources, and that these alliances are particularly critical in highly uncertain environments (Gulati, 2007), which one could argue is the case when a company is trying to innovate. In this case, the partnerships that my respondents discussed were deemed important in this context of innovation to reduce uncertainties associated with new markets and to gain

knowledge necessary for the business (Mowrey, Oxley, and Silverman, 1996). In addition, my findings echo prior research by Morten and Birkinshaw (2007) who show that companies can capitalize on partnerships with external entities such as universities, government labs, entrepreneurs, and even customers themselves to learn about emerging ideas and generate unique concepts and products. This sort of knowledge exchange and collaboration can allow a firm to tap into sources of knowledge that will keep its innovations relevant and the organization as a whole at the forefront of the industry (Morten and Birkinshaw, 2007), which is similar to what I heard from my respondents in both sectors.

Finally, my respondents noted that while partnerships are essential for success in a global market, there are significant risks associated with entering into them. One of the most significant risks associated with partnerships relates to intellectual property, in both the technology and pharmaceutical industries. This is largely because the most important asset that firms in these global and uncertain contexts own is their intellectual property. Findings from my interviews align well with prior research that has examined the benefits and costs of alliances. For example, research on alliances has shown that there is oftentimes a tension between cooperation and competition that must be managed and taken into consideration when entering into partnerships (Khanna, Gulati, Nohria, 1998).

In my sample, there was evidence of these kinds of concerns as some technology respondents talked about the ways in which they maintained primarily one-sided information-sharing with partners in the early stages of a product's development so as to protect over-exposure of the firm's innovation. In future research, it could be helpful to delve more deeply into if and how certain kinds of partnerships presented opportunities

for collaboration as opposed to competition and how global managers deal with this delicate balance as it relates to expectations and norms in certain country contexts. It could be that in some countries, collaboration is more generally expected and in others, competition is more often the norm among partners. The potential for country-level differences in the use of partnerships might be useful to explore in future research and could be helpful to leaders who must navigate partnerships in multiple country contexts on a daily basis.

Limitations and Suggestions for Future Research

Although my research design had several strengths, including the breadth of the organizations from which I was able to garner interviews and the senior level of the interviewees, who were difficult to reach and find time in their busy schedules, there were several limitations to this research as well. First, the examination of my research questions was limited due to a small sample of twenty respondents. Although these were in-depth interviews that lasted approximately 45 minutes in length, this research would have been richer had there been more interviewees in total.

Therefore, future research into these areas of inquiry could benefit from a larger sample size and respondents stemming from other industries. This larger and more diversified sample size could provide a better understanding of the generalizability of some of my findings. Alternatively, future research could engage in additional interviews in these same sectors but with more leaders at different levels of similar organizations to understand if and how the tensions uncovered here might play out differently at different levels of an organization. It is likely that the tensions that presented themselves in my

findings are more pronounced at the senior management level rather than at the local level of management because of the nature of these tensions. The challenges that arose in my study were those associated with managing on a global scale within a multinational firm. I would hypothesize that an array of other challenges might present themselves for leaders at the local level as they work to manage their individual groups. At the same time and despite the small sample size of my study, this study was an effort to explore rather than definitively test hypotheses, and so, I am hopeful that my findings are able to provide insight into some of the tensions that leaders of multinational firms face and to generate future research interest.

I was also limited by the nature of the data. I was fortunate to be able to gain access to very senior level executives in both the technology and pharmaceutical spaces. However, because the data were purely qualitative, and therefore did not contain quantitative aspects, it is difficult to discern the impact or benefit of the various ideas suggested in my interviews. Future research could use a mixed method approach to my areas of inquiry; this would require determining quantitative measures of, for example, the different markets served. Creating a quantitative study to further this research could include surveys that would ask respondents to report on similar scales the extent to which they experienced certain tensions uncovered in this research. Moreover, gathering data from both the upper and lower levels of management could help to better understand whether these challenges are typically widespread across management within an organization or more pronounced at certain levels. Further, with quantitative data collected over time on certain kinds of market expansions and their impact, we might learn more about how innovations are introduced and managed differently over time.

More generally, a mixed methods approach might help us uncover additional tensions associated with innovating on a global scale in multinational corporations.

Finally, my sample was built from a snowball sampling technique, whereby my network of contacts was built out as I spoke to more interviewees. While this sampling technique provided breadth and depth to explore my areas of inquiry, conversations were more opportunistic than originally anticipated. Thus, as previously discussed, not all of my interviewees were necessarily in the process of serving underserved markets. Still, many of the lessons from my interviews seem plausibly generalizable to the broader field of innovation management within multinational corporations. Future research that is able to more narrowly select leaders who were all operating in similar geographic regions could build upon this research to examine if there are separate and useful lessons to be learned about transferring or creating innovations in underserved markets for developed markets, or the reverse.

Conclusion

The findings from this study provide evidence that research into the management of innovation in multinational corporations, such as the study of organizational structures to promote idea generation, can help us to begin to understand how to best address the complex and diverse needs that exist in our increasingly globalized world. Whether or not an organization is risk-prone, risk-averse, or somewhere in the middle, it is evident that the future of innovation and product development will include unraveling the intricacies of successfully leading transnational innovation strategies.

One of the core overarching themes that this research uncovered is the idea that paradoxes or tensions are ever-present for leaders of global organizations today. I began

this research with the sense that there may be tensions in adapting to local needs in product development while maintaining a global brand and global operations. However, what I found in my work is that this notion of tensions extended far beyond what I originally anticipated. For example, in terms of creating a corporate culture of innovation, leaders talked about maintaining a global organizational culture while recognizing and empathizing with local cultures of individuals within the firm. In terms of leading for global innovation, they talked about retaining their dominant and unique leadership style, while also being adept at tailoring their style to suit different country contexts. Even in discussions of the content of the innovation itself, leaders explained how products often needed to span geographies but at the same time address the needs of specific geographic markets, with their unique values and needs. And, in terms of partnerships, my findings uncovered a core tension around fostering collaboration when there was the possibility of competition.

After further examination of my findings, it seems that these tensions or paradoxes are actually made up of interdependent elements. For leaders I spoke with, these elements, some complementary and others contradictory, did not require choosing one or the other, but rather, maintaining a sort of equilibrium between different elements that made up these tensions. For example, global leaders expressed the need to maintain a global corporate culture and also be able to encourage local subcultures to emerge in certain country contexts or in smaller business units. In this way, these organizational tensions could instead be viewed as dualities rather than paradoxes that need to be resolved – dualities that coexist in the operations of multinational corporations and are interconnected in nature.

The organizational dualities that have been unveiled in this study, particularly in relation to innovation, are representative of the challenges and opportunities that present themselves when operating on a global scale. Future research that examines the topic of paradoxes as dualities in the context of global management might further my research. Just as there has been a rise in training leaders to develop a Cultural Intelligence (CQ) (Ramsey & Lorenz, 2016), there could be implications for how leaders are developed such that they become adept at finding ways to coordinate or integrate different structures, cultures, and leadership styles as they manage global firms. And, in the case of managing for innovation, my expectation is that these kinds of dualities will only be that much more challenging as managers face the duality of leading for “new” ideas while preserving their core mission and previous successes.

Appendix A: Thesis Overview Shared with Interviewees

For my honors thesis, I am studying how managers and leaders of global firms manage innovation in multiple markets, especially in both developed and emerging markets. I am particularly interested in the kinds of tensions that managers of innovation strategies face as they try to implement innovation strategies worldwide within their firms.

Current research on multinational corporations (MNCs) provides an understanding of different kinds of innovation and the ways to attend to multiple markets. However, there is less documentation of how these innovation strategies are actually implemented on the ground and the tensions that these efforts might produce. For example, substantial research on innovation by Vijay Govindarajan and Chris Trimble has examined the theory of “reverse innovation,” where firms focus on local customization and innovate specifically for the needs of emerging market consumers. Others, including Michael Tushman and Charles O'Reilly, have also looked at global firms’ “ambidexterity” in attending to multiple market needs at once. Scholars such as Garvin and Haas demonstrate the difficulties that managers face in coordinating communication and information flows across international borders and cultures. However, there is little research that pulls these streams of work together or that looks at how coordination and communication issues that condition a firm’s implementation of a global innovation strategy.

For my work, I am interested in three kinds of tensions that I believe that managers of global companies may face when implementing a global innovation strategy. These could be stated as “hypotheses,” although they are likely more similar to areas of inquiry. I have outlined these three areas below. On the next page, I have included specific questions for your consideration that I plan to use in my interview process.

1. Is there tension between innovating to meet the needs of lower income consumers versus maintaining brand reputation worldwide; if so, how would these be described?
2. What kinds of tensions do managers involved in global innovation strategies face in terms of adapting their own personal leadership style as they cross market cultures?
3. To what extent do managers use local partners to implement their global innovation strategies? Are there tensions associated with doing so? In particular, how does the firm protect intellectual property when engaging with local partners?

Through this research, I hope to contribute to a better understanding of how companies can improve their ability to meet the needs of diverse consumers in both developed and emerging markets. Further, I aim to contribute to the literature on the management of innovation on a global scale. My focus is on the implementation of global innovation and it is for this reason, given your role, that I believe speaking with you would be very helpful.

Overall, I expect the interview to last between 30 minutes and an hour in length and will focus on the above-mentioned topics. A sample list of questions can be found on the following page. Participant names will be kept anonymous unless the participant indicates otherwise to the researcher. Thank you in advance for your consideration, and I look forward to speaking with you.

Appendix B: Interview Protocol and Sample Questions

Please describe your role in X company (current/past). In what ways were you involved in global strategy work and, in particular, innovation that was going on at X company? Can you describe the global innovation strategy you observed (or led) while you were at X company? What were the priorities at the time and how did they shift while you were there?

Can you describe a product or service that you would characterize as a strategic innovation initiative – where a new product/service was developed and executed either in the home market (e.g., United States) and then taken to another country or some other strategy - when a product/service was developed separately for different markets?

Would you trace the evolution of this example/initiative in your company?

- Was it planned that this would be a global innovation initiative from the start or did this just evolve that way over time?
- When was a team put together to work on this project?
- How did you select the team members?
- How did you divide up the work and why?
- How was this team managed? Led?

More generally, I am interested in the management of innovation at your company.

- How intentional has your company been in trying to innovate in different country markets and why?
- Could you talk about the tensions that have arisen in your experience between creating new innovations for underserved markets while also maintaining your firm's brand and reputation?
- More generally, how have you managed the tensions and risks that might be associated with trying to meet local market needs while in a global company - what has worked well/not so well, from our experience?
- What other tensions exist in this kind of global innovation work that we have not discussed?

My work is also focused on examining the risks to a firm that may be associated with partnering with local entities.

- In general, does your company work directly with local partners in a country they might want to enter? Or, do they bring in people from corporate?
- What / who have been your most valuable partners on the ground?
- How / has your company coordinated information flows/transfer with these partners? Are these kinds of partnerships managed differently and if so, how?
- What is critical to know about working with local partners when innovating or implementing an innovation strategy in your field?
- Can you please walk me through the risks of working with different kinds of local partnerships?
- Do you think your approach to serving different markets (other than the U.S.) is unique to companies in your sector? Why/not?

I am also interested in the leadership of global companies like X and the ways that people might need to adapt their own styles or management when working across cultures

- In general, did you find that you had to adapt or alter your leadership style when working in different cultures? If so, can you give an example of a time when you did this? How did you go about altering your leadership style to conform to your understanding of the cultural, political, social environment in a different country context?
- What lessons do you take away from these kinds of experiences?

Did my questions miss any critical issues in managing innovation strategies globally?

Are there any other individuals that you think I could talk to about this topic?

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