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Transnational Corporations, Institutional Change, and Economic Development: An Institutional
Learning Model for Development

A dissertation submitted in partial satisfaction of the requirements for a degree Doctor of
Philosophy in Geography

by

Mariko Eva Silver

2012

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ABSTRACT OF THE DISSERTATION

Transnational Corporations, Institutional Change, and Economic Development: An Institutional Learning Model for Development

by

Mariko Eva Silver

Doctor of Philosophy in Geography

University of California, Los Angeles, 2012

Professor David Rigby, Chair

The paper examines the role transnational corporations (TNCs) can play as boundary spanners supporting institutional change and policy transfer. Interactions between transnational investors and locationally bound actors increasingly give shape to the shifting geography of economic power and can lead to fundamental and persistent changes in the government, governance, and institutions that influence the character and potential of places. Historical context, path-dependency, power dynamics, and exogenous shocks all influence the formation and fungibility of the institutional matrices that influence prospects for economic growth. This paper examines the processes of institutional change by examining the lived experience of institutions—interactions of specific organizations in context—to shed light on how institutions shape development and how institutions themselves are shaped. A viable TNC acting as boundary spanner will enable learning through legitimate peripheral participation and encourage locationally bound actors to work together with industry toward clearly articulated goals.

This study focuses on Intel Corporation's investments in Chengdu, China and the Ho Chi Minh City region of Vietnam. Through multiple interviews over the course of five years, it explores how the corporation pushed for changes to organizations, norms and ways of working in higher education and in economic development organizations, both major determinants of an economic institutional environment. In economic development organizations, Intel encouraged increased accountability and acculturated government officials to the demands and vocabulary of engagement with the global economy. In higher education organizations, mutual articulation of clear learning outcomes and linkages with peer higher-education entities in other countries were among Intel's key contributions.

The dissertation of Mariko Eva Silver is approved.

John A. Agnew

Michael M. Crow

C. Cindy Fan

David L. Rigby, Committee Chair

University of California, Los Angeles

2012

For Tony, Joan, Thom, Kumi, and all my teachers. You are the greatest gift.

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Biography

Mariko Silver currently serves as Special Advisor to the President of Arizona State University where she oversees multiple international efforts. Ms. Silver has served as Deputy Assistant Secretary for International Affairs at the United States Department of Homeland Security and as Policy Advisor to Arizona Governor Janet Napolitano. In Arizona she oversaw the state's public and private universities, community colleges, and vocational institutions, the Arizona Department of Commerce, and Science Foundation Arizona. She worked previously at Arizona State University and Columbia University. She holds a BA (hons) in History from Yale University and an MSc (hons) in Science and Technology Policy from the University of Sussex (UK), Science Policy Research Unit (SPRU).

Chapter 1: Introduction

In 2003 Intel became the first major transnational corporation (TNC) to announce a significant investment in the semiconductor industry in the western part of China. Intel announced the selection of Chengdu, the capital of Sichuan Province, one of the most populated and economically productive of the western provinces, as the site for its newest greenfield investment. When Intel arrived in Chengdu, the city was already at the developed end of the spectrum among western Chinese provinces, with a strong industrial base and well-regarded universities, but it had not yet been able to attract foreign direct investment (FDI)¹ at the scale of the eastern provinces. It was (and is) still considered a developing area. Intel was following the Chinese central government's exhortation to "Go West" and encourage economic development and integration into the global economy beyond China's economically established and fast-growing eastern provinces.

Turning to Vietnam, in 2006 Intel announced it would make the single largest private investment the country had ever seen and would build a one billion dollar (USD) semiconductor facility on the outskirts of Ho Chi Minh City in the south of Vietnam. This project would also become Intel's largest single investment anywhere in the world. Vietnam's ability to attract a globally branded, high technology transnational corporation to Vietnam was a major accomplishment, and it helped put Vietnam firmly on the high technology FDI map. The announcement of Intel's commitment to build near Ho Chi Minh City made headlines throughout the country and around the world.

¹ The United Nations Conference on Trade and Development (UNCTAD) defines FDI as follows: Foreign direct investment (FDI) is investment involving a long-term relationship and lasting interest in and control by a resident entity in one economy in an enterprise resident in another economy. In FDI, the investor exerts significant influence on the management of the enterprise resident in the other economy. The ownership level required in order for a direct investment to exist is 10% of the voting shares. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals or by business entities. Some countries use a definition of FDI that differs from the preceding one (UNCTAD 2005a).

There is no question that TNCs affect the countries, regions, and cities where they choose to invest. Scholars have identified multiple possible and proven roles for TNCs in economic change (Dicken 2003, Young et al. 1994). TNCs are hailed as bringers of technology, wealth, and know-how; creators of jobs; and generative engines of economies. They are also reviled as gobblers of resources, and destroyers of local culture, environment, and entrepreneurial activity. Positive or negative, these effects are referred to in the literature as “spillovers.” The bulk of the economically focused spillover literature centers on the relationships that TNC activities have to indigenous companies—how large and trans-local TNCs affect their smaller and more geographically bounded counterparts. There is less analysis of spillover relationships between TNCs and other “located” actors, including governments and geographically tied public sector organizations. And, the literature touches only glancingly on an area of potential TNC interaction that could yield significant insight into the relationship between TNC location and regional economic success: institutions.

The term “institutions” is shorthand for the norms and values—often referred to as “rules of the game”—that govern social behavior and provide a framework for economic interaction. In the realm of economics, “good” institutions—in the form of strong property rights protections or contract laws, for example—help to enhance clarity and predictability in the system of exchange. When economists or development scholars say that a place has “bad” institutions, they generally mean that the location in question is poorly governed, has weak rule of law, is corrupt, or simply has an insufficiently articulated or murky framework for economic activity. In such a place economic actors large and small have little trust in their ability to reap a return on any investment or to secure gains from economic transactions. Institutional quality, therefore, is seen as a significant determinant of economic success and a major point of differentiation among

localities. TNCs can be exploiters of poor institutions, but can they also act as “importers” of good institutions?

There is a great deal of literature on how TNC’s interact with institutions from the TNC perspective (e.g., the importance of institutional makeup in determining TNC locational choice), but much less from the institutions’ perspective (Flores and Aguilera 2007), and it is the institutions that are the place-bound and place-defining features in this interaction. The policy transfer literature identifies TNCs as coercive actors (Dolowitz and Marsh 2000). Because of the mobility of their capital, TNCs in particular are seen as able to “force governments to adopt policies capable of attracting industries,” some of which might have detrimental long-term effects—for example, on the environment. And the power of TNCs is increasing as the mobility of capital increases, thus diminishing the “capacity of national policy-makers to frame their own agendas” (Dolowitz and Marsh 2000, 6).

At the time of its investments in Chengdu, China and Ho Chi Minh City, Vietnam,² Intel was the biggest high-tech TNC either place had ever engaged. In both places the local and central governments were intimately involved in the attraction of this marquee multinational corporation and continue to be deeply engaged in its retention. These engagements can provide a window both into the nature of relationships between TNCs and governments, and into how the interactions that comprise those relationships might lead to fundamental and persistent changes in the governments, governance, and institutions—as well as the economic trajectories—that help shape the character and potential of places.

One of the principal roles of government is often the regulation, oversight, or in the case of China and Vietnam even the management, of economic activity. Might interaction with TNCs

² The Intel site is just outside of Ho Chi Minh City proper (near the high-tech zone within the periurban perimeter of the city), but for ease of reference I will use Ho Chi Minh City to indicate the location of their investment.

even change the way that governments engage in this central element of governance? Might a relationship with a TNC shift a government's idea of what its role—what its job—is? Can we find examples in which change in one policy area led to, or is emblematic of, a fundamental shift in a government's conception of its relation and obligations to society and vice versa?

Do institutions change and even learn through their interactions with TNCs? Do people in a selection of institutions with strong influence over the economic trajectory of these places change their perspectives and ways of working, and do these people, in turn, change institutions? Does institutional learning take place as a result of interaction with certain TNCs? What elements of learning are due to interaction and influence of TNCs rather than to academic, “regional development industry,” and inter-governmental influences (Lagendijk and Cornford 2000)? These are the questions I will address in this project.

I explore whether TNCs can play a catalytic role in institutional learning processes. How does a particular set of organizations and institutions enter into and engage with a learning process that leads to substantive change in the function or focus of those institutions? What is that process like “on the ground”? What are some of the factors that can make it successful from an economic development perspective? This is another angle of approach to the TNC embeddedness discussion articulated by Dicken et al. (1994).

I hypothesize that the entry of a major TNC into a developing area can have significant effects on the economic institutional environment in that area; and that some of these effects are traceable to direct interactions between the TNC and institutional actors (actors in a position to set institutional frameworks or directions). I am particularly interested in the interactions between TNCs and institutional actors within government and government-affiliated organizations. I will focus in this paper on higher education organizations and economic

development organizations as major determinants of an economic institutional environment and as organizations with the potential to be influenced significantly by the entry of a TNC. These organizations are of particular interest as they can be both formative and reflective of the institutional environment that lends shape and direction to economic activity.

Research design and case study selection

I have chosen to use a case-study approach to explore the research questions articulated above. I will look at two cases, Intel's entry into Chengdu, China and Intel's entry into Vietnam. Through this particular pair of cases I hope to expand our understanding of the consequences of policymakers' decisions to attract major multinational corporations. As states and cities adjust their policies to attract these TNCs, how do they change their roles as government actors, and how do they change the incentive structures for their communities?

Intel is what can be called a "marquee multinational corporation." I define *marquee multinationals* as industry leaders with international brand recognition and significant influence over their industry, or at least their own supply chain. While there are TNCs of various sizes and types, much of the development literature on the role of TNCs in economic development focuses on large companies and their ability to create a series of upstream and downstream development effects (through supplier and distribution networks, deleterious and positive) that might affect the place in which the large company is located (OECD 2002; Lozano and Boni 2002; Driffield and Hughes 2003; Milberg 1999; Aitken and Harrison 1999; Young et al. 1994; Blomström 1998; Dicken et al. 1994). A focus on larger, well known companies facilitates data gathering and has the added benefit of enabling this project to be consistent with much of the existing literature on TNCs.

It is clear even from casual examination of news reports that Intel's entry into an economic environment attracts attention to that place as a potential investment location. The Intel brand is internationally recognized among consumers as a high technology company with an advanced product line. It is the top semiconductor company in the world. It is ranked in the top 100 companies in the Fortune 500 index and is a company with a widely known and successful brand. Intel is the largest manufacturer in an expansive and high-technology industry. Many places are eager to attract Intel facilities and those places with Intel facilities boast of them as a significant local asset. Intel is often an early entrant TNC in emerging economies. By focusing on an early large-scale investor I hope to be better able isolate the role of any single company. Also, studying an entity that helps initiate new activities in a place could sharply highlight challenges to development that the locality might face.

Outline

My core interest for this project is in the role of TNCs in institutional change in developing countries, in particular in the transitioning post-communist environments of China and Vietnam. In order to explore the questions outlined above, I will frame my inquiry principally in two theoretical traditions: development studies and institutional change research. By exploring the interactions between TNCs and government institutions, and the changes that those interactions prompt, I intend to illuminate the processes of institutional change and to contribute to the literature on development by laying out what might be called an institutional learning model of development.

In Chapter Two I begin with a survey of the literature on TNCs and the internationally mobile capital they often control. I focus on what scholars have learned about how these globe-

spanning entities interact with the places where they do business. Transnational corporations are central elements of the modern economic age. The international spread of corporate activity is not a new phenomenon, but it is arguably a defining feature of today's economic environment (UNCTAD 2008). It is therefore critical that we expand our understanding of the role these TNCs play in shaping the local economies and their placement, roles, and interactions in the global economy.

In Chapter Three I lay out the theoretical framework for my project. I begin with a brief overview of western development theory and scholarship on the role of institutions in economic growth. In what follows I build on work by development and globalization theorists on the intersection of localized actors and globalized flows—especially the flows of mobile capital—to explore processes of institutional change as an important aspect of development. I survey the literature on how institutions and organizations change, with particular attention to how externally generated institutional models are transferred, imported, and integrated as part of efforts at development. Chapter Three also describes the legitimate peripheral participation (LPP) learning model I will draw upon in my analysis of the interactions between Intel and the places in which it locates.

Chapter Four introduces the case studies and methodology, discusses the origins of the project, and provides some background on Intel. Chapters Five and Six present the case studies themselves, first Chengdu and then Ho Chi Minh City, and Chapter Seven concludes.

Both China and Vietnam are undergoing transitions from managed to hybrid capitalist economies, but they are each doing so in different ways, which I will explore in the two case-study chapters. The shift toward capitalism is occurring at a time when the spatial organization of production and consumption reflects local capacities and pressures, but also at a time when these

local considerations play out against a backdrop of global economic integration. Within developing and developed economies alike, TNCs can play critical roles in terms of investment, jobs, technology, and, I argue, institutional change and development. In both transitions, local and national governments are engaging with TNCs as never before and, in both cases, Intel was an early TNC entrant into the local economies. I wanted to find out whether Intel's entry into these locations might have led to shifts in the economic development trajectories of both of these places and, if so, if it had done so through engagement with local institutions. Additionally, if local or national institutions appeared to have changed, did this change reflect learning on the part of those institutions? My working hypothesis was that it did, and that where this learning was effective, it occurred through some form of legitimate peripheral participation.

Chapter 2: Transnational Corporations: global entities, local contexts, and the competition for mobile capital

Variouly referred to as transnational corporations (TNCs) and multinational corporations (MNCs³) these economic entities are employers, they produce goods and services working in multiple localities across national borders, and they engage with diverse governments and places. By definition their work spans nations and often encompasses continents, and each place has its own unique interaction with these globe-straddling economic entities. Because of their mobility and the jobs and economic benefits they can bring, many countries, regions, and cities are increasingly engaging in competitive place-making to attract TNC assets. Places are striving to make themselves maximally appealing locations for investment and, in so doing, are often changing everything from their physical landscape to their fiscal policies and their institutional environments. I will survey below some of the types of changes places may and do undertake to attract and retain TNC investment. But my focus is primarily on the institutions these interactions between places and TNCs are encouraging or creating, and what kinds of organizational and engagement infrastructures are emerging. In particular, I hypothesize that interaction between mobile TNCs and place-based governments can change the behavior as well as the perceived and real roles of those governments. Additionally, as the relations change among big actors—nation-states and TNCs—the relations among smaller actors, including sub-national regions, regional institutions and organizations, and smaller companies can change as

³ I have chosen to use primarily the term *transnational corporation* (TNC), rather than *multinational corporation* (MNC) following Dicken's (2003) definition: "a firm that has the power to co-ordinate and control operations in a large number of countries (even if it does not own them), but whose *geographically-dispersed operations are functionally-integrated*, and not merely a diverse portfolio of activities." But, when quoting authors who use MNC, I have not altered their words.

well. Each incremental change can shift, tear apart, and reweave the global political and economic fabric.

The past three decades have seen simultaneous consolidation and expansion of corporate activity. New communication technologies, reduced trade barriers, and developing markets have all encouraged corporations to expand their production chains across the globe, building networks of owned and affiliated subsidiaries. According to UNCTAD, in 2003 (when Intel was deciding to put a facility in Chengdu) at least 61,000 TNCs with more than 900,000 foreign affiliates engaged in “international production” estimated to be \$7 trillion (UNCTAD 2005). Even previously location-dependent (or co-location) corporate activities, particularly services, are now also increasingly mobile (UNCTAD 2004). As a result, many states, cities, and sub-national regions are seeking to cast themselves as viable competitors in a field of potential TNC locations. Additionally, during the 1990s, TNCs on average became significantly larger and, perhaps more importantly, productive assets and revenue are increasingly consolidated under the control of a small group of the top TNCs (Roach 2005). The Fortune Global 500 companies received combined annual revenues in 2004 of over \$15 trillion and, according to Roach (2005), the value of capital assets owned by the world’s 50 largest corporations increased by 686 percent between 1983 and 2001. During roughly the same period, mergers and acquisitions have also led to a handful of extremely large corporations with activities in multiple countries.

States and TNCs, in combination with smaller actors, are altering their behavior and strategies for success in this new environment of increasingly mobile capital. Even as they adjust their approaches to the new environment, however, these actors together, through their incremental changes in behavior as well as through their major shifts in policy and strategy, are dynamically engaged in changing the map of global production.

While a sizable portion of contemporary economic activity is still concentrated in the West (Hirst and Thompson 1996; Bordo et al. 2003), TNCs are increasingly investing in, working in, and supplying to developing countries. In the first years of the 21st century a developing country—China—became the largest recipient of FDI in the world, and the largest manufacturer, surpassing the United States (Christiansen and Bertrand 2004). And, while within the developing world FDI is still extremely concentrated, more countries around the globe are increasingly on the radar screens of TNCs in some way, shape, or form. Developing countries have long been engaged in international trade, largely as resource and raw material suppliers in colonial eras, but now their roles in the international economy are increasingly diversified. Developing countries are locations for manufacture as well as, still, sources for raw materials, and in the last few years a small subset of developing country locations have even become providers of “higher-end” services like design and financial modeling and “top end” activities like R&D. In addition, developing country populations are increasingly consumers of TNC products, further diversifying their points of engagement with the global economy in general and TNCs in particular.

Dicken (2007) argues that TNCs are the dominant force on the global economic scene. They are the drivers of the global economy, and they are spreading their activities more broadly than in previous eras (though some scholars, including Hirst and Thompson 1996 and Bordo et al. 2003, debate aspects of this claim). They are engaging more places, and more of those places are in the developing world. They are also engaging those places in different interactions, building new relationships, and with an arguably freer hand, than in previous eras, including the immediately previous Cold War era. There are those who legitimately decry some of the effects of TNCs on developing countries and those who hail TNCs as the best, and maybe only,

effective way to grow and “upgrade” economies—to “develop” these underdeveloped areas (Lodge 2002; Lodge 2006; Dollar 2003). There is legitimate and ongoing debate on both the individual and net effects of TNCs on developing economies, and the debate is decidedly “unresolved” (OECD 2002). I will outline here some of the main approaches to framing and assessing the purported benefits and costs, and will then suggest some new elements we might inject into the debate.

While TNCs are often treated as a generalizable category of actor, there is in fact a great deal of differentiation among TNCs and therefore among TNC effects. This is true both across and within industries. Extractive industries, for example, form something of a category of their own. At the same time, TNCs from different countries within the same industry have shown remarkably different approaches to internationalization and engagement with developing countries (West 2002). Also, even the same TNC can have different experiences and effects in different countries, even in cases when those countries host similar parts of the production chain (DePropis and Driffield 2006).

Much of the literature on the benefits of TNCs for host economies in the developing world focuses on potential and documented spillover effects. These spillover effects can take multiple forms: human capital effects, social learning effects, competition/efficiency/productivity effects, demonstration effects, attraction effects, backward linkages, external linkages, to name some of the most discussed. There is, however, mixed evidence on the realization of these effects (Blomstrom and Globerman 1999; Driffield and Hughes 2003; Paus and Gallagher 2006). Of these, backward linkages are seen to deliver the most consistent benefits to host economies (Blomstrom 1991; Blomstrom and Globerman et al. 1999). The literature on costs or negative effects ranges from the economic-structural views of dependency theory and branch-plant

economy theory, localized capacity diminution, and crowding-out of local businesses, to concerns about exacerbating uneven income distributions, exploitation of labor, and eco-effects as well as post-development informed concerns about cultural preservation and unique development trajectories (Rahnema and Bawtree 1997; Lozano and Boni 2002; Driffield and Hughes 2003; Kirby 2004).

Access to and utilization of technology is arguably the most important determinant of long-term economic growth, so it makes sense that investigations of positive (potential) economic effects of TNCs would center significantly on engagement with technology. While there is a great deal of discussion of technology transfer as a primary potential benefit of engagement with TNCs, both in academic and in policy circles (Naughton and Segal 2000), the evidence of effective technology transfer is certainly mixed.

Given this menu of possible costs and benefits, how might we determine net effects? Case-study approaches have shown that while we can outline broad parameters of expectation, on-the-ground effects are strongly determined by location and organization-specific factors (Naughton and Segal 2000; Almeida 2004, Kirby 2004; Giarranta and Pagano et al. 2004; Yeung and Liu et al. 2006; Paus and Gallagher 2006). That is, factors related to the dynamics of particular TNCs in particular places.

Drawing on the growing literature on the relative and interrelated roles of institutions, capital, localities, and TNCs (see, e.g., Young et al. 1994; Storper 1997; Dicken et al. 2001; Scott 2001; Dicken et al. 2002; Dicken 2003; Scott and Storper 2003; Agnew 2005a), we might extract some frameworks for what determines economic success and relate these to the more generalized theoretical frameworks of the economic literature on spillovers. In particular we know that

institutions matter as a determining element of economic success (I will discuss this further in the next chapter), yet institutions are not a major focus of the spillover literature.

Though passingly addressed, for example by Paus and Gallagher (2006) and Kirby (2004), the institutional learning effects have not been central to analyses of TNC impact; yet institutions clearly matter in determining the effects on places of engagement with the global economy in general and with TNCs in particular.

In addition, there has been little discussion of institutional learning at the government level as a possible spillover effect, yet we know from the regional economic development literature that state institutions can matter a great deal in determining the environment and potentialities for economic development. Kirby (2003) has described how, in the Irish case, engagement with TNCs led to significant alterations in policy strategies and institutional form; others have shown similar trends in Singapore. Yet, such institutional learning effects are not part of the mainstream spillover literature.

The possible costs and benefits identified for host economies in developing countries engaging with transnational corporations are many, but unfortunately evidence of specific effects is lacking. That said, there is overall evidence that in the short term, at least in the present economic climate (that is, taking into account the economic trajectories of recent decades and particularly the last thirty years), export-oriented growth and engagement with TNCs has net positive economic growth effects. It is arguable, however, that these benefits come together with costs, such as uneven income distribution, social dislocation, uneven spatial development, and environmental degradation (Storper 1997; Scott 2001; Kirby 2003). It is also unclear how far the costs and benefits of economic growth in the current climate and specifically TNC-driven economic growth are separable. Branch plant economy and dependency theories provide the

most compelling arguments for TNC specific costs, as backward linkages provide some of the most solid examples of TNC specific benefits. Yet delving into the evidence for these sets of costs and benefits leads us back to the conclusion that specific TNCs affect specific places in myriad and diverse ways.

Mobile capital

Over the course of the past thirty years TNCs' search for profitability has come more and more to entail moving assets—financial capital, production facilities, and now even service-provision and R&D—across borders and far from the “home” country of the corporation. TNCs invest and disinvest in locations around the world with greater ease and, depending on their location, they often are required to take relatively little responsibility for any negative externalities their activities generate (Group of Lisbon 1995; Sklair 2001; Latham 2002). While sunk costs and an established and dependable workforce can often hold a company in place, rewards for mobility are often greater than those for geographical stability.

Policy decisions led (and pushed on others) largely by the United States have enabled TNCs to move their capital and invest abroad more freely, building networks of production that are dispersed across borders and around the world (Sassen 2002; Agnew 2005). In 2003 (the year Intel Corporation announced its investment in Chengdu, China), 220 of the 244 changes made to laws and regulations affecting FDI were moves in the direction of liberalization of capital—intended to ease the process of foreign direct investment and internationalization of capital. Just two years before, 2001 marked what was to become the peak year of the first decade of the twenty-first century in the adoption of new liberalization-oriented policies worldwide (UNCTAD 2012, 76). In 2003 the world also saw the conclusion of 86 bilateral investment treaties (in

addition to the existing 2,179) and 60 double-taxation treaties (in addition to the existing 2,256) (UNCTAD 2004). By the end of 2011, these totals had risen to 3,164 agreements, which include 2,833 bilateral investment treaties and 331 “other IIAs” (international investment agreements—many of which are free-trade agreements) (UNCTAD 2012, xx).

Transnational capital investments are undeniably increasing in volume and frequency. Foreign Direct Investment (FDI), one commonly used measure of transnational capital movement, tripled between 1984 and 1987 and grew around 20 percent per year into the first half of the 1990s. In the late 1990s FDI flows increased even more rapidly at a rate of more than 40 percent annually. FDI outflows (in 2005 prices) increased over 2,100 percent in absolute terms between 1982 and 2001 (Roach 2005, 25). Following a significant dip in 2001-2002 (reflecting a downturn in the global economy), by 2003 FDI was back on an upswing in most areas of the world. According to UNCTAD (2004), 111 countries saw a rise in FDI flows in 2003, and developing countries in particular saw a rise (9 percent) in FDI inflows. Global FDI then peaked in 2007 before taking a dip during the global recession from which it has yet to fully recover (UNCTAD 2012). In addition to changes in trade policy, these increases in FDI were the result of a combination of factors, including the opening of several countries’ financial markets, the global expansion of non-finance sector TNC activities, and the emergence and spread of information and communication technologies that helped enable the internationalization of production chains in many more industries and by many more firms.

Deploying capital and dispersing value-added

Much of the new and emerging geography of production is based on a networked version of the production chain, managed both by direct ownership and by indirect control. For example,

Roach (2005, 30) observed that “not a single employee of Nike...makes shoes. All of Nike’s shoes, clothing, and other gear are manufactured by foreign firms under contract with Nike.” The production chain, in this case, is an international network of inter-firm relationships that includes TNCs together with smaller-scale manufacturing concerns and localized clusters of specialized labor and resources. Some argue that these networks are the main unit of influence in a globalizing economy and should be the central unit of analysis (Group of Lisbon 1995). In most of these networks the TNC is the dominant, if not the central, node. Whether it is Walmart setting the production cost and benchmark price of mass-produced toys or Nike influencing the labor conditions in factories from which it sources production but which it does not own, a large TNC can, by virtue of its combination of mobility and size, influence the structure and robustness of these networks. It can often control the deployment, production, pricing, and employment levels of the smaller suppliers (some of which might in their own right be far from small) that are part of its network (Dicken 1994).

Sklair (2001) identifies a firm’s industry sector as a key determinant of its level of globalization—or engagement in transnational networks of production. Even this, however, is a rapidly changing parameter as the range of what elements of the production chain can be globalized broadens to include services and other previously place-tied activities. Even the previously inherently localized economies of scale and scope that may have helped the dominant TNCs grow to such great size are in some arenas being complemented or even displaced by networked economies of scale and scope that do not rely on physical co-location, but rather on distributed interconnection. The 2004 UNCTAD Trade and Development Report describes a striking upward trend in the offshoring of services, particularly in industries or along portions of the production chain that were previously geographically bound in a variety of ways.

The increasing transnational mobility of capital is leading to changes in the relationships between TNCs and smaller firms. Corporations are finding more locational flexibility in their production chain as more and higher-end elements can be internationally outsourced (offshored). We do not yet fully understand the effects of increasing outsourcing of services, for example, but commentators like Thomas Friedman (2005) and organizations like UNCTAD (2004) see the balance of comparative advantage shifting with the changing face of offshoring and outsourcing. Many corporations still keep their high-value operations close to home (Friedman 2005), but the growing ability to undertake higher value-added processes far from the corporations' country of origin, particularly in services and in research and development, is further changing the parameters for international division of labor.

This mobility changes also the relationship between places and the economic actors that reside in and sometimes shape those places, as in response to increasing willingness of TNCs to move capital and disperse their investments geographically, states are changing their economic strategies to take advantage of the new flexibility in the production chain. So, as TNCs are assessing the advantages of different states and regions as locations for their capital, states are actively wooing that capital through a variety of approaches often summed up under the heading of "competitiveness." The mobility of capital continues to change the relationships between states and TNCs.

Place-making, place marketing: governments, mobile capital, and competitiveness

The 1980s saw a rising sense, particularly in United States and UK political circles, that national economic policy was, if not becoming redundant, certainly being swept along with the tide of the market rather than setting the pace (Palan et al. 1996, 63). As Cerny (1990, 228) put it,

“the state...has in many ways been ‘sucked in’ ...into the competitive rat race of the open world economy.” States and TNCs together had created a new, more internationalized and mobility-oriented framework for the deployment and management of capital. Meanwhile, technological changes and the opening up of new markets were accelerating changes in the international division of labor. Once the shift to this new framework was underway, states and TNCs began to interact in new ways.

In deciding where to invest their mobile capital, TNCs can compare the advantages of particular states or regions according to a range of criteria, including tax structure and incentives, favorable regulatory environments, cost of labor, capacity and skill level of labor, to name a few (Dicken 1994; Roach 2005). TNCs can play one location’s offers of favorable regulation, tax breaks, and additional enticements against another location’s offers to bargain for the best deal. In this environment nation states, sub-national regions, cities, and even neighborhoods are seeking to become more viable competitors for transnationally mobile capital. Thus, competitiveness has become a byword of economic development, although Porter (1990) and others have bemoaned the term’s inconsistent definitions and uses. To some it means enhancing productivity growth in home industries (Porter 1990); to others it means primarily the attraction of subsidiary production functions; to still others it means becoming more generally “business friendly.” Yet, competitiveness, with its varied definitions, has become a goal of economic development from the United States to the European Commission to Saudi Arabia, India, and Pakistan (Google search 8/2012). The mantra of competition and state competitiveness may be particularly appealing in an environment, led by the U.S.-derived vision of government in support of the market, in which business-like government, CEO-identified national presidents, and efficient economies are among the marks of good statesmanship (Sklair 2001; Economist

2002; Agnew 2005). To many, the competition state approach makes perfect sense given the framework of transnational capital movements that states have helped to create, even if it is not always clear what states should do to win the competitive “game” (Palan et al. 1996).

In the late 1980s and early 1990s the persistent perception of Japan’s economic success as a threat to America’s continued economic hegemony inspired a new wave of writing that set forth the idea of nation-states as economic competitors in an increasingly globalized market economy (see Porter 1990, Ch. 1). Some argued that the conception of nation-states as economic competitors was not only inaccurate, but also dangerous. Krugman (1994, 7-8), in particular, argued that “countries do not compete with each other the way corporations do” as they are not, in economic terms, identifiable as “pure rivals” and the success of one country does not push others “out of business.” It is true that, while states can certainly be unstable, they are still more likely to be permanent, or at least more durable, than corporations—that is, less likely to “go out of business” (Van Apeldoorn 2003). But this does not mean that states, regions, and other scales of locality are not—and do not see themselves as—economic competitors. But, if they do not behave quite like firms, how do they compete?

Dicken (1994), drawing on Cerny and others, argues that the “competitive aspect of state behavior is itself deeply politically, socially, and culturally embedded...[and that] the state in the contemporary global economy may be legitimately regarded as a competition state.” And as competition states, nation-states do “take on some of the characteristics of firms as they strive to develop strategies to create competitive advantage” (Dicken 1994, 112). One of Porter’s (1990) key points in his discussions on competitiveness has been that states can create and nurture comparative advantage, particularly by cultivating specialized factor conditions. States are not passive vessels. States deploy a range of competitive strategies depending on their existing factor

endowments (e.g., skill level and/or cost of labor, natural resources, government support for business, corporate tax rates), their current place on the production chain, and their economic and social aspirations. And, they are proactive builders of comparative advantage, and many are working to hone their “product”—their place—to make it more saleable to mobile TNCs. One characteristic of this competition is that competitors look not only to best one another, but to learn from one another, often adopting new modes of economic governance based both on what other nations are doing and on dominant conceptual paradigms.

The state is both product-developer and itself the product that is to be marketed to transnational capital, much of which is in the hands of TNCs. States cast themselves as engaged in a race for competitiveness. This race has no finish line, but successful competitors will be the most attractive places for mobile transnational capital, both in the form of TNC “locates” and in the form of direct financial investments.

This new geography places the traditional model of states and the exercise of state-based power in tension with the emerging global economic framework. States still seek to use protection and trade policies as competitive tools, for example, but this tactic no longer has the same effect it might once have had. For example, many officially American companies derive their own competitiveness from the internationalization of their production chains, so many argue it no longer makes as much sense to “protect” the U.S. economy from Chinese-made products with trade barriers, since many of those Chinese-made products are actually the products of U.S. companies with operations, affiliates, and/or networks of contracted suppliers in China. The “protection” can hurt American companies, therefore, much more directly than it might have prior to such extensive internationalization of the production chain.

A sense of alarm can accompany the perception of TNCs as roving actors detached from the state, a change from the Keynesian-derived assumption of a “socially constructed correspondence between the national economy as the primary object of economic management, and the national state as the primary political scale on which economic management was conducted and social welfare was delivered, and the treatment of political subjects as national citizens” (Brenner et al.2003, 4). There has been a shift from this previous framework to a new one, in which the national economy is no longer necessarily the most relevant unit of analysis. Neither, however, has the TNC simply replaced the national economy as the unit of analysis, nor can we examine the “transnational capitalist class” (Sklair 2000) or transnational flows without considering the places in which capital is generated and through which capital flows.

TNCs, mobile capital, and multi-scalar state engagement

In addition to the most visible actors on the landscape, TNCs and nation-states, the changing nature of the production system is encouraging new actors to enter the “competitiveness” field, creating additional nodes in the network and additional layers for analysis.

The competition for transnational capital, even when spearheaded by nation-states, is anchored in particular regions, cities, even neighborhoods. These sub-national regions are stepping out and casting themselves in the competitiveness race. TNCs themselves are also focusing attention on the sub-national (regional) level in addition to the nation-state level as they explore their options for transnational (and intra-national) deployment of capital. Ireland and China have regional strategies for enhancing national competitiveness, and in the United States much of the competition takes place via direct state (e.g., Arizona, California, Florida, New

York) or city engagement at the international level. In 2011 Intel, for example, decided to locate a \$3 billion plant in Chandler, Arizona. Chandler had to compete for this “locate” with other Arizona cities, with other U.S. states, including New Mexico and Oregon, and with other nations, including Singapore and Ireland. Arizona won this competition by offering Intel a combination of “low-road” tax incentives and “high-road” educated workforce incentives (Taylor, E. 2005).

The competitiveness framework is becoming more pervasive, and as these smaller actors take on the mantle and policy frameworks of competitiveness, they too are contributing to changes in the mechanisms for deployment and eventual distribution of mobile financial capital and of human capital. Malecki (2004) holds that earlier arguments (e.g., Krugman 1994) against the deployment of concepts of competition and competitiveness in relation to states must be reframed when we consider the economic activities of sub-national regions in a globalized economy. Malecki (2004, 1102) argues that “regions unlike nations more or less can go out of business, becoming so depleted by outmigration that they are at a long-run competitive disadvantage. Regions and localities do compete for investment.... the basis for competitiveness at the regional scale is one of absolute, rather than comparative, advantage” (see also Dicken 1994). Whether it is a global city or an emerging region, as Cerny (1990, 222) argued “there has been a change in the focus of economic policy in general, away from macroeconomic demand management towards mesoeconomic and microeconomic policies.” The nation-state is less frequently serving as the broker for its regions on the international stage, or as the distributor and pass-through entity for capital flows. Sub-national regions, particularly in the United States, are increasingly building their own strategies to compete on the international stage for mobile capital.

States and regions see themselves as competitors racing for their share of increasingly mobile capital in an effort to improve their national or regional productivity. They are seeking to do so by casting (or branding) themselves, usually through their economic development organizations (public and private), as more “competitive,” advertising themselves as places with everything from inexpensive labor, “business-friendly” tax structures, tax holidays, land and natural resource-related incentives, to education systems, research capacity, high-technology oriented infrastructure, and highly skilled labor.

TNCs, smaller firms, states, and regions are evolving together by many small and big steps, by building strategies and changing policies, by creating new technologies, exploring new business tactics, and developing new international relationships. This is changing the geography of the production chain and, in doing so, changing the way that places and firms relate to one another. Palan et al. (1996, 6) argue that states, by reacting to the global marketplace for capital with competitiveness strategies, are shaping “the institutionalization of globalization in the state system” and that this is creating “in effect, an entire new infrastructure of globalization...which corresponds to a new political geography of accumulation.” If this is the case, it is extremely important to understand the nature and details of those competitive strategies, their deployment, and their levels of success. This new geography is being shaped by the simultaneous direct engagement of TNCs, production networks (which include TNCs and smaller firms whose links cross national borders), nation-states, and sub-national regions in the global market for transnational capital.

TNCs carry nationally derived cultural traits in their products and in their working styles, but as Sklair (2001) points out they are not, with the exception of state-owned or closely state-affiliated TNCs (for example, in China), chiefly responsible to particular states or nations. “The

prime responsibility of [boards of directors of TNCs] is to make the company as profitable as possible with no specific privileges extended to their states of origin” (Sklair 2001, 2). The essence of TNCs’ relationships to places has changed as a result of contemporary TNCs’ particular combination of asset size and mobility. They are—just as the name describes—transnational, and their ability to move capital and operate in multiple locations is unprecedented. When they move this capital around the world and make investments, they bring with them particular organizational cultures which are often reflective of the location (or locations in the case of TNCs that are the result of mergers) where they originated. As they work around the world, they bring norms and values, as well as expectations, that are often born of a particular set of circumstances and reflective of the norms and values—institutions—related to doing business in their countries of origin. As they invest in new places, these organizational cultures intersect with other norms and values, institutions, and locationally specific organizational forms derived often from distinctly different histories and cultures from those in the TNCs’ places of origin.

We need to build a better understanding of the dynamics of these interactions, what kind of institutional changes they may be encouraging or creating, what kinds of organizational and engagement infrastructures are emerging. These interactions can change the perceived and real relationships between and roles of governments and of TNCs, and thus change the nature of place-bound organizations and the institutions that frame their behavior.

Chapter 3: Development, institutional change, and learning organizations

In order to lay the foundation for the case studies that follow, this chapter brings together development theory with literature on the importance of institutions to economic growth. While academic work on development is deep and wide, development is, at its core, an economic exercise, and the work of development scholars is to identify, analyze, and understand paths to economic success.⁴ Institutions have been identified by scholars as essential in determining economic trajectories, so understanding how they are formed and how they change is arguably essential to understanding and encouraging economic growth. These two strains of academic inquiry inform my exploration of the role that TNCs can play changing the institutions that, in turn, can shape the scope and scale of economic opportunities of particular places.

I begin with a brief overview of Western development theory with a particular emphasis on understanding development theory in the context of a global economy in which transnational economic actors (including TNCs) intersect with locationally bound actors and power structures. I describe some of the early and persistent goals and assumptions of development theory, including the long-held assumption that the importation of governance and economic structures evolved in already economically successful places is an important ingredient in development success. Based on that assumption development theorists and practitioners, as well as diplomats and international organizations, have often advocated for less economically developed countries to adopt institutions that have been deemed to promote economic growth (and other benefits) in more developed or “advanced” places. Sometimes this is done while accounting for cultural

⁴ Under the development umbrella, there are many sub-definitions, and there are competing definitions. Amartya Sen’s (1999) “development as freedom” comes to mind, and efforts to understand what a fully “developed” state might look like—will it be more equal/just/environmentally sustainable, or simply more wealthy?

differences, but often the attempt is to transplant institutions *in toto* without significant modifications.

In light of this, I then turn to a review of the literature on institutions. These social constructions, or institutions—in and through which are conveyed myriad power relations, cultural norms, individual and group understandings of self and community histories, ideas about governance, progress, and economic possibility, as well as incentives for social and economic activities and interactions—are major determinants of the geographical distribution of economic activity across space. They shape the contours of global economic geography. As Martin (2003, 79) puts it: “although institutions are unlikely to be the sole ‘cause’ of geographically uneven development, they enable, constrain, and refract economic development in spatially differentiated ways.”

While the economics portion of the institutions literature has its roots in a squarely transactional view of which institutions support economic growth, other social scientists have opened up the aperture to include a wider range of institutions and institutional models. I take this broader view in my case studies. Institutions embody expectations about behavior, which is why economists find them to be such powerful indicators of economic success, but institutions are not *sui generis*; they are crafted and changed by interactions among people and decisions made, perhaps collectively or by a powerful few. Thus it is important to explore how specific institutions, and the organizations that create and enforce those institutions, are formed and how they change.

I close the chapter by describing the model of organizational change I will draw upon in this project. I will build on work on organizational change in the public and private sectors. In order to look at how institutions change, I have chosen to look at how organizations “learn” and,

since I will use the experiences of individuals as my lens into how organizations change, I have selected a learning model developed to describe the effective learning experiences of individuals in organizations—legitimate peripheral participation. Analysis of the learning elements of the policy transfer process that takes contextual and organizational factors into account could add to our understanding of both individual and organizational learning, and thus to our understanding of the elements that influence the success or failure of policy transfer efforts as well as, perhaps, larger shifts in the expectations people have of their governments and that governments have of themselves. Learning is not the only way to think about institutional change, and I review some alternative models, including policy transfer and institutional borrowing, but my case studies proceed from the assumption that, while organizations may have their own cultures and their own path-dependent trajectories, they are at heart made up of individuals who, under the right circumstances, can make decisions and take actions that change the course and shape of those organizations, as well as of the institutions they craft and govern. I hypothesize that the entry of major TNCs can create an environment ripe for such change.

A brief history of Western development theory

The terminology and study of development moved into current usage in the late 1940s as “part of the process by which the ‘colonial world’ was reconfigured into a ‘developing world’ in the aftermath of World War II” (Peet and Watts 1993, 232; Black 1999). The central goal of development was to narrow the GNP gap between rich and poor countries. The grand designs of the “First Development Decade,” in theory and practice, relied on an oversimplified, linear, and often utopian, modernization framework. “Take-off,” “big push,” and “stages of growth

theories” dominated much of the theoretical discourse, and the concepts they laid down dominated development activities (Thorbecke 2000, 20-21; So 1990, 29).

Economic indicators largely were held to reflect fully the state of “development” of a nation, based on the assumption that (1) in order for economic indicators to move in a positive direction, certain social processes must be at work, and (2) economic growth laid the foundation for positive social changes. The tools of development within this framework were import-substitution industrialization and investments in large-scale infrastructure (Toye 1996, 223-225; Thorbecke 2000, 21; Black 1999, 19).

The modernization theorists of the 1950s, who set the stage for all further development theory, framed development along a timeline of economic modernity in which the traditional should give way over time to the modern (Escobar 1995). A clear example of this approach is W. W. Rostow’s “take-off” theory, in which economies pass through a series of time-delineated phases in order to advance toward Western style “self-sustaining” growth. Poorer countries are set up as behind richer countries (Rostow 1959). The process Rostow maps out traces growth through time strictly according to Western historical experience. The less economically developed (by this measure) societies must pass the posts set by the European and U.S. experiences in order to be considered developed or modern. They are earlier in a process for which the Western/Northern experience has defined the trajectory and end point. Most manifestations of precapitalist culture were either stepping stones on the way to modernity or they were roadblocks.

Rostow (1956) and later Simon Kuznets (1973), and others, also suggest that one cause of lack of development in the Western/Northern mode (and implicitly, then, of poverty) is a lack of Western European-United States “civilization” or sense of entrepreneurship or, simply, European

people (Rostow 1956; Kuznets 1973). Non-European culture may simply not be capable of producing the infrastructure of civilization necessary to move up the ladder and forward in economic time, they suggested. In this view, the West/North is modern, and is perhaps the only set of cultures ready to pursue a “modern” trajectory. Economic lag is, in this formulation, blamed on cultural lag. Those who were premodern could be moved toward the modern, up or ahead along a linear scale of advance. The exercise of development was thus conceived, at least in part, as a civilizing mission defined variously in terms of religion, economics, and culture in which Western was forward and non-Western was back. These approaches also failed generally to take account of imbalances of economic and political power not only within, but also among nations, focusing their inquiry on the internal characteristics of individual nations, with little attention to the broader structural relationships that countries found themselves in.

Theory in the 1960s began to correct this oversight, with development approaches like import substitution. Scholars also broadened the development vocabulary beyond economic measures and goals to include the social and political. While the central goal and measure was still economic success at the aggregate (state) level in the form of GNP or GDP, employment rates, and balance of payments, theorists were also expanding to explore non-economic measures of development (So 1990; Thorbecke 2000).

By the 1970s, the international community and aid agencies, including the United Nations and the World Bank, had begun to focus on “basic needs” and the “poorest of the poor.” It had become clear that the simple strategies of economic growth alone were but a part of a series of broader development objectives, that included the advancement of human rights. In addition, many theorists expanded the conversation to include alternative visions of development and its goals (see Peet and Hartwick 1999 for an overview). Development theorists and

practitioners also showed a heightened level of concern over the persistent inequality in income distribution both among and within countries.

The 1970s saw major shifts in the lens through which many scholars saw the goals of development. Additionally, even within the narrower confines of economic theory, scholars reexamined the assumption that economic growth could (1) be effectively driven by outside (foreign) sources and (2) was the inevitable first step on the way toward larger development goals. The first theoretical shift is best exemplified by the emergence of dependency theories. Dependency theorists emphasized the role of “developed” nations in creating the circumstances in which developing country poverty exists (So 1990 provides an overview). Dos Santos, for example, argued that a relationship between states “assumes the form of dependence when some countries (the dominant ones) can expand and can be self-starting, while other countries (the dependent ones) can do this only as a reflection of expansion” (Dos Santos 1970, 231). The second shift was based on an expanding recognition of the complexities of development and the failure of the experience of development to align with dominant theories. This led to a reexamination in many sectors of the development scholarship and practitioner community of GNP growth as goal, means, and measure, and a shift toward greater recognition and inclusion of social as well as economic variables (Black 1999, 20).

In this period scholars also intensified focus on individual hardship in addition to (or instead of) aggregate hardship as a focus for aid. Many development practitioners began to shift strategies toward helping smaller communities and building direct participation and involvement of the intended beneficiaries into retargeted development activities, recognizing both the ineffectiveness of purely macro delivery mechanisms to address micro-level need, and the variety of individual poor and poor communities within poor states. This shift encouraged

development practitioners to build mechanisms for the individual poor and the poorest of poor communities to have a say in the implementation of development projects. Scholars, followed by aid agencies, began to advance the view that without the participation of the intended beneficiaries, projects were likely to be unsustainable in the long term, and often unsuccessful even in the short term.

According to Köhler (1996), the late 1980s “saw the end of a single, lead paradigm” for development. Broader sets of indicators of welfare and well-being gained currency (Thorbecke 2000, 36). Doubtless, the emerging recognition of the complexity of the development undertaking made setting goals as well as devising means and measures far less clear than in earlier periods. Accepted development paradigms were further challenged by the escalation of a debt crisis in the 1980s, providing fuel to those who felt that macroeconomic modernization and development strategies were not only failing to build positive growth, but were also creating severe negative consequences. There also began in this period a strong Western-led (particularly the United States and Great Britain) ideological shift away from government services and government-focused development and toward market mechanisms, which were held to be better means for expression of the aggregation of individual agency than inefficient state structures, a prescription held both for developing and in developed countries. This shift to market mechanisms in development grew from a broader market liberalization push that would help usher in a new era of more internationally integrated and distributed production and consumption. This Western-led effort to push market mechanisms as the principal tools of development coincided with initial moves away from collectivization from within some managed economies as well, including in Vietnam and China. I will return to these specific circumstances in my case studies.

By 1990, the United Nations began to focus with greater intensity not just on development, but on human capital and “human development.” In 1995, the UN expanded its definition of development to encompass security, economic growth, the environment, justice, and democracy. This broadening of the development goal-set and the concurrent continued broadening of the tools for measuring development marked a transition away from the paradigm of clearly defined, linear development trajectories. From the mid-1980s into the 1990s multilateral lenders and development theorists were also focusing more intensely on the newly industrializing Asian countries (known as the East Asian NICs) as models for development, which relied heavily on high savings rates, technology transfer, and significant investments in education as well as strong but targeted government management to encourage markets and exports and attract FDI (World Bank 1993; Stiglitz 1996). The East Asian NICs also developed new approaches to institutions (the economic-social “rules of the game” supportive of economic development) (Stiglitz 1996). But the 1990s also saw the emergence of increasingly mobile capital and the conversion of the East Asian economic “miracle” to the East Asian economic crises, even as the “Washington Consensus” and neoliberalism became ever more entrenched as dominant paradigms (Peck 2008). These shifts led, by the latter part of the 1990s, to a broad recognition of an increasingly complex development landscape.

Development is no longer simply about closing the GNP gap between developed and developing countries (Peet and Hartwick 1999). And, development is no longer understood only as a one-size-fits-all linear trajectory benchmarked purely by economic measures, though economic growth is still the *sine qua non* of most development theory and practice. At the same time, neither the nature of economic activity nor the mechanisms for distributing the benefits of that activity is static.

In the early twenty-first century we live in a world of “deep integration” (Dicken 2002) in which transnational production networks dominate thinking about economic growth. The goals of development include broader human development, security, and freedom-oriented aims, but also, very pointedly, the integration of less developed places into transnational production (and consumption) networks through the removal of barriers to trade, technology adoption, and competition (e.g., Parente and Prescott 2002). Gone, largely, are the days of import substitution and isolationist total food-independence strategies for development. Even the economic growth goals of development, however, are less clearly defined than they were in the linear growth theories of the mid-twentieth century. The Asian financial crisis of the late 1990s showed the perils of economic integration, even as the East Asian economic miracle showed its power as a driver for growth.

Where previously nation-states were the principal players as well as the scale of measure for development, now individual actors, multiple NGOs, international institutions, and networks are players; and individuals, communities, and regions, as well as nation-states are all scales across which we measure development success. Shifts in the framing of questions about development have evolved in conjunction with changes in the economic landscape that drive new approaches to economic engagement around the world. What most call “globalization” and what Dicken (2007) and others have further theorized as “global shift” has overtaken the discourse of economic development as purely localized or confined to a nation-state.

Arturo Escobar argues that one of the most promising avenues for new theoretical frameworks for development in this transnational production economy is in a movement away from space-based understanding of development to place-based conceptions that engage emerging “novel politics of scale” (Escobar 2001, 163). This conception recognizes the

challenges posed to development by the “global shift.” Space, Escobar argues following geographer Doreen Massey, implies “the absolute, unlimited and universal...homogenous” of globalization whereas place encompasses contextualized activity, and local, community-based practice (Escobar 2001, 165). Under the rubric of anti-globalization, space implies what Haraway (1988) calls the “god-trick” of universalization, in which one perspective—the Western/Northern perspective—becomes not just the dominant, but the only valid perspective: “the seeming triumph of Eurocentered modernity can be seen as the imposition of a global design by a particular local history, in such a way that it has subalternised other local histories and designs” (Escobar 2004, 217).⁵ The dominance of the spatializing and universalizing power of modernity and globalization has defined, Escobar argues, the playing field for development, exchanging the globalized for the contextualized, the space for the place: “placelessness has become the essential feature of the modern condition” (Escobar 2001, 140). The spatiality of globalization, according to Escobar, has left us, in a sense, everywhere and nowhere.

Escobar sees a “philosophy and politics of place” emerging to counter this spatialization (Escobar 2001, 141). This politics of place is “a novel political imaginary in that it asserts a logic of difference and possibility that builds on the multiplicity of actors and actions operating at the level of everyday life” (Escobar 2004, 223). Escobar (2001) sees development efforts that focus on place as the unit of analysis and the unit of action as perhaps more capable of producing development outcomes that embrace “multiplicity” and diversity, and also address the combination of local and translocal needs and outcomes that characterize contemporary development.

⁵ Escobar (1995) also argues that an economy is “above all a cultural production, a way of producing human subjects and social orders of a certain kind” (Escobar 1995, 59). The prescribed process for becoming such a state via economic growth and infrastructural and social change is a product of Western culture.

Escobar argues that this new politics of place works along a new politics of scale. Globalization, he argues, is an “important geographic re-scaling by capital which shifts power primarily to the global level and global forms of governance,” or at least to transnational forms of governance (Escobar 2001, 166). The social shifts he describes are “place-based yet engaging with transnational networks” working across spatial scales that are well suited to investigation via geographical modes of inquiry. In other words, the intersection of place-based development actions and globalized flows is the new locus of development.

What aspects of the intersection of localized actions and global flows should we examine? Can localized actions and globalized flows intersect in ways that both generate economic growth for places and capital accumulation for the entities that drive the global flows? In order to answer this question we need to understand both what helps the places and what drives the flows; we need to understand where and how they intersect and what shapes the nature of that intersection.

Economists and development theorists often still appear to hold that economics and economic growth sit outside of or transcend culture, driven instead by the universal reward-incentives of “economic man,” while simultaneously positing that societies must embrace cultural change in order to experience economic growth. Economic growth was, for the purposes of the classical modernization analysis (and for much other analysis), extracted from its cultural context, and economic interactions are often viewed as essentially the same across cultures (Escobar 1995, 61). Yet, when efforts to encourage or create economic growth in the Western mode do not work as planned, often economists and others blame culture or, in a more refined version of the culture argument, they blame institutions.

Institutions as determinants of economic growth

Institutions matter for economic growth (North 1990). Institutions—the norms, values, culture, incentives, and disincentives within a place or community—provide a framework for economic activity (North 1993). From an economics point of view, “good” or “strong” institutions help the individuals and organizations that manage and deploy capital to reduce transaction costs. From a social welfare point of view, “good” or “strong” institutions serve the needs—diversely defined—of people. Without the right institutional environment, capital infusions—FDI, for example—will not lead to gains in productivity and will not beget growth. The assumption that different institutions produce different economic outcomes is one of the principal bases for economic policy. And, since economic institutions and overall economic environments vary from place to place—country to country, within countries from sub-national region to sub-national region, city to city, and so forth—institutional differences provide one avenue of explanation for the differences in economic success among localities.

The role of institutions has been thrown into even higher relief over the past two decades as economic globalization and the opening up of many countries to increasingly mobile capital have highlighted the differences in institutional infrastructure around the world. As we watch countries benefit differentially from economic globalization, such scholars as Rodrik (2007) argue, we can see how national (place-based) economic policies, for example, are major determinants of economic growth and benefits. In order to understand development, then, we must improve our understanding of *how* these policy choices—these institutional frameworks—intersect with the forces of economic globalization to generate growth.

We must ask which institutions matter in which contexts. We must ask what makes institutions effective with respect to economic growth. And, if we can figure out what makes

institutions conducive to growth, we must ask how a place gets from here to there—how can places transition from ill-fitting or ineffective institutions to ones that can support and encourage growth? The contours of the institutional environment of a place, of an economic milieu, of an industrial sector, are shaped by culture surely, and by national policies, by local or sub-national policies, by communities, and by industry actors. So how do we parse these influences?

An institutional focus has developed in parallel within multiple disciplines. In the following discussion I will use elements of each of these frameworks to explore how certain institutions change under specific sets of circumstances, in an effort to illuminate avenues for understanding the drivers and possibilities for economic growth. How do we approach the investigation of institutions? The answer to this question depends on one's operational definition of institutions. While multiple disciplines emphasize their importance, there is no broadly accepted definition of what constitutes an "institution." Institutions, in all conceptions, are frameworks that affect the behavior of individuals. In the broadest economics conception they are the "rules of the road" for economic activity. As Eggertsson (1996, 10) puts it: "the institutional framework defines and limits the set of practicable forms of economic organization available to economic actors." Most scholars include both formal and informal institutions in their thinking about institutional influence on social and economic trajectories, but there is disagreement among scholars and among disciplines about how widely the institutional net can be fruitfully cast when thinking about economic development.

Building on the work of Ronald Coase (1937) and Douglass North (1990), theoretical and empirical work in institutional economics has illuminated the role of institutions in economic growth largely through the lens of transaction costs and property rights. The body of empirical work in the field on contracting regimes, government transparency, and regulatory frameworks

that reduce uncertainty and facilitate market activity illustrates the importance of both formal and informal institutions in establishing the context for economic possibility (see, for example, Alston et al. 1996).

A good portion of the most influential work in this vein is focused on a particular configuration of institutions as conducive to economic growth, arguing that limited government and strong property rights oriented institutions are those that enable (or cause) growth by encouraging greater investment in human and physical capital. This view has been criticized for taking too narrow, linear, and prescriptive a view of what institutions matter, leading to policy recommendations that were effective in theory, but insensitive to the contexts of particular places, and therefore ineffective in practice. Craig and Porter (2006, 4-12) argue that in the wake of the early 1990s economic collapse of Eastern bloc economies, these economic theorists' findings converged with development practitioners' longstanding emphasis on institutional "modernization" to help establish a global consensus among development practitioners that goals ranging from economic growth to equality and inclusion depended largely on "stronger institutions." In this definition "stronger" institutions are those that provide a framework for economic activity that aligned with market-oriented goals and "neoliberal" ideas of progress (see also Peet and Hartwick 1999). This consensus, Craig and Porter argue, builds upon core elements of the colonial, post-colonial, and current development enterprise, where the state in developing countries is envisioned to be, ideally and principally, an enabling state to support economic growth. They and others argue that the case for institutions, in the vein that North describes, is too narrow, too linear, and too simplistically modeled (e.g., Sangmpam 2007; Clemens and Cook 1999). To illustrate their argument, Craig and Porter point out that if "market or liberal democratic orientation...is all so crucial, how come China and Vietnam have been such

successful Poverty Reducers?” Both countries have made incredible strides in reducing poverty and encouraging economic growth without, thus far, establishing Western systems of property rights protection (Craig and Porter 2006, 14). Rodrik (2007, 5) and others have also criticized the idea that economic policies and the institutions they are intended to engender can be carved up and transplanted like modules from one context to another. In fact, he argues, “straightforward borrowing (or rejection) of policies without a full understanding of the context that enabled them to be successful (or led them to be failures) is a recipe for disaster.”

At the same time, political economists and economists, particularly beginning in the 1990s, began to explore the roles of a broader range of institutions, including “social infrastructure,” bureaucratic quality, stability, democracy, and freedom in shaping the economic landscape (Knack and Keefer 1995; Hall and Jones 1999; Sen 1999 Rodrik 2000; Rodrik 2007). Hall and Jones (1999, 95) find that “the primary, fundamental determinant of a country’s long-run economic performance” is what they call “social infrastructure,” which they define as “the institutions and government policies that provide the incentives for individuals and firms in an economy.” In other words, it is not simply a selection of the institutions that control property rights and transaction costs that determine economic viability, but rather a larger matrix of institutions that matters. It is this larger matrix that establishes parameters for economic activity and in which incentive structures develop to guide economic decision making. Specific “rules of the road” like property rights are embedded in this larger matrix, and they cannot be divorced from it and transplanted as discrete entities. This line of thinking has led Rodrik (2007), Chang (2006), and others to encourage a move away from a focus on institutional form to a focus on institutional function and to urge policymakers and scholars to embrace institutional diversity in service of economic growth and development.

Work on institutions in sociology and political science highlights the importance of a broader range of institutions and delves into the social and political dynamics of institutions, moving beyond a focus on property rights and the rational-actor driven models of traditional economic approaches to take account of the historical and cultural contexts that shape incentives and institutions (Clemens and Cook 1999; Hall and Taylor 1996; Blom-Hansen 1997; Heydemann 2008). Institutions, they emphasize, are socially constructed, context dependent, and fungible (Granovetter 1992). This argues against one-size-fits-all policy prescriptions that advance a unitary approach to finding “the right mix of institutions” (Boettke et al. 2008, 332), or as Evans (2004) calls it, “institutional monocropping,” and argues for more fine-grained and contextualized analysis of institutions and their success or failure in encouraging development. It also supports a wider view of which institutions might matter.

However, much of this work, even with an emphasis on context, does not critically examine the functioning of the institutions it recommends, and treats institutions generally and as “black boxes” (e.g., Hall and Jones 1999; Acemoglu et al 2001; Dollar and Kraay 2003). The strong emphasis on the importance of institutions to development compels us to delve into specifics. What makes particular institutions conducive to growth?

Economists have tended to focus on the “what”—that is, which/what institutions are important to economic growth—whereas sociologists and political scientists explore the “why” and the “how”—what drives the development and structures of institutions, and how they guide or constrict social and economic activity. By drawing these approaches together we might begin to understand better the black boxes, to understand the nature of institutional development and the ways in which institutions set the parameters for economic growth in particular contexts.

Hall and Taylor (1996) identify three main strains of institutional thought across the social sciences: rational choice institutionalism, historical institutionalism, and sociological institutionalism. I will review each briefly in turn. Drawing on the analytical approaches fleshed out by institutional and organizational economists, rational choice institutionalists focus on institutional structures as mechanisms for reducing transaction costs and for mitigating principal-agent problems. Rational choice institutional theorists tend to see behavior as guided by a “strategic calculus” in which actors are pursuing their fixed set of preferences and tastes in an environment of others doing the same. Each individual’s set of optimal choices is unlikely, in this scenario, to lead to the best outcome for the collective good, so each individual actor is essentially negotiating (or calculating) constantly. Institutions structure these negotiations and calculations. In this conceptualization, then, institutions themselves are the product of the value they have for actors, which assumes that the actors themselves create the institutions to serve their needs and to realize gains from cooperation (which would otherwise be absent).

Historical institutionalists focus on power relations, long-term path dependence, and unintended consequences, and sometimes include ideas as well as more formalized frameworks in their definition of institutions. In this view, institutions “affect behavior primarily by providing actors with greater or lesser degrees of certainty about the present and future behavior of other actors. More specifically, institutions provide information relevant to the behavior of other actors...they affect individual action by altering the expectations an actor has about the actions that others are likely to take in response to or simultaneously with his own action” (Hall and Taylor 1996, 6-7). Among the three schools, historical institutionalists tend to focus most on the question of how path-dependent institutions with embedded power relations shape the option set for actors in policy making.

Sociological institutionalists argue that organizational forms and procedures should be considered as culturally specific practices, which may or may not be designed to increase efficiency or maximize a specific set of individual preferences. They are generally created to convey the parameters of social possibility and social legitimacy—as Hall and Taylor characterize it, from the sociological institutionalism perspective: “institutions influence behavior not simply by specifying what one should do but also by specifying what one can imagine oneself doing in a given context ...[they] provide the very terms through which meaning is assigned in social life” (Hall and Taylor 1996, 16).

All social configurations have norms and values surrounding economic activity, and all social configurations that engage in economic activity have institutions. As Greif (2006, 403) describes in his studies of medieval trade, even “what we consider a state of anarchy...is not devoid of institutions”—we simply may not recognize them. As Cronon (1983) shows us in his study of early colonial New England: where colonists saw a lack of property rights-based economic institutions suitable for development there was, in fact, a sophisticated system of rotational property use that suited quite well the economic needs of New England’s indigenous Native American groups. We see similar stories in the history of Southeast Asia, Cambodia in particular, where French colonists, in an effort to wrest more economic value out of their holdings, tried to create their version of a property-rights regime—their version of order—where they saw none and, in the process, moved to destroy the delicate institutional structure that had enabled Cambodian communities, and even empires, to prosper economically and politically over the course of centuries. Partly as a result, the French achieved little economic success there (Silver 2005).

What may seem like economic policy best practice to a Western economist, for example because it appears to build transparency or stability into the system of economic exchange, might in fact undermine a differently derived understanding of value that supports multiple social as well as economic goals and which cannot be altered without significant, and potentially negative, knock-on effects. As Rodrik (2007) points out, this observation leads to a series of questions both about which institutions are most important and about the mechanisms for institutional change. As the examples above show in brief, we need to understand the social dynamics that underlie institutions as well as their structural functions (the “why” as well as the “what”) in order to move away from institutions as black boxes.

Economists who have tried to disentangle the role of institutions in economic growth have found quantitative instruments wanting and point to case studies and historical analysis—combined with additional work on microeconometrics—as the way forward (Eggertsson 1996; Dollar and Kraay 2003). In particular, with respect to economic growth, we need to understand how communities build and rebuild the matrices of institutions that establish and structure incentives for economic activity. Historical context, path-dependency, power dynamics, and exogenous shocks can all influence the formation and fungibility of the institutional matrices that influence prospects for economic growth (Rodrik 1993; Alston 1996; Greif 2006).

Though some argue that institutions, and particularly institutional change, are insufficiently theorized at the local level (Evans 2004), geographers have illuminated economic interactions with their explorations of “institutional thickness” (Amin and Thrift 1994) and regionally based untraded interdependencies (Storper 1997). This work is known collectively under the heading of “relational economic geography” (Sunley 2008), and tends to emphasize the importance of interpersonal relationships in weaving the institutional fabric of a place and in

encouraging economic growth driven by innovation and learning. But this work has also been criticized as inadequate to understand broad patterns of uneven economic development, though offering illumination in particular cases (Sunley 2008).

Institutional change does not simply happen; it is driven by people and through organizations. It requires learning and, as some have remarked, “institutional learning is at the centre of the combined but uneven international growth pattern” (Dalum et al. 1992, 312). Therefore we must understand the mechanisms, processes, and preconditions for institutional learning. So how do we use the tools and observations set before us by social scientists concerned with institutions to unpack the black boxes? Investigating institutions is all the more difficult because institutions themselves are not monoliths. The “social infrastructure” or matrix of institutions of a particular place is constructed simultaneously at multiple scales.

Institutions—formal and informal—are layered. They intersect and sometimes contradict each other as, for example, a multinational institution, a national government, and a local government might each convey different sets of expectations and incentives around the same problem set. It is this intersection, this lived experience of institutions, that might help us shed the most light on how institutions shape development and how institutions themselves are shaped. In other words, context matters. One way to improve our understanding of the lived experience of institutions and their intersections is by exploring organizations.

Institutional development, learning, and organizational change: institutions are the rules; organizations are the players

If institutions are the rules, organizations both set many of those rules and show us how people play within those rules. Indeed, the view that organizational change must be part and

parcel of development efforts is well established. The focus on organizational change among development practitioners is so pervasive, in fact, that, in some corners “[d]evelopment is no longer seen primarily as a process of capital accumulation but rather as a process of organizational change” (Hoff and Stiglitz 2001, 389).

Drawing on North, Eggertsson (1996, 9) provides the following definition of an organization: “a set of actors who cooperate or act jointly in production. The output of organizations ranges from commodities (firms) and statutes (legislatures) to religious services (churches).” Organizations actualize the rules that institutions embody. As North (1993) writes: “It is the interaction between institutions and organizations that shapes the institutional evolution of an economy. If institutions are the rules of the game, organizations and their entrepreneurs are the players.” Organizations make formal, and informal, rules tangible—either in their own structure or in the explicit transmittal of those rules. Organizations are loci where institutions are observable and can be, essentially, institutions made manifest. But not all organizations are equally important actors; some not only live within, but also delimit and design the larger institutional milieu.

Existing studies in the economics literature of institutions and their role in economic development use proxy variables to measure institutional influence and institutional quality (Jütting 2003, 19; e.g., Acemoglu et al. 2001). A case study approach can complement macro-level comparisons and trend analysis by removing the intermediaries—the proxy variables—and enabling us to look directly at the institutions through the eyes of those who both shape and live within them. In his overview of empirical work in institutional economics Alston (1996, 25) notes that analysis that truly illuminates the way institutions function in the real world is lacking. In his words, existing studies are “either highly descriptive or so abstract as to render [them]

useless for policy.” One avenue to further illuminating institutions is to build a better understanding of how both the formal and informal rules that comprise institutions are established and change. A way to do this is to explore the organizations that in many cases both embody and enforce institutions.

We can expand and deepen our understanding of institutions and our ability to analyze their effects by building a better understanding of how the specific people and organizations shape and comprise particular institutions. In particular, how they change their ideas and expectations, how the incentives that drive their behavior shift, and how these shifts change their actions. We need to run the institutional experience to ground (Wolfe and Gertler 2002; Greif 2006).

By tracing how organizations develop, we can gain insight into the evolution of institutions, and by gaining insight into the evolution of institutions we can learn about the process of development understood as institutional change. By focusing on organizations that contribute to the crafting and implementation of institutions, we can learn still more. In order to do this I will draw on what economists have found about the value of stability, control over returns to assets, and minimizing transaction costs, and bring this understanding together with other social scientists’ observations of how individuals interact with institutions “on the ground.” That is, how individuals both navigate and shape institutions, and the expectations and incentives they outline for intertwined social and economic activity.

Existing literature does provide a roadmap for understanding how organizations can change and learn (Wolfe and Gertler 2002; Geppert 2005). In framing this project I will draw particularly Cohen and Levinthal’s explorations of absorptive capacity and on Lundvall’s (1992) firm-based work on learning by interacting (itself building on Arrow’s 1962 description of

learning by doing) that focuses on how firms learn about and integrate “best practices” through their engagement with other firms and institutions. Scholars have identified human capital and absorptive capacity as critical determinants of economic capacity (Cohen and Levinthal 1990; Hurwicz 1995; Glaeser et al. 2004). The ability of an organization, industry, community, economy, place, or person to take in and integrate new knowledge and new ways of creating economic value are major factors in sustained economic success and, in particular, in the adoption of technology—a key determinant of economic success. Following this literature, the project will focus on assessing shifts in the nature and depth of absorptive capacity surrounding the entry of a major TNC into the local economy.

Absorptive capacity, a concept derived from firm-focused studies, implies that within a given organization there is a measurable collective capacity to learn and that the capacity to learn can be both analyzed and improved. In their development of this concept, Cohen and Levinthal argue that absorptive capacity, “the ability...to recognize the value of new, external information, assimilate it, and apply it” (in the firm case, “apply it to commercial ends”) is largely a function of “prior related knowledge” (1990, 128). Thus, knowledge begets capacity. The absorptive capacity concept is fairly straightforward and aligns with human development and broader, cognitive development-oriented learning literature.

Not just any exposure to prior related knowledge will do, however. Drawing from research on learning and memory, Cohen and Levinthal (1990) point out that simple exposure to information is not enough to generate learning outcomes or knowledge transfer; both the type of engagement and the structure of the organization matter. Deeper engagement with the material, for example by being involved directly in manufacturing or exposure to opportunities to learn through trial and error efforts focused on similar problems—these are the kinds of prior learning

experiences that enable people and communities to integrate new knowledge. As they put it: “intensity of effort is critical” (Cohen and Levinthal 1990, 131).

Cohen and Levinthal also point out that not only is the type of effort or experience important, but effective learning is also dependent on structures that surround that experience. An organization’s absorptive capacity is not simply a result of the sum of the absorptive capacities of its members; the organization itself must be set up to integrate new knowledge into its community of practitioners. There must be an effective “boundary spanning” mechanism or set of actors to interface with externally generated knowledge, and their organization must be structured so that those boundary spanners can communicate new knowledge effectively within the organization. In some development contexts, could TNCs be such boundary spanners?

Organizational learning

How do organizations learn, and how do we know whether an organization is learning? Scholars examining firms, particularly in technology-heavy industries like semiconductors, look to such tools as patent relationships (see e.g., Branstetter 2006) or explore the extent to which learning is embedded in technological artifacts (Epple, Argote et al. 1991) to measure learning and knowledge transfer. But, learning can also be explored by examining the structure of organizations themselves.

The structure and culture of an organization are both determinants and outcomes of the level and type of learning of which that organization is capable. Organizational form can both shape the interactions among individuals within the organization and with external actors (and the knowledge they might bring), as well determine the likelihood that such interactions will

occur. The structure itself is also “an adaptive product, responsive to environmental influences, including cultural definitions of propriety and legitimacy” (Selznick 1996).

The ability of an organization to change and “learn”—integrate new knowledge—is determined not only by the aggregate absorptive capacity of its members, as Cohen and Levinthal have pointed out, but can be shaped also by factors driven by the organization’s culture, which evolves over time. Members of an organization make decisions and build routines based on experience, and these routines can come to define the culture and dominant ways of working within and with that organization. In fact, these routines can long outlive the specific experiences that spawned them in the first place (Levitt and March 1988). This tendency toward what scholars call “path-dependence” can be a major impediment to learning as organizations hang on to long-ago devised routines far beyond the moment of their utility, and either do not look for, or explicitly reject, change even when that change would enable them to meet their goals more effectively in an inevitably shifting environment. Such routines, and the path dependence they can generate, may not always lie within a single organization, they can be taught and perpetuated through formal schooling, “experts,” and industry or organizational lore, sometimes creating a kind of “lock-in” whereby organizations are not oriented toward learning and change, but rather toward perpetuating the existing structures, routines, norms, and measures of legitimacy. Sometimes exogenous shocks can help to “unlock” an organization.

Levitt and March (1988) found that organizations with a greater degree of “slack,” or flexibility, are more likely to engage in “unintentional innovation” and successfully use trial and error and “organizational search” to develop new approaches, learn, and change. But, even among those organizations that may be predisposed to learn and change, shifting paradigms and distinguishing the best way forward among alternatives can be extraordinarily difficult,

particularly when organizations are faced with “paradigm peddling and paradigm politics” that lead to “superstitious learning” and privileging of changes to keep up with the prevailing wisdom or management trends, but which may not fit the particular needs of the organization or environment in question (Levitt and March 1988; Dalum 1992).

Policy transfer and organizational learning in the public sector

Much of the work on organizational learning, like Cohen and Levinthal’s work on absorptive capacity, has focused on firms. But there is a parallel body of work concentrating on policy transfer, “policy diffusion,” or “institutional borrowing” and organizational learning in the public sector that is particularly illuminating in thinking about the kinds of change that development theorists and institutional economists have identified as essential to development. Policy transfer can take many forms, from voluntary institutional borrowing and integration of perceived best practices, to enforced or coercive policy mandates imposed by external actors, which might include dominant industry players, governments, or international organizations. Dolowitz and Marsh (1996) identify in the literature three types of transfer: voluntary, direct coercive, and indirect coercive transfer, though they note in later work (Dolowitz and Marsh 2000) that these three types can sometimes blur together. They also identify six main categories of actors involved in policy transfer: elected officials, political parties, bureaucrats/civil servants, pressure groups, policy entrepreneurs/experts, and supra-national institutions (Dolowitz and Marsh 1996). As I will describe in depth in the coming chapters, to this list I would add TNCs, which they mention in passing but do not explore. In addition to individual actors and organizations Stone (2004) points to transnational networks and global networks of epistemic communities as vehicles and catalysts for the generation, codification, and transfer of policies.

The actors in policy transfer processes can vary, and the objects of transfer can also vary, from specific policies, regulations, and laws, to institutional infrastructures and organizational forms, as well as norms and value structures (Dolowitz and Marsh 1996). To capture this, Stone (2004) identifies “soft” transfer as the spread of norms and knowledge, and “hard” transfer as the transmission or transport of policy tools, structures, and practices. Governments at multiple levels, organizations in the public sector, and private firms all “borrow” or transfer legal regimes, regulations, ideas, and structures that have been, or are projected to be, effective in other environments (be they other countries, other sectors, or other organizations). Yet the specific processes that comprise this borrowing or transferring are still often assumed or under-analyzed (Dolowitz and Marsh 2000).

Heydemann and Hammack (2009) explore these dynamics in studies of philanthropic organizations and their tendency to project, and even impose, their “institutional logics” on the recipients of their charitable attention. They explore the role of organizations in uneven financial relationships and the role of institutional assumptions and institutional coercion in shaping those relationships and their outcomes, though they also note that, even in very uneven financial relationships, ideas (and institutional frameworks, assumptions, and logics) can flow both ways (2009, 5). Heydemann and Hammack (2009, 6) distinguish between institutional projection and institutional diffusion, pointing to the former as more “intentional and managed” and coercive, whereas the latter has for them a more unmanaged and decentralized, or “organic” quality. It is important, they argue, to distinguish one from the other in each individual case. Their studies of these uneven financial relationships may be particularly relevant to the further understanding of the relationships surrounding the placement of mobile capital by TNCs, particularly when those

TNCs are significant global actors with the kind of “legitimacy” that Heydemann and Hammack (2009, 24) point to in certain charitable foundations.

Even within the limited literature on processes, the portion that focuses on the transfer of norms or institutional frameworks (as opposed to specific, more tangible elements such as legal frameworks or organizational structures) is even smaller (Stone 2004). In the case of the public sector in particular, there is a great deal more work to be done to help us understand how and under what circumstances governments decide to integrate externally generated policy ideas and the structures to implement them. What is the role of interdependencies and externalities in encouraging/coercing policy transfer (Dolowitz and Marsh 1996), for example? What are the circumstances under which these policy transfers succeed or fail, and are there any generalizable lessons that can be drawn?

There is a strain of literature that focuses largely on the ability of the receiving environment or entity (usually a government) to integrate externally generated policy frameworks or ideas, considering any failure largely as a failing of the recipient rather than of the policy. This brings us back to earlier questions about context and the critiques by many in the development community that external actors too often fail to understand the local needs, instead turning to generalized—one-size-fits-all—prescriptions for, for example, economic growth (see e.g., Stone 2004; Boettke, Coyne et al. 2008).

Whether we are discussing soft or hard, coercive or voluntary transfer, the policies and structures that are transferred can be brought on in multiple ways. They can be copied *in toto*, they can be emulated, they can be hybridized, synthesized, or simply serve as inspiration (Rose 1991). Each of these modalities of policy transfer may have different implications for the receiving entity. Stone (2004) argues persuasively that “copying or mimicry of policy or the

imposition of policy lessons provides less scope for learning or the development of consensual knowledge” and that such learning can “make the difference between successful transfers as opposed to inappropriate, uninformed, or incomplete transfer.” Relatedly, Levitt and March (1988) emphasize the importance of effective feedback mechanisms in the process, and Grin and Loeber (2007, 211) note a trend in the literature and in policy practice toward “understanding policy change as the resultant of learning processes among *and between* governmental and non-governmental actors”—a trend that, they argue, further highlights the importance of understanding more fully the institutional contexts of all parties involved in these learning processes. However, Grin and Loeber (2007) also point out that, even in explorations of such learning, the analytical focus is generally on individual policy makers or policy analysts as the learning subjects, focusing on the processes between individuals and failing to examine sufficiently the organizational aspect of learning or even the influence of contextual factors on the capability for learning, whether at the individual or organizational levels.

Careful analysis requires a nuanced view even of context, a term that can be broadly interpreted. It needs not only to illuminate power dynamics embedded in transfer relationships and learning processes (Levitt and March 1988), but also cultural norms and values—both explicit and implicit—as well as, in the case of most incidences of policy transfer, global dynamics and dominant intellectual and policy paradigms and trends. If formulated correctly, such an approach can help us to observe not only organizational changes, but also, as Grin and Loeber (2007, 202) put it, changes in the “way in which the relation between state and society is conceived of and acted upon, which comes out in a change in institutions in the realm of the political *and* elsewhere in society.” This is particularly important when the effects of such learning are not limited to a single organization or government entity, but can have significant

repercussions and knock-on effects in other areas of governance and the overall relationship of state to society.

Analysis of the learning elements of the policy transfer process that takes these contextual and organizational factors into account could add to our understanding of both individual and organizational learning, and thus to our understanding of the elements that influence the success or failure of policy transfer efforts as well as, perhaps, larger shifts in the expectations people have of their governments and that governments have of themselves.

A learning model: legitimate peripheral participation

Consensual knowledge is likely to be more effectively integrated—learned—than information that is simply transferred or imposed (Stone 2004). One way of building consensual knowledge is through participatory learning frameworks. One such framework, which I will use to try to illuminate the processes I will explore through case studies, is legitimate peripheral participation.

Grin and Loeber (2007) point to Etienne Wenger’s work on communities of practice and legitimate peripheral participation in particular as potentially valuable frameworks within which to explore institutional change and organizational learning. Lave and Wenger (1991) argue that what they call legitimate peripheral participation (LPP) is one of the ways in which people learn most effectively because it fosters a shared sense of norms. According to the theory of LPP, people learn most effectively when they are “let in” to a community of practice and allowed to build a deep understanding of the mindset of that community as *participants*.

LPP is a particular kind of learning-by-doing that has been called learning-by-interacting. In order for it to work well, Wenger (1999) argues, learners should have access to the practices

and artifacts of the community of practice. This access provides maximum “interpretive support” for learners, by providing exposure not only to the knowledge itself, but also to the cultural practices, power relations, and conditions for legitimacy that surround that knowledge. All the better, they argue, if the community of practice is not only one of knowledge implementation, but also one of knowledge generation.

Peripheral participation in a community in which knowledge is held, Lave and Wenger argue, is the best way to learn. Peripheral participation in and of itself, however, is not sufficient. Participation must be “legitimate.” Legitimate peripherality involves “participation as a way of learning—of both absorbing and being absorbed in—the ‘culture of practice’” (Lave and Wenger 1991). Learners who are legitimate peripheral participants must be included in the community and its practices—one must become an “insider” (Seeley Brown and Duguid 1991). Legitimate peripheral participants are more than observers on the fringe of a practicing community. Learners should be able ideally to engage with and see how “the experts” participate in the community and how they practice or work. This means that participation, inclusion, enculturation, accessibility, and transparency within the communities of practice are essential elements for effective learning. I hypothesize that, under the right circumstances, TNCs can act as “experts” with knowledge of how to succeed in the competition for mobile capital and economic success, and that the TNC location process can help places to become “insiders” who learn how to compete and improve their prospects for success as participants in the global economy.

Learning actors

In order to understand whether particular communities and circumstances are conducive to learning, we must understand the actors and their relationships—who is teaching and who is

learning? Stone (2004) notes that much of the existing policy transfer has a bias toward what she calls “methodological nationalism,” focusing heavily on bilateral exchanges between sovereign states. This bias is reflected in the list of six principal policy transfer actors that Dolowitz and Marsh (1996) identify, which are listed earlier in this chapter. Stone argues that scholars should focus more attention on policy transfer networks, epistemic communities, international organizations, and non-state actors in policy transfer. These can come in many forms—as international networks of policy experts, as advocacy groups, as NGOs, or as international organizations, or as private industry.

In this project I examine TNCs as actors in policy transfer. While scholars note the role of industry networks and TNCs as frequent advocates for policy transfer, the relationship between TNCs and governments is often described in terms of power struggle. For example, when Dolowitz and Marsh (1995) note in passing that TNCs can be instruments of policy transfer, they assume that such transfer will inevitably be directly coercive. The role that particular businesses, and whole industries, can play in standards setting is well established, as is the potential for business interests to influence government policy making (see Stone 2004), but the nature of those relationships, particularly in developing or transition economies, deserves more nuanced and fuller exploration. What are the different kinds of interactions that can take place and, in these interactions, is the relationship purely coercive and transactional—simply a set of trade-offs—or is pressure being applied from one set of actors to the other? Or might the two sets of actors—states and TNCs—be learning from one another?

Multinational firms are, by definition, engaged in trying to understand and navigate multiple national and local institutional environments simultaneously in order to do their work. These actors, be they large multinationals or entrepreneurs engaged in multiple locations, interact

with other firms, industrial networks, and multiple governments, often at the same time, and in these interactions can become advocates and catalysts for institutional change (Dalum et al. 1992; Kalantaridis et al. 2007).

Kalantaridis et al. (2007) identify entrepreneurs in post-socialist environments as actors who can significantly influence institutional change, as importers of technology and new ideas as well as devisors and providers of incremental (“micro-level” in Kalantaridis’ terms) solutions to institutional challenges. He identifies them as translators of market institutions that might be superimposed on or gradually replace preexisting socialist ones in times of transition. In this sense, private sector actors can be boundary spanners between the global economic system and developing countries. Perhaps in this role they could also serve as actors in the learning processes that can drive institutional change. I suggest that education and economic development are two areas of government-TNC interaction in which this potential role might be most fruitfully explored.

Education and economic development organizations as actors in institutional change

Education:

Education and human capital formation can be essential to determining the evolution of institutions. Glaeser et al (2004) argue that “institutions have only a second-order effect on economic performance. The first order effect comes from human and social capital, which shape both institutional and productive capacities of a society” (Glaeser et al. 2004, 271, 298). In other words, the quality of human capital is primary, and can lead to improvements in the quality of institutions, which in turn can further support successful economic development. From this perspective, students and practitioners of economic growth and development should focus on

sorting out what institutions—norms, values, formal and informal structures—help determine the quality of human capital.

Education systems can play a central formative role in the creation and reproduction of the social structures, norms, and values that comprise institutional frameworks and influence the development of organizations through what Bourdieu called “sanctioning the hereditary transmission of cultural capital” (Bourdieu 2002, 282). They are, by design, perpetuators of norms and values as well as factual content. They are important determinants of the quality of human capital, and thus the economic prospects, of individuals and places.

The nature and quality of economic development and education organizations influence the distribution of TNC investments and activities across space. Literature on FDI, TNCs, and development identifies education and economic incentives as factors that influence both FDI and TNC location decisions and their success in those locations. Education institutions train, and in many ways shape, the cultural approaches and expectations of the workforce required by many TNCs. Technology-oriented and service industry TNCs in particular value higher education and training (Miyamoto 2003). Education institutions are designed to transmit specific knowledge, training, and strong cultural norms to and via their graduates. Their organizational design elements as well as their educational content can be critical factors determining the economic viability (the human capital capacity) of a region or community.

In the race to capture high technology industries, postsecondary schooling becomes particularly important to development overall, and to the location decisions of TNCs. As Hoff and Stiglitz (2001, 413) put it, drawing on the work of the World Bank: “if differences between industrial and developing countries depend on differences in knowledge as much as on differences in capital, policies to narrow the knowledge gap take on a first-order importance. As

a consequence, improvements in secondary and tertiary education systems, not just increased access to primary education, become important.” Additionally, many TNCs engage directly with education systems as part of their basic business proposition, which requires a usable labor force (see, for example, Paus and Gallagher 2006). There is evidence too that, once a TNC has set up shop, foreign investors often influence the demand for skills both by setting the terms for a particular labor market and by directly engaging with training institutions (Lorentzen 2007).

The importance of institutional learning and absorptive capacity in determining host countries’ likelihood of reaping benefits from engagement with TNCs logically leads to an investigation of TNC effects on the baseline components of absorptive capacity levels—human capital formation. Studies that translate the learning and capacity concepts outlined above from the firm level to the regional or community level reinforce the idea that a community, region, or nation’s ability to benefit from new knowledge, technologies, and investments is significantly dependent on what Xu (2000) calls a “minimum human capital threshold.” Most of the studies in this vein focus on levels, and sometimes quality, of formal schooling. Studies that explore the role of FDI or TNC involvement in raising levels of learning to or above this threshold tend to focus on industry specific or national labor force or at the firm level (Xu 2000; Mahnke, Pedersen and Verzin 2003; Almeida and Phene 2004).

Most investigative work on how TNCs engage in human capital development, however, focuses within the firm on internal training of managerial and line workers, as well as on observational and interaction-based learning effects that can raise standards and human capital levels at local firms affiliated with or somehow linked to TNCs. The emphasis is on learning in specific factories and firms, or on particular industrial sectors (e.g., Aitken and Harrison 1999; Blomström et al. 1999; Driffield and Hughes 2003). There is less investigation of how TNC

activity affects either educational organizations with wider reach, or the broader institutional environment around education. This leaves a gap. As Hudson (1999, 65) put it, “rather than privilege territorial over corporate knowledge production and learning (or vice versa), the critical point is to explore the *relationships between* these two.”

Economic development and business attraction:

There is little disagreement that government policies and activities play critical roles in determining the potential for economic activity in a given region. Specifically, there is broad agreement that government policies can influence the ability of a given place to benefit from foreign direct investment and TNC activity (Young et al. 1994). Existing work on the relationship between governments and TNCs focuses on the bargaining and power relationships surrounding TNC and FDI location decisions (Li and Yeung 1999), but does not follow the interaction through to understand the organizational learning implications of these relationships. The institutional perspective enables us to build a more granular view of the nature and manifestations of this influence. Governments overall establish rules of economic engagement (minimum wage, environmental and consumer protections, infrastructure, tax breaks, tax incentives or earmarks for particular industries, for example). Government economic development organizations (in regions in which they are significantly empowered) can shift both the real and perceived incentive structures for an industry or company.

I will focus on the investment attraction arms of government economic development agencies. These organizations, as vehicles of larger government policy, can quite literally provide a framework for the economic activity that surrounds, and ideally flows from, investment attraction. Investment attraction and economic development organizations are often

at the “pointy end of the spear,” interacting directly with the multinational entities whose investment their governments hope to attract. They are also, therefore, among those likely to learn and shift directly because of interaction with TNCs.

The rules and norms that governments set, and which their agencies establish and project, affect both the type and distribution of economic activity across sectors and regions. Much of this rule and norm setting goes on at the national level, but the sub-national polities (e.g., province, state, canton, city) provide additional layers of rules of engagement, which can further shape and shift the geographic mix of economic activity. It is at this level, in fact, where the economic policy rubber often meets the proverbial road. Regional, state, and municipal level policy in the United States, for example, has become a great focus of national competitiveness drives and can influence the location of companies and even whole industries. It is at this level that I will focus much of my exploration.

Chapter 4: Institutions Exist in Places: Case Study Overview

Research questions

Existing case studies investigating the roles and effects of TNCs have shown that while we can outline broad parameters of expectation, on-the-ground effects are strongly determined by location and organization-specific factors (Naughton and Segal 2000; Almeida and Phene 2004; Giarranta and Pagano et al. 2004; Kirby 2004; Paus and Gallagher 2006; Yeung and Liu et al. 2006). That is, factors related to the dynamics of particular TNCs in particular places.

In this project I focus on the following lines of inquiry regarding the possible roles of TNCs in institutional adaptation:

- a. Can the entry of a TNC shift institutional environments? If so, by what mechanisms?
- b. Can the entry of a TNC shift institutional environments through interaction with organizations that help shape these environments?
- c. Do TNCs have a role to play in increasing the economic potential of the communities and places in which they locate?
- d. Do TNCs have a role to play in changing the way policy makers and government or government-affiliated organizations approach their work?
- e. Can TNCs play a role in shifting a particular place or government's approach to human capital building?

I approach these questions with the following working hypotheses:

- a. The entry of a major TNC into a developing area can have significant effects on the economic institutional environment in that area.

- b. Some of these effects are traceable to direct interactions between the TNC and institutional actors (actors in a position to set institutional frameworks or directions).
- c. Some of these institutional actors function within government and government-affiliated organizations.

I pay particular attention to the absorptive capacity of institutions over the course of a TNC's location activities. Do institutions change and even learn through their interactions with TNCs? Do people in a selection of institutions with strong influence over the economic trajectory of these places change their perspectives and ways of working, and do these people, in turn, change institutions? Does institutional learning take place as a result of interaction with certain TNCs? What elements of learning are due to interaction and influence of TNCs rather than to academic, "regional development industry," and intergovernmental influences (Legendijk and Cornford 2000)? What characteristics of a TNC or a place are conducive to learning and institutional change? I approach these questions by exploring shifts in policy frameworks and among policy makers, as well as in the provision of higher education and resultant human capital development.

Case selection and scope

My two case studies focus on the entry of the same TNC, Intel Corporation, into emerging capitalist economies: China and Vietnam. Based on the literature reviewed in the previous three chapters, I designed a research approach that enables me to explore the possible roles TNCs might play in institutional learning and institutional change in two transitioning economies. TNCs are often lumped together, but each corporation is an individual organizational actor, and different TNCs can be expected to have different effects. In this project I will focus on

a TNC that is a first mover or early entrant in emerging or economically underdeveloped localities. By focusing on an early entrant I hope to better identify the role an individual TNC might play. While a focus on later entrants might illuminate further aspects of the interactions among localities and TNCs, it would be far more difficult to isolate the role of any single company. In addition, a focus on early entrants can bring the challenges facing developing areas into particularly sharp contrast by highlighting some of the obstacles these localities might face in initiating and sustaining a development trajectory.

Founded in California in 1968, Intel is the world's largest semiconductor company and the industry leader. It is also a major transnational entity with a long history of international activity. Intel opened its first overseas manufacturing facility in 1972 in Penang, Malaysia, followed in 1974 by a facility in the Philippines. Intel found a place on the Fortune 500 list in 1979, passed \$1 billion USD in revenue for the first time in 1983, and became the largest semiconductor supplier in the world in 1992. By 1993 its product had gone from an unknown piece of computer hardware to a recognized brand, and its chips powered 85 percent of all desktop computers (<http://www.intel.com/about/companyinfo/museum/archives/timeline.htm>). By this time, Intel had facilities in Israel (Development Center, 1974; Fab, 1985), Ireland (1989), and would soon expand manufacturing operations to China (1996) and Costa Rica (1997). Intel entered the Chinese market in 1985, and in 1996 opened its first manufacturing facility in China, located in the Waigaoqiao Free Trade Zone of Shanghai Pudong New Area (<http://www.intel.com/community/china/>).

Intel is what can be called a “marquee multinational corporation.” I define *marquee multinationals* as industry leaders with international brand recognition and significant influence over at least their own supply chain and industry. While there are TNCs of various sizes and

types, much of the development literature on the role of TNCs in economic development focuses on large companies and their ability to create a series of upstream and downstream development effects (through supplier and distribution networks, deleterious and positive) that might affect the place in which the large company is located (Blomström 1991; Dicken et al. 1994; Young et al. 1994; Aitken and Harrison 1999; Milberg 1999; OECD 2002; Lozano and Boni 2002; Driffield and Hughes 2003). A focus on larger, well-known companies facilitates data gathering and has the added benefit of enabling this project to be consistent with much of the existing literature on TNCs.

I selected Intel Corporation as a study subject because of its status as a marquee multinational and its preference for being an early entrant manufacturer in developing regions. It is clear also, even from a cursory examination of news reports, that Intel's entry into an economic environment attracts attention to that place as a potential investment location. The Intel brand is internationally recognized among consumers in connection with a high-technology company and product line.

From a research design perspective, it is worth noting that Intel's facilities follow a "copy-exact" format, thus making the sites relatively comparable within type (their semiconductor factories [known as *fabs*] around the world are comparable, their assembly-test plants—also known as assembly and test manufacturing (ATM) facilities—are comparable if not identical, allowing for age).

I used a dual case-study approach, looking at Intel's entry into Chengdu, China and the Ho Chi Minh City area of Vietnam, in order to test hypotheses in multiple environments and to build theory that takes into account significant differences in circumstances. By choosing two case studies that follow the same corporation in countries and regions that are often compared

economically, politically, and institutionally I was able, following George and McKeown (1985), to maintain some consistency across cases. The two cases have sufficient similarities to be considered two examples of a “conceptual class” (Abbott 1992). The study design thus maintains a number of specific similarities across cases to approximate “natural experimental features” per Lloyd-Jones (2003). I have chosen two different countries with similarities, rather than two cases in the same nation-state context, specifically to test the proposition inherent in my hypotheses and research approach—anticipated similar patterns of experience (Vaughn 1992).

In both Chengdu and Ho Chi Minh City, Intel was an early and much vaunted entrant among TNCs. Both Chengdu and Ho Chi Minh City were in emergent phases of economic development at the time of Intel’s respective location announcements. In the case of both location decisions there was a great deal of back and forth between Intel and the relevant local government economic development actors. In both cases Intel has also focused on building relationships with the higher education institutions in the area. Finally, in both cases the location of Intel generated a great deal of press coverage, local and international discussion about whether the location of Intel in the respective cities indicated a major shift in the viability of these cities as significant nodes in the global economy.

Both China and Vietnam are undergoing transitions from managed to hybrid economies, but they are each doing so in different ways, which I will explore in the following two chapters. In both transitions, however, local and national governments are engaging with TNCs as never before and, in both cases, Intel was an early TNC entrant into the local economies. I wanted to find out whether Intel’s entry into these locations might have led to shifts in the economic development trajectories of both of these places and, if so, if it had done so through engagement with local institutions. I am interested particularly not in Intel’s pure economic clout (money

invested, jobs generated), but rather in its influence over the institutional infrastructure in both places. Did Intel's interaction with the governments in these locations change the institutional matrix? If so, how—by what mechanisms? If local or national institutions appeared to have changed following Intel's arrival, did these changes reflect learning on the part of those institutions? My working hypothesis was that institutional change did occur and that it occurred through a form of learning built upon legitimate peripheral participation (described above).

Building on the results of initial information-gathering conversations with Chinese and Vietnamese as well as Intel interviewees, I elected to focus on two specific types of institutions, one in each location: local government economic development entities in China and higher education institutions in Vietnam. I chose these two types of institutions because they each play significant roles in establishing the overall institutional environment for business and, therefore, for a location's economic prospects. In addition, in the case of Chengdu, China, even my earliest conversations and most basic of questions about the entry of Intel revealed that the city's economic development organization had found its interaction with Intel to be a specifically transformative experience. In the case of Ho Chi Minh City, Vietnam, I had the opportunity to observe and explore the initial stages of a higher education partnership initiated by Intel, and including Arizona State University, that is explicitly intended to drive institutional change in the region and in the country. So, while I talked with a similar range of stakeholders in each place, I will focus my analysis in the Chengdu case on Intel's engagement with the City of Chengdu's economic development entity, and I will focus my analysis in the Ho Chi Minh City case on Intel's engagement with higher education institutions.

Methods

Over the course of the five years following Intel's establishment of an assembly test plant (ATM) in Chengdu, China, and over the course of the five years following Intel's decision to establish an assembly test plant in Vietnam, I conducted semi-structured interviews with a range of Intel employees, local and national government, business, and academic stakeholders. The interview questions (Appendix A) were crafted to elicit these stakeholders' views on what had changed in government and higher education settings since the entry of Intel as a manufacturing presence in these two distinct places. In China, I spoke with a range of local government, business, and higher education leaders, as well as the leadership of Intel's operation in Chengdu and government relations staff in Beijing. In Vietnam, I interviewed or was able to sit in on meetings with local and central government officials as well as business and higher education leaders in and around Ho Chi Minh City (the Intel site). I interviewed the leadership, including the first and current general manager of Intel in Vietnam and the U.S. and Vietnam-based Intel teams who work most closely on higher education and human capital aspects of site selection. I also interviewed Intel site selection and research staff working out of the United States on an international basis. Through these interviews and analysis of press coverage, together with the application of existing relevant literature I hope to expand understanding of the role of TNCs in shaping the economic trajectories and institutional fabric of the places where they locate.

Following George and McKeown (1985, 35), I built the case studies in line with the "process tracing" procedure developed for investigations of human and organizational decision making. The process tracing approach "attempts to uncover what stimuli the actors attend to; the decision process that makes use of these stimuli to arrive at decisions; the actual behavior that

then occurs; the effect of various institutional arrangements on attention, processing, and behavior; and the effect of other variables of interest on attention, processing and behavior.” I explored the motivations and perceptions of key decision makers and social as well as economic and political actors internal and external to major institutions in an effort to understand whether and how those institutions changed and learned based on their interactions with the TNC, Intel.

As an employee in the Office of the President at Arizona State University, which has strong ties to universities in both Vietnam and in China, as well as to local government officials in Chengdu and Intel leadership both in the United States and abroad, I was fortunate to have privileged access to Intel, government, and education leaders in both Chengdu, China, and Ho Chi Minh City, Vietnam. I conducted semi-structured interviews with a range of actors in each place as well as within Intel Corporation. I interviewed officials within the ministries of education and the ministries of science and technology, administrators and faculty from local universities, leadership of the high technology zones that house Intel in both locations, members of the teams that participated in recruiting Intel, expatriate and local managerial Intel staff, members of local economic development organizations, and representatives of local companies in the electronics sector both with and without direct Intel affiliations. I did, however, have difficulty securing interviews with Vietnamese central government leadership, and much of the information I gathered regarding interactions at that level comes from public meetings and publicly available sources.

The case-study approach allowed me to trace a variety of articulated micro (individual) experiences through (and link them to) the development of macro-level complex systems (institutions). I supplemented interview data with analysis of materials produced by the organizations involved and press coverage, both in the host countries and in the industry press, as

well as with contextualizing data on the economic and educational circumstances in the case study locations. FDI data (UNCTAD) provide some initial context for the economic trajectories. However, my interest in both the educational and economic data lies at the sub-national level, and it is particularly difficult to find reliable and comparable data across countries and regions. In addition, while FDI data is often used as an overall indicator of the regional economic effects of foreign firm interaction, FDI, national educational attainment statistics, and related data alone cannot tell the whole story of TNC influence in emerging economies (Li and Yeung 1999). Government educational attainment statistics, in particular, often fail to capture reliable measures of educational approaches and quality that we can deploy to understand a trajectory, not just of improvement or degradation, but also shifts in approaches and norms over time. In order to understand the relationship dynamics that are so critical in determining the direction and degree of institutional change, I focused on the specific social interactions that surround and that can influence organizational learning, and therefore institutional outcomes.

I chose this approach to draw on what Castree (2005) pointed out are among the benefits of case-study research in human geography: to investigate the “multiscaled relations” that comprise persistent diversity of human experience in particular places, while teasing out the trans-contextual elements we must have to build coherent theory. This is particularly important for research that is, as this project, focused on the relationships between states and other actors. That is, for studies that explore the intended and unintended consequences of state actions—of policies. This pair of case studies will illuminate not just the interactions in these particular places—though there surely are local specificities—but also add theoretical depth and shed new light on the processes of learning and institutional change as essential cornerstones of development. Chapter Five will focus on Intel’s interactions with local government in Chengdu,

China, and Chapter Six will explore Intel's engagement with higher education institutions and the Ministry of Education in Vietnam.

Through this particular pair of cases, I hope to expand our understanding of the consequences of policymakers' decisions to attract major multinational corporations. As states, and cities adjust their policies to attract TNCs. I hope to expand understanding of whether and how governments, as a result of their interactions with TNCs, change their approach to governance.

Research precedent: the Costa Rica case

In 2006, around the time that Intel's facility in Chengdu was getting up and running, and Intel was making its announcement of a major investment in Vietnam, the World Bank's Multilateral Investment Guarantee Agency published a study entitled: "The Impact of Intel in Costa Rica: nine years after the decision to invest," which surveyed direct and indirect effects of Intel's investment in the small Central American country. Intel was by far the largest foreign high-tech investor in Costa Rica when it chose the country for a new site in 1996, so much so that one of Intel's vice presidents compared the TNC's entry into Costa Rica to "putting a whale in a swimming pool" (Spar 1998). The authors of the World Bank report refer to the "Intel effect" when talking about distortions in measures of GDP—economists began to measure the economy "with and without Intel, in order to understand the trends of 'the other Costa Rica.'" (World Bank 2006, 13).

The World Bank's report on Intel in Costa Rica identifies four main areas of impact: FDI inflows, GDP and trade; investment climate; industry and industry composition; broader development and societal impacts in areas such as education. The report, like other literature on

the topic, emphasizes the importance of Intel's marquee status, or the "signaling effect" of Intel's entry to other TNCs, noting that Intel's entry helped create a "better country image for FDI" and "Intel had given an implicit seal of approval to Costa Rica's operating environment" causing "other prospective investors to take notice" (World Bank 2006, 8). In particular, the authors noted that Intel's reputation for undertaking extensive due-diligence studies prior to investing helped pave the way for additional investors, and Intel cooperated closely with the Costa Rican economic development authorities to become a "live testimonial" for investing in the country (World Bank 2006, 9). By 2006 electronics was Costa Rica's largest sector and, while others had invested, Intel was still its biggest player. The report credits Intel with "a shift in the country's top exports, from coffee and bananas to electric and electronic products," but notes that the investment had yet to catalyze development of a true cluster (World Bank 2006, 25). It did, however, put Costa Rica on the map for consideration by other investors, and it spurred a range of institutional changes that appear to have significantly improved the overall business climate and Costa Rica's "competitiveness."

Intel worked closely with the Costa Rican government, particularly its investment promotion agency CINDE, to change the business-oriented infrastructure and institutional environment of the country. The prospect of large-scale investment and the arrival in Costa Rica of a major TNC arguably helped to break up political bottlenecks and ease the way for economic reforms and additional infrastructure investments (Larrian et al 2000). Intel also worked closely with a range of universities and technology institutes to revamp curricula, introduce new courses, and create new certificate and degree programs in areas of interest to Intel. The Minister of Science and Technology called Intel's entry into Costa Rica "a very important push" to technical education, in particular (World Bank 2006, 22). In summary, the World Bank report states:

Intel's investment decision was the catalyst for a realignment of Costa Rica's competitive platform as an investment location. Costa Rica worked... with a novel sense of urgency to enhance the country's technical education, incentives law, regulation and infrastructure. Over time the effects could be seen in an improved investment climate, a more focused, strategic approach to investment promotion, a developing technology cluster, and newly secured FDI projects in other target sectors. The Intel investment also reached far into the local community, affecting education and the country's knowledge base, workplace standards and business culture.

Rodríguez-Clare (2001) notes that these changes built on a history of government investment in education and in investment promotion (some of which was financed by the United States Government via USAID in the 1980s), and calls these changes "not concessions [to a particular company], but rather Intel-inspired reforms to improve the country's competitiveness."

Would China and Vietnam have similar experiences and undertake significant changes? Both countries are much larger than Costa Rica, both countries were in the midst of major economic reforms when Intel entered, and both countries also have central-local government relations at play in a way that Costa Rica did not in this case. The World Bank report and other accounts of the Costa Rican experience describe Intel as a catalyst for change, but they do not fully describe the processes and experiences that underlay that change. If there were parallel or similar experiences, how would they play out in these different environments and would they take place in a learning-oriented context?

Chapter 5: Case study: Intel in Western China

Intel Selects Chengdu: A Story of Institutional Learning and Change

In 2003 Intel became one of the first major TNCs to announce a significant investment in the electronics industry in the western part of China. It was touted as the first big foreign direct investment (FDI) success of the central government's Great Western Regional Development Policy, or Campaign to Open up the West, initiated in 1999 and more colloquially known as the "Go West" campaign, designed to encourage the development of China's western inland provinces. These western provinces were, partly due to policy design at the central government level, latecomers to the great burst of economic growth that had characterized the eastern part of China for the preceding decades.

Intel announced the selection of Chengdu, the capital of Sichuan Province, as the site for its newest investment. According to leadership in the city of Chengdu, Intel was the first fully foreign-invested multinational to build a high-tech facility there. Though Motorola had a joint venture and Siemens had a factory in Chengdu, the Intel experience was qualitatively different for the provincial and municipal governments. Tony Liu, who led the team of city officials tasked with securing Intel's investment, noted in 2006 that before Intel came to Chengdu "we didn't have the real meaning of the real multinational." Through their experience wooing and winning Intel's investment in Chengdu, city officials learned how a major western TNC behaves, what it demands, and how to meet those demands. To learn this, city officials undertook a concerted effort to, in a sense, apprentice themselves to Intel—through a form of legitimate peripheral participation. In the process of meeting the TNC's demands, and based on what they

learned through the experience of attracting Intel, the city of Chengdu changed its approach to economic development and altered the organizational form of its business attraction apparatus.

Intel began preliminary inquiries into new sites for an assembly test facility in China in 2000, but in the first round of exploration Chengdu quickly fell off the list of cities under consideration because, according to Chengdu municipal government officials, “the local government didn’t pay lots of attention,” says Liu. But in 2001 word came that Intel was seriously considering setting up a site in western China in keeping with the central government’s push to “go west,” and this time Chengdu’s city leadership took the prospect very seriously. According to Chengdu city officials, Intel then put Chengdu back on the list as a potential site and Intel’s due-diligence teams with experts in logistics, human resources, infrastructure, and public security began coming to assess the true viability of the city for their needs.

Intel’s site-selection team initially identified two potential sites in western China as well as sites in the country’s east, and in Thailand, Vietnam, and the Philippines (Theng 2010, 53). According to Theng’s account (2010), “After the initial visits, [Intel] had a shortlist of cities, but...none of them had an overwhelming advantage.” It took “several more rounds of visits and negotiations...before the site selection team could make its recommendation.” Suzhou and Shanghai in China’s east were in the running, but the final contenders were Chengdu and Xi’an, in Shaanxi province. When the then CEO of Intel, Craig Barrett, visited these final two contenders, Theng reports that Xi’an officials focused on showing off the city’s general beauty and cultural offerings, but Chengdu authorities “focused on showing just how ready the city was for the Intel challenge with its new airport, and new industrial area with a free trade zone and logistics centres.” The Chengdu team, he says, “was so determined to secure our investment that they had visited Intel factories in Shanghai and Penang [Malaysia] to familiarize themselves with

the needs of the semiconductor industry” (Theng 2010, 55-56). Chengdu did not yet have all of the facilities and policies that Intel would require, but the city’s emphasis on addressing Intel’s specific needs and its eagerness to learn about and understand those needs convinced the company. City officials, for their part, report that they saw this as not only a major opportunity to secure foreign capital, but also a major opportunity to acquire knowledge and capabilities.

How did Chengdu go from being cut off the list of potential Intel locations to becoming the site for the company’s first new assembly test facility in a decade? It is a multifaceted story, but fundamentally one of institutional learning and adaptation.

China: opening up, economic governance, and the geography of FDI

China began to re-enter the global economy at a time when TNCs were trending upward in size and number, and the recent dramatic acceleration in the growth and expansion of TNCs has paralleled the emergence of China as a major global economic power. China’s economic activity has become tightly linked to the activities of companies all over the world, and China has built a competitive strategy that not only makes it the low-cost competitor to beat, but also can place it in powerful positions relative to managers of transnationally mobile capital and TNCs. In addition, the Chinese Government still exercises a level of unified policy control that many states do not. Thus, contemporary China provides a vivid, and in many ways peculiar if not unique, window into the ongoing negotiation between states and corporate entities.

Over the course of the past two decades, China has emerged as a primary destination for FDI. The origins and nature of this FDI are shifting as China engages more and diverse nodes in the global networks of capital. Early investments came primarily from small and medium-sized enterprises (SMEs) from Hong Kong and Taiwan and networks of overseas Chinese capital,

including from Southeast Asia and from Western-based overseas Chinese investors, who continue to play important roles in the composition and character of FDI in China. However, a broader cross-section of multinational corporations has increasingly trained its sights on China as an investment location and as a market. Extra-regional TNCs are now heavily relying on Chinese low cost production, even as these TNCs use the low-wage rates in China as leverage to keep (or push) rates down in other countries where they have operations (*Economist* July 30, 2005).

All levels of Chinese government—local and national—have in turn trained their sights on attracting the capital these international investors can provide. China has made rapid economic development and the attraction of mobile TNC financial capital central political priorities, luring TNCs from across industries to invest in production facilities in China and/or to source their production from facilities in China (be they Chinese-owned or foreign-owned). In addition to a supply of cheap labor, the Chinese government offers favorable tax structures in Special Economic Zones (SEZs) and other special investment and development zones.

In China's case, size certainly does matter. China's deep supply of low-cost labor and high level of engagement in trade are together changing the face of the world economy (*Economist* July 30, 2005). But, it is not just China's size and population that have lent it this kind of power. The collective effect of the entry of the Chinese labor force into TNC production chains, combined with the ability of the Chinese state—if it so chooses—to exercise direct and indirect control over the activities of companies, whether state-owned enterprises or foreign-based TNCs, makes the kind of power that China is accruing unique among its contemporaries, both relative to TNCs and relative to many other states. The Chinese government (central and local) exerts significant control, and allows TNCs to also exercise substantial control, over

mobility and other freedoms of the labor force (Wright 2003). This is part of both domestic political and international competitiveness strategies (Chan and Li 1999; Fan 2002).

The foundation of China's economy, and the biggest draw for TNCs and their mobile capital, is its capacity to serve as "workshop to the world" based on low-cost and abundant labor supply, but the central government is trying to put some parts of the country on a fast track to "high road" competition (Malecki 2004). The government is focusing its high-road oriented efforts on the areas surrounding existing major cities, including Shanghai and Beijing, implementing competitiveness strategies that expand and improve its education system, and building research and development (R&D) capacity, some with the help of TNCs. China has been building capacity in science and technology since the late 1970s by sending thousands of students abroad to study, and over the last decade it has also begun to put increasing amounts of money into research, education, and skills development within China's borders (Suttmeier and Cao 1999; Dahlman and Aubert 2001; Hayhoe and Zha 2004). In the late 1990s TNCs began to use China not simply as a cheap production site, but also increasingly as an innovation/R&D site. China's huge population of potential consumers and growing stock of workers with strong science and engineering training have helped it to attract high-end investments in R&D from TNCs including Microsoft, Lucent, Motorola, SAP, Ericsson, and GE.

China is also actively working to move up the global production chain by building its own TNCs which, in turn, are seeking control over other forms of capital, including natural resources, technology, know-how, and internationally recognized TNC brands (*Economist* June 23, 2005). This is a strategy for building both capacity and competitiveness. China is trying to leapfrog established hubs of high-end production by bringing in capabilities and established resources. Three widely covered failed attempts to purchase foreign-based capacity from TNCs

include Chinese state-owned and partly state-owned enterprises' attempts to purchase Noranda (Canada), Unocal (United States), and Maytag (United States). Other attempts have been more successful, including the bid by China National Petroleum Corporation for the Canadian TNC PetroKazakhstan. Each of these takeover attempts was led by Chinese state-owned enterprises with financing assistance from the Chinese central government. In these cases, state-backed entities are deploying their own mobile capital to capture the tools the state feels it needs to be competitive.

China is benefiting from transnational capital and from an increasingly networked version of the production chain in which elements can be isolated and moved around the world in search of the greatest comparative advantage for the production of each component in what might be a larger product. At the same time, China is itself actively encouraging this transnationalization and networked version of the production chain. Partly as a result of this, while there has long been competition among localities (so much so that Mao initiated anti-localism campaigns), the reform years have seen the emergence of a new "competitiveness" framework fed by international trends in place-promotion as well as by central government policies that focus on economic development and place-promotion as key aspects of job assessment for government bureaucrats and politicians (Cartier 2005).

China has been on the path of economic opening and reform since 1978, and since then China's reform has been characterized by what Deng Xiaoping famously called "crossing the river while groping for stones," in other words, learning-by-doing (Arrow, 1962). This learning-by-doing took a distinctly geographical form in China. The southeastern provinces were opened first to trade and investment: local governments were allowed to experiment with policy reforms and new economic frameworks and, based on the success in those southern regions, officials

were allowed—and often encouraged—to spread those reforms. This approach of incremental institutional change through geographical experimentation is a defining feature of the institutional learning curve in China.

Regional FDI and the development of China's east

The active engagement of foreign investors (largely, in the first instance, from Hong Kong into the Pearl River Delta) has had a significant effect on economic trajectories, first on a regional basis and later at the national scale. With the FDI funds came knowledge and skills that helped shape China's emerging economic success (Naughton 1999).

In the early “opening up” years overseas, Chinese capital dominated foreign direct investment in China. In 1979 the Chinese central government established four SEZs in China's southeast coastal region, where foreign investors could enjoy preferential treatment. These were followed in 1984 with the designation of fourteen Open Coastal Cities and other open zones which were allowed to provide tax incentives to foreign investors, and throughout the 1980s additional regional designations followed (Fan 1995; Wong and Choy 2008). These zones received more investment from the central government than other locales in China, as well as loans and subsidies. They were also permitted higher foreign exchange rates, allowed to retain more revenue, and received a range of other economic and financial freedoms that were not available to other areas. Over the course of the 1980s these zones became a more integrated part of a larger plan to build up a “belt” of eastern China-based export-oriented industry and foreign trade linkages for the nation (Fan 1995). Fan (1995) notes that this led to significant skewing of foreign investment toward the eastern region, with some eastern provinces receiving ten times or more the foreign investment of central and western provinces. Fan's (1995) work also points out that foreign investment was one of

the most important determinants, if not the most important determinant, of unequal rates of growth and uneven spatial development in this period, both between and within provinces. During these years and into the 1990s, Hong Kong-based investors made up by far the largest portion of FDI. They created major manufacturing hubs in China's southeastern Pearl River Delta, invested in real estate and tourism, and—deploying ties of shared culture, language, and proximity—created production networks based on relationships—*guanxi* capital (Leung 1993; Sun and Tipton 1998). Taiwanese-based investors also, via networks of shared culture, language, and proximity, contributed significant amounts of FDI, particularly over the course of the 1990s (Hsing 1998; Sun and Tipton 1998). For many years, overseas Chinese networks and capital continued to dominate SME-based FDI in China.

With Deng Xiaoping's "Southern Tour" in 1992, the provinces and cities of the southeast—those that already had growing industrial capacity and significant foreign capital inflows—were further advantaged (Lin 1993; Smart 2000). The local governments in these provinces were empowered to adjust taxes, initiate fiscal reform, and take other measures to attract—or continue to attract—foreign capital, and to advance their industrialization. In addition, these localities were, in some cases, allowed to retain more of their collected revenue as it came in, both in the form of taxes and in the form of township and village enterprise (TVE) and other state-affiliated enterprise profits. These advantages enabled these places to become more entrepreneurial—to the point that Oi (1992) and others have termed their *modus operandi* "local state corporatism"—and to reinvest in further development of their assets, creating the potential for localized virtuous cycles of economic development.

The combination of capital-origin-derived locational specificity and geographically oriented government policy created a distinctively regional thrust to FDI in China. Place of origin and shared

culture, trust, and *guanxi* were critical features that both encouraged investment and bolstered its success. The flexibility and networked nature of this FDI engagement arguably facilitated the interaction of these manufacturing entities with the global trajectories of post-Fordist industrial development, just-in-time manufacturing, and affiliated international trends (Yeung 1997). This, combined with the rising costs of labor in Hong Kong and Taiwan and the labor surplus in China, created a strong environment for FDI success and export-led economic development in the areas geographically and culturally close to Hong Kong and Taiwan. Central government policy allowed these southeastern localities, increasingly flush with locationally specific FDI, to engage more freely in market interactions and export, thus empowering local governments to expand their mandates and become increasingly entrepreneurial—even corporatist (Oi 1992)—and reinforcing the regional thrust.

The government policies that enabled the success of these regions have helped create a distinctively uneven geography of development in China, with the southeast at the forefront and the central and western parts of China lagging behind or struggling to catch up. At the same time the successes of the east and southeast led to central government-level reassessments of economic policy, which have expanded the scope and scale of economic reform to encompass other parts of China, encouraging additional localities to attract FDI (Smart 2000). Some even argue that the central government has given up a great deal of its power to the localities. But, the central government continues to frame the activities of the localities and has the power to step in if it feels reforms are out of line or have somehow gone too far, and the central government has shown it will step in (Wang and Liu 2000; Cartier 2001). In addition, despite increasing amounts of mobile capital and increasing integration of parts of China into the global economy, “the state and its

leaders endure as the decisive factors shaping regional policy and the ensuing patterns of regional development in the Chinese socialist economy” (Fan 1995, 444).

Extra-regional FDI and the expansion of development to China’s center and west

By 1995 investors, including the United States, Japan, Singapore, and Britain, had stepped up their contributions of FDI in China, accounting for 7.2 percent, 5.2 percent, 4.4 percent, and 2.3 percent of FDI respectively, with South Korea, Germany, Canada, and Australia rounding out the top ten list of FDI contributors over the 1983-1995 time period (Sun and Tipton 1998, 161-163). In the last decade, and particularly following China’s accession to the World Trade Organization (WTO) in 2001, China has attracted increasing investment from sources beyond its immediate neighborhood and overseas Chinese networks, including from Western-based companies and major multinational corporations. By 2003 China was the number-one recipient country of FDI in the world (UNCTAD 2005). At the same time, overseas investors have begun to bring more of their capital to provinces beyond the eastern belt.

Capital from Western investors tends to enter China quite differently than the *guanxi* capital of Hong Kong and Taiwan, in terms of investment targets and modes of entry, as well as location (Yeh 2000; Sun and Parikh 2001). Western investors often have different aims from Hong Kong investors—for example, seeking entry into the Chinese market for their products as much or more than finding cheap factors of production.

Western investors have tended to be more focused on capital and technology intensive industries, to gravitate toward larger cities away from SEZs and, in the case of capital from the United States, to spread resources more widely, and to invest in larger-scale projects than the investments from Hong Kong and Taiwan (Sun and Tipton 1998; Sun and Parikh 2001). Also,

particularly in the early phases of Western capital entry, Western FDI was more restricted and, by government policy, often funneled into the form of joint ventures.

At the same time as the amounts of Western FDI were increasing, the Chinese central government began considering seriously how to encourage more even geographic distributions of the significant economic gains that China had experienced since opening up (Holbig 2004). Following the lead of Deng Xiaoping, the central government had deliberately crafted economic policies that favored growth in the eastern and southeastern provinces of China, largely at the expense of central and western provinces (Fan 1995; Goodman 2004; Tian 2004). But even as Deng Xiaoping encouraged the opening up to economic growth of the east, in the 1980s he also articulated the evening out of development as a longer-term goal—possibly partly in response to pressure from provincial leaders and scholars (Holbig 2004). Under the 1991-1995 Eighth Five Year Plan, the central government began to invest in select major infrastructure projects in the central and western regions of China (Tian 2004). And, in 1992, Deng put a tentative timetable to the overall goal of addressing geographically uneven development, noting that by the end of the twentieth century authorities should begin to resolve “the problem of disparities between the rich coast and poor interior gradually and smoothly” (quoted in Holbig 2004, 337).

In 1995, at the meeting of the 14th Central Committee’s fifth plenary session, the government began to integrate these goals into formal policy. In 1996, the central government began encouraging foreign investment in the interior, and pressing the developed provinces of the east to help poor regions in the west through a range of aid programs (Tian 2004). Still, at the end of 1999, China’s coastal region had more than 80 percent of all the foreign-invested firms in China and more than 83 percent of the total foreign-invested capital. The coastal region was also still receiving the majority (about 58 percent) of the total capital investment coming from the central and local

governments (Tian 2004). In the latter half of the 1990s influential academics began to argue more for leveling the distribution of economic opportunities and wealth among the regions, and in the summer of 1999, Jiang Zemin appears to have raised for the first time directly the creation of an “Open Up the West” policy (Holbig 2004).

By the autumn of 1999 Jiang Zemin and Zhu Rongji announced that the Open Up the West strategy (*xibu da kaifa*, also known as the “Western Development Strategy” or “Go West” policy) would become an official government policy in 2000 (Goodman 2004; Tian 2004). This Go West strategy is arguably less a coherent policy framework than an amalgam of sometimes competing agendas and goals (Goodman 2004; Holbig 2004). But one of the Go West policy’s clearest goals was the attraction of more foreign investment. In support, the central government gave provinces in the designated western region the power to approve any size of foreign-investment project and to give significant tax breaks (eight additional years) to foreign-invested firms (which can qualify with only 25 percent of their foreign capital inland) (Holbig 2004; Tian 2004).⁶ The government also expanded the range of industries in which foreign investors are allowed to participate. The strategy also involved increased investment in infrastructure, more loans on good terms to provinces, cities, and enterprises in China’s west, and freedom to issue more government bonds. All this may not be enough, however, to enable these localities to surpass the packages that eastern areas can still provide to attract foreign investors (Tian 2004). These are not the only impediments to increasing investment in the central and western regions, as Tian (2004) notes, pointing to issues of “rampant corruption, lack of respect of law and unhealthy mentality of the people in the region,” as well as lack of understanding of the basic rules and norms of a market economy which include property rights and contracts, and a more

⁶ Not all the provinces included in the Go West program are geographically located in the western part of China. The program also includes Inner Mongolia in the northeast.

general lack of educational attainment. In addition, Lin and Chen (2004) point to bureaucratic lock-in in local governments, and “slack management” in industry. In other words, a lack of institutional infrastructure for engagement in the global market economy.⁷

Foreign investment capital has played a major role in China’s economic development trajectory over the last thirty-plus years. Interaction with FDI has influenced the shape and directions of government policies, both at the local and at the central government level, as well as of local government to central government relations. FDI has also, in its turn, been significantly shaped and directed by its interactions with multiple levels of government.

These shifts to embrace economic reforms across China and further opening up the Chinese market to FDI have led to greater engagement by more provincial and local government-level leadership with foreign investors. While the central government still essentially sets the “rules of the game”—as to which industries can receive FDI and in what forms, which industries have priority, and which sorts of FDI localities can provide exceptional attraction enticements (Wang and Liu 2000)—localities are increasingly interacting directly with purveyors of foreign capital and foreign companies. What might the effects of such engagement be?

Sichuan Province

Sichuan has a history not only of prosperity, but also of institutional experimentation. It was the first province to begin abolishing collective agriculture and in the mid-1980s was among the first provinces to experiment with new ownership models for state-owned enterprises

⁷ Additionally, the west itself is diverse and varied, with some areas far ahead of their neighbors, and stark rural-urban divides (Goodman 2004). Some argue that the Go West program’s initial investments have even exacerbated this divide. Sichuan Province, for example, is among the largest in western China in terms of both population and economic output, and the capital city of Chengdu and its surrounding areas were already among the most developed and prosperous of the western region, with a rich agricultural base, history of industrial development, strong universities, and developing infrastructure. The areas of Sichuan north and east of Chengdu, however, are mountainous, with significantly dimmer economic prospects (McNally 2004).

(McNally 2004). But, as the eastern provinces gained preferential treatment, Sichuan fell behind, sending more “floating population” migrant workers to the east than any other province, and losing skilled workers, resulting in further diminished economic prospects as brain drain took hold. Sichuan also faced some of the consequences of past prosperity, as industrial lock-in bound the province to an over-reliance on outdated state-owned firms.

In Sichuan, McNally (2004, 429) argues, the Open Up the West campaign accelerated the development of infrastructure, raised the province’s political stature, and, combined with China’s entry into the WTO, is “raising awareness among Sichuan’s government and business leaders of the province’s national and international competitive position.” He notes that this “psychological change” has led to even greater efforts to improve Sichuan’s institutional and investment climate.

Sichuan’s provincial leaders enthusiastically took up the opportunities that the Go West effort presented, building on a tradition of relative autonomy and isolation from the central government while taking advantage of the new options that the central governments’ evolving policy offered. The province increased its spending on tertiary education and worked to improve the investment climate by streamlining government administrative functions—including those with which the private sector might interact (McNally 2004). Provincial leadership also pushed to modernize local state-owned enterprises. The City of Chengdu invested in the Chengdu New and High Technology Zone and Mianyang Technology City. At the same time, provincial authorities advanced initiatives to increase levels of urbanization and make Sichuan more attractive to skilled workers by adjusting the residency system, all with an eye toward social stability as well as economic development. This is the environment into which Intel entered when it announced in 2003 that it would build an assembly-test facility in Sichuan’s capital, Chengdu, making one of the largest foreign investments in China’s west thus far.



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Intel goes west

In 2000/2001 Intel began to focus more closely on sales prospects for western China, even as the central government began drawing the company’s attention to the region through its emphasis on the Go West campaign. At the time, in Intel’s assessment, growth in Sichuan and other developing markets was set to outstrip—albeit from a lower base—that in more established parts of China by upwards of 20 percent (Theng 2010, 50).

In August 2003 Intel announced that it would invest \$375 million USD to build a semiconductor assembly and test facility in the Chengdu Hi-Tech Industrial Development Zone (West), its second in China after Shanghai. Intel began construction in April 2004 and in March 2005 Intel announced it would make an additional investment to build “Phase Two,” a testing

facility, thus increasing the company's total investment in its Chengdu operations to \$450 million USD. In December of that year Intel inaugurated the first phase of its Chengdu factory. By 2006 the first parts of the facility were up and running with 1100 employees (Intel Products [Chengdu] Ltd. Newsletter, 2006), and by 2007 "Phase Two" was complete. Thus Intel became one of the biggest investors in Sichuan province, the largest and best known TNC investor, the largest semiconductor manufacturer, and the largest high-tech investor.

According to Intel's then country manager, Tan Wee Theng, "...Intel was by 2001 comfortably established in China. And it was around this time that an audacious idea began to make its rounds of the corporate corridors. In our next phase of growth in China, why not take heed of the central government's recently launched drive to develop the country's remote western region?" (Theng 2010, 44). Intel's leadership in Beijing and Chengdu cited the importance of Chengdu as part of the Go West program as one of the motivating factors for the selection of the site. They noted that the investment in Chengdu would align with central government priorities and would, therefore, mean that the central government would "help." In Theng's words: "Why was I so keen on going west?" Not just for the market, he says, though that was important, but also "...for long term, sustainable relevance in China, you want to be on the right side of the government. Supporting the country's long term agenda will show your commitment." By going to Chengdu, he recalls "Intel would gain first-mover status throughout China. I was also pretty sure that we would be able to get a good deal in terms of incentives, both from the local authorities and the central government" (Theng 2010, 50-51). China was fast becoming the third largest market in the world for Intel's chips, with China generating up to 12 percent (\$3.7 billion USD) of the company's total revenue by 2004. Intel was ready to increase its investment in China, both to capture the production savings that China's labor force offered

and to demonstrate its significant commitment to China by bringing more FDI and doing it in a location the central government had designated as a priority for development (Theng 2010).

The Chengdu plant would be Intel's first in a "tier two city" in China; it would be a greenfield site and the company's first new assembly test facility in a decade (Theng 2010, 156). In 2004 *Fortune* magazine called Chengdu "ground zero for Intel's latest foray into China," saying that Intel is "throwing money all over town" (Vogelstein 2004). In the same article the writer noted that most American companies probably had never heard of Chengdu. Intel was, in this sense, serving as a "marquee multinational" bringing attention to Chengdu and serving as a verifier of sorts of Chengdu's investment climate.

The city engages

Two weeks before Intel's site-selection team paid their first call, Wangli Moser, Intel's director of corporate programs in China who oversees government affairs there, flew to Chengdu to tell government officials the team would be coming to assess their city. She talked to city officials about what Intel would want to see and what they would want to learn about the city. The mayor and party secretary were, she says, very quick to respond.

As one of the first steps in the site evaluation and selection process, Intel sent what city officials and Chengdu Hi-Tech Zone staff characterized as a "very complex questionnaire." It was the first time any of the Hi-Tech Zone staff had seen anything like this and, in 2002, the Chengdu Municipal Government set up an "Intel Project Team," also called the "Intel Project Office," to respond. Tony Liu, of the city's Foreign Trade Commission, led the group, which consisted of representatives from existing economic development and infrastructure-oriented agencies, including the province of Sichuan's and the city of Chengdu's Foreign Trade

Commission, the Economic Commission, the Planning Commission, the Power Bureau, and others specifically tasked to answer all of Intel's due-diligence questions and to prove that the city and the province could provide the level of service that Intel appeared to require. This was the first time that such a multi-disciplinary team had been assembled in Chengdu to undertake a major business attraction task. The team consisted of about twenty to twenty-five people, divided into six groups covering a range of policies as well as water, transportation, and energy infrastructure and education. It was the main interlocutor with Intel's due-diligence groups.

The questionnaire was the first taste staff level Chengdu officials had of what was in store for them working with Intel. It was the beginning of a multi-year back and forth in which, according to Liu: "Intel educated us how multinationals do business." The process of responding to the questionnaire forced city officials to work across organizational stovepipes and to codify as never before their city's capabilities, strengths, shortcomings, and aspirations across the full range of areas of interest to many TNCs, including infrastructure, import-export regulations, employee, educational, and other human capital assets. "It was the first time we had seen anything like this," Liu said, and the first time that they were forced to assess their overall economic development asset profile in such concrete terms. This codification led to a new way of thinking about the city's competitive strengths and weaknesses, asset profile, marketability, and approach to all foreign investors to follow.

The process of responding to the questionnaire and providing additional information to Intel also pushed city officials to hew to a timeline of specific deadlines, something they were not accustomed to doing. As one Hi-Tech zone official recounted: "Chinese people always say 'I will try my best or I give you feedback as soon as possible.' But Intel people will ask you when. Next week, next month you will give me a paper, you will give me feedback next week. No

Chinese people will ever do that. But now yes we don't say 'as soon as possible.' [We say] 'I will give [it to you in] ten days, or after today I will give it to Intel' or something like that." In pushing the city to respond on a clear schedule, Intel "put everything on the table instead of under the table," Liu recalls, meaning that they put things on paper with concrete deadlines rather than relying on the more implicit agreements and rough timelines to which the Chengdu municipal staff were accustomed.

The Intel Project Team's job was to persuade Intel to select Chengdu as the site for their new assembly test facility and the effort was given highest priority by the municipal and provincial governments, which knew they were competing with Xi'an, Suzhou, and Shanghai. The team provided answers to the questionnaire, but was also empowered to provide Intel with any and all additional information they requested. City officials were proactive in this effort, not just responding to Intel's questions, but traveling to Intel sites around Asia and to Intel's headquarters in the United States to understand better what it would mean to attract and host Intel. This brought Chengdu municipal officials into the Intel orbit and introduced them to the Intel culture as legitimate peripheral participants. They visited export processing zones (EPZ) in China's east to see what facilities a "modern" EPZ might need. They were also empowered to bring issues directly to higher-level officials for swift resolution, something quite out of the ordinary. And, all this was happening on a timeline that forced the officials to learn and do at the same time. They had to learn what the EPZ requirements were, for example, while almost simultaneously figuring out how to implement them—they were learning by doing.

One example of the municipal government's newfound responsiveness when faced with the prospect of "winning" Intel was the selection of the physical site. The Chengdu Hi-Tech Industrial Development Zone was established in 1988, and the Chinese central government (via

the State Council) approved it as a state-level hi-tech development zone in 1991/1992. Intel wanted all of the benefits of being within the Hi-Tech Zone and the EPZ but, based on their due-diligence review, decided that the zone's location in the south of the city would not suit their needs. Intel preferred the western part of the city.

Thus, in 2003, the City of Chengdu, after seeking permission from the provincial and central governments, annexed the land that Intel sought—a large plot that was, at the time, active farmland under the control of an adjacent county. The annexation of farmland for industrial or commercial development is not uncommon in China, but it was the first significant expansion in Chengdu of the Hi-Tech Zone. It required the creation of a second, far more sophisticated EPZ, and indicated both the city's—and provincial and central governments'—commitment to Intel and its budding focus on technology-oriented economic development, a focus that was, Chengdu officials argue, catalyzed by Intel's engagement. Intel's site-selection manager Siew-Hai Wong has said:

what convinced us that Chengdu was the right place was the local government's response to all our concerns. We were worried about transport; they said: 'No problem, we will work with you to solve it.' Utilities—same answer. And so on. There were so many issues, and with each one they showed they were ready to find solutions. That's what I liked—their spirit and determination to solve every problem, not giving up. Some of our discussions were over the phone. We would ask for something, and in half an hour they would call back and say: 'Yes, it can be done.' ... That really impressed me—their desire and determination to win our business. It's that kind of attitude that would make the difference for us. Once we started work on the factory, it wasn't all smooth sailing. But with each problem the local government showed its commitment to find a solution. (Theng 2010, 57)

It was the government's responsiveness not only to anticipated but also to unanticipated needs, as well as the government's willingness and ability to learn and integrate new approaches that convinced him.

Intel settles into the hinterlands

Yet, Chengdu's entry into the higher echelons of Chinese contemporary economic geography was not entirely smooth. Once this truly greenfield location was selected, municipal officials began six months of negotiations on a master development agreement (memorandum of agreement [MOA]) with ten appendices. Chengdu officials had "never seen such a complex MOA," the negotiation for which required bringing in still more teams from the legal departments of various parts of the government. The city government and Hi-Tech Zone staff then had to produce defined deliverables on clear timelines, including major infrastructure improvements—they had to learn how to do this even as they implemented, and they did so with a great deal of interaction with and guidance from Intel.

Byron Ba, Intel's director of logistics for the Greater China area, described Chengdu, even in 2006, as being "very much in the hinterlands of China," noting that Intel "knew before we announced our investment [there] that we may get into some trouble...because it is so far inland, but we obviously had underestimated the...problems we got ourselves into" (Johnson 2006). Many of the problems were infrastructural—the inability to land a wide-body 747 aircraft at the Chengdu airport, the lack of reliable power supply and transportation networks—but many were also institutional. Even the physical infrastructure limitations required institutional solutions. The existing governmental organizations were not set up to deliver the things that Intel required, nor were they set up to prioritize activities in the way that the Intel attraction and location process demanded. The creation of the Intel Project team addressed some of these deficiencies, which were laid bare in the course of Intel's location decision-making and continued to emerge as the city worked to address Intel's needs once the company began building its new facility. But it was not only Intel Project Team members who had to adapt. The

existing city and provincial agencies had to adjust and work with Intel to ensure availability of water resources and to pipe a reliable supply of power and install back-up power systems for the greenfield site, as well as to begin significant expansion of the airport. The City of Chengdu and the Chengdu Hi-Tech Zone were, in engaging with Intel, working with the most demanding, and high profile, investor they had yet encountered.

Intel identified these hurdles, and municipal officials sought out lessons learned in other cities and at other Intel sites, applying many of those lessons as they developed both at Intel's site in Chengdu (special water and power provision), and in the city's larger infrastructure (for example, in the construction of the new terminal at the airport). Interaction with Intel helped direct this learning. Intel engaged heavily with local officials regarding their concerns about "hard" factors like power and water supply, and airport runway capacity, as well as regulations. Intel also worked with the government on "soft" institutional changes, including the attitudes of government and its way of working. This was evident in changes in policy as well as changes in what might broadly be called the culture of work in some areas.

For example, Intel demanded a more efficient export-processing apparatus that would be open 24/7, so Chengdu officials visited Shanghai and other EPZs to learn how to meet Intel's needs. By 2006 city officials pointed to the EPZ and the Chengdu Customs and Inspection and Quarantine Bureau (CCIB) as the entities that changed the most through their dealings with Intel. Intel, says Liu, forced CCIB to change its "attitude [toward] enterprise....[Before Intel Customs would] take a look at the local enterprise [with the attitude that] maybe today you get clearance—okay—but tomorrow [is] also okay...there was no time schedule. But Intel started a different story." He reports that the CCIB developed an orientation and responsiveness toward enterprise and an emphasis on "efficiency and the quick response to the multinationals" that did

not exist before the municipal government's efforts to attract and satisfy Intel. Some of the changes were structural, and some were cultural or attitudinal. He notes that CCIB had to alter its approach to be more customer-oriented by both moving its physical location and opening up a site in the EPZ, and by changing their internal systems to accommodate Intel's demand for a paperless customs process, a benefit previously permitted by the central government only in eastern coastal provinces, but granted to Chengdu because of Intel. And, CCIB had to change its organizational culture, too.

The idea that the CCIB would be organized to serve business and improve the efficiency of supply chains and trade interactions was quite new. It was through iterative interactions with Intel, and because of the municipal, provincial, and central governments' emphasis on satisfying the TNC's demands, that the CCIB fundamentally changed the way it undertook the business of government. Before Intel arrived, city officials report, CCIB's customer service was "terrible" and its location was inconvenient for multinationals. With Intel's arrival and the push the TNC made to improve customs processing, CCIB changed its approach from an arbitrary waiting game to a "whenever you need clearance, just call me" ethos. Some of these developments might well have been assumed in the absence of Intel (and it is not clear that this new attitude immediately applies to local exporters), but the promise and realization of Intel's investment in the city catalyzed and focused the city's economic development efforts in a way no previous investor had done.

The Intel staff in China overseeing government relations were matter-of-fact about the government learning process and clearly expected that it would be part and parcel of Intel's entry into a new area: "Logistics are driven by need...and as a first mover [Intel] will always have the need and then they will need to establish the system, which takes time, and they have to

coordinate internally and change the internal system to make it work—these are generic problems in China...[we/China] need to grow up so fast and service always has to catch up.”

Municipal officials, local and provincial government leadership were matter-of-fact about Intel’s role in government learning and changes as well. According to the then mayor of Chengdu Ge Honglin, “When a large multinational company like Intel decided to invest in Chengdu, it pushed us to improve our service levels. The semiconductor business uses sensitive equipment and needs better utilities support, like reliable, round-the-clock power supply. There was a lot of pressure on our local officials to learn and to improve” (Theng 2010, 58). At the staff level, municipal officials reported that “Intel really educated the local government on how to work with the IT industry... We...accumulate a lot of experience from Intel.” And, they were clear that Intel’s status as a marquee multinational and industry leader was an essential component of this process. As one Hi-Tech Zone official noted, when working with an “industry leader,” both the company and the local government could also push the central government for help that might otherwise not be forthcoming, and the local government had greater leeway—as well as greater incentive—to bend over backwards to make changes to accommodate such a major TNC promising such a large-scale investment in the city.

Tang Hua, Deputy Director of Chengdu’s Hi-Tech Zone, holds that these changes benefit not only Intel, but that “local government can cooperate to provide support to top industry leaders and that benefits the whole industry. Once we got the leader of the industry [the industry leader/TNC] they can ask [for] support from local government, so by working with industry leaders we can also improve the business climate.” Intel’s demands were different from those of companies Chengdu had previously encountered, and these demands put officials on a steep, but productive, learning curve. According to *Fortune* magazine, by 2004 Party Secretary for

Chengdu Li Chuncheng had “completely re-architected the local government to thin its once crushing bureaucracy and more effectively attract foreign investment...Li says that using the blueprint that Intel helped lay down for dealing with foreign companies, he is working on five other investment deals.” (Vogelstein 2004)

Municipal officials see the relationship with Intel as a valuable long-term investment and one that attracted additional attention to the city from the central government as well as from other potential investors. They contrast working with Intel to working with local or less well-known companies, saying that “local companies are more concerned about incentives and cost cutting than some of the other issues that Intel was interested in, and local companies move as costs change, so does Intel...but sound relationships with local government are another factor....The central government enabled things for the Chengdu Hi-Tech Zone [e.g., the EPZ] for Intel that they wouldn’t for other companies...there was more flexibility.” So local government officials felt a real sense of possibility and openness that would not accompany the entry of most companies into the city, and there was a sense on the part of government officials that the kinds of changes and accommodations Intel wanted or demanded would also serve the city’s own long-term goals, beyond securing just Intel’s immediate investment.

Chengdu city officials were clear also that it was not only the “hard” changes, but the “softer” changes and learning process that they view as important for Chengdu’s long-term economic development. “The value of [Intel’s] investment,” according to Mayor Ge, “is not just the money itself—it’s the management and technology that comes with it. We get to learn about new management styles and new technologies. I told my officials to pay attention to all the details in a very careful and disciplined way. Whatever we committed to do, we would have to

deliver. And we would have to deliver on time because time is money for an enterprise” (Theng 2010, 58).

In December 2005, at the request and with the sponsorship of Intel, the Sichuan University Center for Development and Strategy completed a report entitled: “Economy [*sic*] Impact of Intel’s Operation in Chengdu.” For the report, the research team interviewed a range of stakeholders and surveyed 3,000 local residents and 2,000 government officials and “professionals.” According to this report, Intel pushed changes in the city’s infrastructure, but more importantly, in the city’s orientation:

The even better part of Intel’s investment in Chengdu is not necessarily the material part, but the change in the social ideas and concepts. Intel is expected to bring better ideas and greater awareness in terms of corporate management, moral standards, and environmental protection for the government and corporations.

The report emphasized the attitudinal and institutional changes government had made and was expected to make as a result of interactions with Intel:

First, the change of the mindset of the government is of critical importance in Intel’s final decision to move into Chengdu. On the one hand is the old system, and on the other is the new demand from Intel. It is either the old system or the Intel project that is to be discarded. In the end, the provincial government of Sichuan and the municipal government of Chengdu broke one norm after another and finally made it. Intel’s sensitivity to legal arrangements made it necessary that every agreement between the corporate and the government be written into the contract that is to be protected by law, making the whole thing into a major agreement with dozens of subsequent contracts. Discussion over the terms took half a year. The introduction of Intel into Chengdu brought a whole new perspective to the government and an excellent example for future efforts in attracting foreign investment. (29)

City officials changed their orientation, stripped down regulations, and improved their service provision such that between 2001 and 2011 the Chengdu city government “cancelled 1,059 of the requirements companies must meet to gain official approval to conduct business, or 91 percent of its requirements” (Huang 2011). The central and local governments pushed and enabled policy changes at local universities to enable more directed training for Intel and other

TNCs through internships and targeted curriculum. They also changed their idea of how a government entity engaging business should behave. According to one Hi-Tech Zone official, for example, “More important” than the changes Intel pushed in physical infrastructure, “through the process of attracting Intel to come here we formed open minded teams.”

Whether all of the changes Intel’s engagement pushed are positive for the long-run economic development of Chengdu remains to be seen, but the fact that such changes occurred and the nature of the engagement between government officials and Intel demonstrates that the legitimate peripheral participation-based learning and team-oriented interaction between Intel and the government, at multiple levels led to significant changes in the institutional infrastructure, as well as in the attitudes and approaches of many government agencies and their officials.

Memes, marketing, marquee multinationals, and the emergence of a new identity

This institutional change is evident in both deed and word. Building on their interactions with Intel, Chengdu municipal officials, and particularly the staff of the Hi-Tech Zone and those who participated in the Intel Project Team, adopted a whole new vocabulary for business attraction. As Tang, Deputy Director of the Hi-Tech Zone, put it, they “began to learn the same language as multinationals and began to use the same language,” including terms like “due diligence,” “business climate,” and “investment environment.” This shift in language is indicative of the city taking ownership of what amounts to a new sense of self—a new economic identity.⁸ Key to this new identity is the city’s sense that Chengdu is a participant in the

⁸ Some might reasonably argue that these city officials were being indoctrinated with a hegemonic discursive formation that purports to be global and to describe universal value, but does not (see Peet and Watts 1993).

emergence of a new economic geography in China—an economic development possibility frontier that includes cities in China’s west.

This new identity is on show in the city’s promotional materials as well as in conversations with officials. They emphasize the infrastructural changes as well as a range of other new elements that the city now understands are of greatest interest to TNCs. This includes an emphasis on the city’s own trajectory of change and willingness to learn, as well as the institutional and attitudinal shifts that city officials now know TNCs value. By 2007 the Chengdu Investment and Promotion Commission’s (2007) English language brag sheet included extensive information on both the new western and older southern sections of the Hi-Tech Zone, and on the merits of its western 24-hour Sichuan Chengdu Export Processing Zone (EPZ). In addition to the Hi-Tech Zone and the EPZ, they also list a State Council-approved Chengdu Economic & Technological Development Zone and Industry-intensive Development Zones in nineteen of Chengdu’s twenty districts. It touts the city’s air travel and cargo throughput and infrastructure, noting that Shangliu airport is “designed as one of the six largest airports in China, the largest in western China,” as well as the city’s railway and road infrastructure. It describes in detail the water, power, and gas supplies and communications network, noting that all are to be further upgraded before 2010. It describes the university network and labor pool as well as labor costs and amenities for foreigners, before coming to locational incentive and tax-break policies which are broken down into city policies and “Incentive Policies for Foreign Invested Enterprises in [the] ‘Go West’ Strategy.” Finally, an appendix lists multiple well-known companies that are foreign investors in Chengdu. The Hi-Tech Zone’s (2006) glossy brochure even boasts that “with a package of policies significantly more preferential than in coastal areas of China, Chengdu Hi-Tech Zone secures [*sic*] a broader profit margin to investors.”

The Chengdu Hi-Tech Industrial Development Zone brochure (2006) emphasizes service and constant improvement: “Chengdu Hi-tech Zone is constantly conscious to enhance its management capability, the ultimate purpose being to create a perfect investment environment to ensure a smooth operation of the enterprises at a lower cost, and to guarantee the lawful rights of investors and the security of their life and property, and to operate at lower cost.” This pitch both aims to establish Chengdu’s viability as an international place of business, with its emphasis on the “lawful rights of investors” and management, and squarely targets the competition with other areas in China through “lower cost.” The zone wraps all this in a narrative about learning—about the zone’s willingness and capacity to learn, to “constantly...enhance its management capability.” It notes the customer-service oriented, non-interventionist approach of the government in almost the same breath: “Chengdu Hi-tech Zone clearly defines different functions of government, enterprise and society. An open, fair and just competition environment is prevalent. A quality service helps solve all problems once addressed to the staff.”

Chengdu also learned about what TNCs feel they need to entice international workers and integrated these elements too into their “pitch,” focusing on the availability of good international schools, which they have enhanced following Intel’s entry, as well as health care and even Starbucks, of which there were none in Chengdu in 2001. It was Intel staff who pointed out to municipal officials that the presence (or absence) of a Starbucks was an indicator of internationalization and a must for any city seeking to build its international profile.

Intel as a first mover: going west and the changing geography of investment in China

Intel was like a flagship—a major role Intel plays is like a flagship

--Tony Liu, Deputy Director, Bureau of Investment Services, Chengdu Hi-Tech Industrial Development Zone and former lead for the Intel Project Office, 2009

Chengdu suddenly became the heaven for top multinational corporations.

--Sichuan University Center for Development and Strategy study of Intel in Chengdu, 2005

The entry of Intel into Chengdu arguably marked the city's entry onto the world stage of FDI, raising its profile among TNCs as a possible location for capital. While Chengdu had, for some time, been an economically successful city relative to its neighbors (McNally 2004), it was, as a result largely of central government policies intertwined with its geography, far behind its coastal competitors for FDI. It became one of the first great successes of the "Go West" campaign.

Intel was a first mover in this context and a large enough investor to catalyze significant changes in Chengdu. One area of change was in Chengdu's place on China's economic map. With Intel's entry, Chengdu became a more viable destination for additional foreign investors and their capital. "Another benefit of Intel's investment in Chengdu," says Mayor Ge, "is that it helped promote Chengdu globally. When others in the high-tech industry saw that Intel was coming here, they realized that Chengdu has the capability to meet the needs of such companies" (Theng 2010, 58-59).

This new image for Chengdu, bolstered by the new vocabulary and focus of investment promotion outlined above, was echoed in the global press. In 2004 *Fortune* magazine ran an article about Intel's investment in Chengdu entitled: "How Intel Got Inside: the American chip giant's hunger for a huge new marketplace has driven it deep into China." In that article Li

Chuncheng, who was serving at the time as Chengdu's party secretary, is quoted as saying that "for Chengdu [Intel's investment] is a demonstration that [Chengdu] is a suitable place to develop new and high technologies" (Vogelstein 2004). Local officials at the staff level also talked about Intel's entry as building greater "trust" for Chengdu among TNCs (Wen 2009).

Local officials and academics expected that Intel's arrival would lead to the development of an information technology cluster in Chengdu as well as a network of sophisticated suppliers, hoping that Chengdu would become "the Silicon Valley of West China" (Sichuan University Center for Development and Strategy 2005). While their visions have not all been fulfilled, particularly with respect to the integration of local companies and the location of suppliers, Intel is now discussed in the Chinese and Western press as the essential first mover, with new investors described as "follow[ing] Intel Corp" to Chengdu and to western China, including Siemens, Phillips, Foxconn, SMIC, Unisem, and Molex (e.g., Huang 2011)—many of which invested in large sites at the level of hundreds of millions of U.S. dollars.

According to the Chengdu Hi-Tech Zone's glossy English-Chinese language brochure (2006), the "entry of Intel, Unisem, SMIC with their assembly and testing projects into Chengdu Hi-tech Zone has brought about more settlements of enterprises in integrate [*sic*] circuit design, chip manufacturing and matching projects. Chengdu's Hi-tech Zone is quickly rising to be a new thriving point in China's integrate circuit industries, accelerating the formation of microelectronics-oriented IT industry clusters." In interviews with local officials (2009), they report that "Intel's arrival paved the way." Specifically they point to Intel's three years of due diligence smoothing the path for other companies both to look at Chengdu and to make decisions about its viability as an investment site more quickly and efficiently, shaving months of time and effort off the city's previous investment recruitment timeline. The sell, they say, is easier and

requires less work on the part of officials. Intel too touts this as a benefit of its arrival to the city. According to David Xu, Intel Chengdu's Public Affairs Manager, the company "brought new concepts and corporate culture to Chengdu." After Intel, company staff say, Chengdu not only had a better grasp of Intel and its demands, but also "understood what [TNCs] need."

Since its arrival in the city Intel and municipal officials report that Intel staff have been actively engaged in the city's efforts to recruit additional TNCs to Chengdu, meeting with potential investors and talking about Intel's experience. It is also clear from discussion with officials that—despite the Go West program and the changes in the provincial and municipal approaches to business attraction, requirements for investment, and regulations—not all potential investors are treated equally. Intel's size, its marquee status, and relationship with the central government enabled the city and the province to take steps to accommodate more of Intel's needs more quickly than might have been the case were it any other potential investor. At the same time, the intense interaction between Intel staff and government officials created a "can-do" *modus operandi* within pockets of the municipal government that appears to have outlasted the specific work of recruiting Intel.

Intel views the shift in the municipal government both in terms of specific changes made to policies and processes, and in overall attitude as well. The Intel attraction and location experiences kicked off what both parties characterize as something of a virtuous cycle of learning, business attraction, and development. "Before Intel," says Liu, "the government paid less attention to high tech and Chengdu didn't have much high tech." And there is a clear recognition that the municipal bureaucracy still has a long way to go, Liu adds: "We do need to learn much more, we need to learn how to cooperate with the multinationals. That is difficult for us in the beginning because we don't know what a multinational is...[in the beginning] we are

not familiar with the multinational and we don't know how the multinational operates, we need time to learn." Intel's government relations head for China agrees that Chengdu officials "have learned a lot from [Intel]" about how to engage with and attract TNCs.

By 2006 *Forbes.com* was referring to Chengdu as a "western boomtown" that was "fast becoming China's Silicon Valley," and in October 2010 *Forbes* named Chengdu among those cities it believes will be the fastest growing in the second decade of the twenty-first century (Kotkin 2010). Intel's arrival in the city was not only a catalyst, as well as a measurable step up for Chengdu on China's economic development ladder, it was also an indicator of what some have called a "restructure" of the IT industry in China. In 2007 Intel announced that it would build its first wafer fabrication plant, not in China's southeast, but in the less-developed northeast city of Dalian. Not quite two years later, in 2009, Intel announced that it would close its assembly test facility in Shanghai, moving up to 2,000 jobs from there to the Chengdu site.

When Intel committed to Chengdu, they committed not just to the factory, but to embedding the company (and the brand) within the city and building long-term relationships with the various arms of local and provincial government. They did this to enhance their own ability to do business in Chengdu and to build their brand among an emerging cohort of consumers, but it set up a collaborative style of engagement between a TNC and the local government that was new to Chengdu as well as, in some ways, new to Intel. According to Robin Martin, lead on the Chengdu site team for Intel, the investment that Intel made in building these relationships was "very uncharacteristic, but...it paid off. [The officials] really helped to move many barriers during the start-up period" (Theng 2010). This relationship building, which occurred both at the leadership level and at the staff level, was an important factor in building a team-oriented approach to developing the site, in which Intel and municipal as well as provincial

officials were able to work together, and learn together, more effectively toward the shared goal of getting the facility up and running. This approach enabled both trust building, and also a kind of legitimate peripheral participation on the part of both Intel staff and government officials.

By 2009, with Intel's facility in Chengdu up and running, the Intel Project Office remained part of the municipal apparatus, though in a stripped-down form. What was once an office of upwards of twenty people is now a response team of two or three helping Intel to troubleshoot as the need arises. Some of the members of the original team went back to their previous positions or to promotions within their home organizations, taking with them the prestige of having participated in securing Intel's investment in Chengdu and the lessons learned in that process. A few members of the original Intel Project Team, including its leadership from the Chengdu Foreign Trade Commission, built on what they had learned from interacting with Intel to create a new unit within the Hi-Tech Zone, called the Key Projects Office, which is focused on attracting large and high-profile foreign direct investors to Chengdu. Altogether the experience of working with Intel, then, shifted the economic development geography of Chengdu, and arguably of China, by bringing this western city in as a viable and significant destination for foreign investment. It also changed the Chengdu government's approach to business attraction, its focus industries, and the institutional structure of the municipal government.

Chapter 6: Case study: Intel in Vietnam

The most serious issue in the Vietnamese transition was not a conventional macroeconomic imbalance, but rather the skills and institutional gaps. The institutional legacy of the central-planning period was a serious handicap that would take many years to overcome. Thus, most of the “software” needed for a well-functioning market economy was in exceedingly short supply, with one exception: there was no shortage of entrepreneurial spirit.

--(Fforde and de Vylder 1996, 317)

We are not about one class, we are about transforming the universities overall starting with engineering, but extending to the rest of the university and system. Our hope is that it's an institutional transformation. In the next year, two years, five years, we are going to transform the universities.

--Rick Howarth, General Manager, Intel Products Vietnam (American Chamber of Commerce luncheon, April 2011)

Intel invests in Vietnam

In February 2006 Intel Corporation announced that it would invest over USD300 million to build its newest assembly and test management (ATM) facility in Vietnam's Saigon High Tech Park just outside Ho Chi Minh City. In November of that same year, Intel announced that it would more than triple that initial investment to USD1 billion and expand to build a 500,000 square-foot facility—its largest ATM in the world. In a news release, Intel Products Vietnam's general manager Rick Howarth pointed to Intel's “strong, constructive working relationship with the Vietnam government, both at the local and national levels” as a major factor in Intel's decision both to invest in the first place, and to expand in such short order (Intel, November 10, 2006). In an interview with *USA Today*, Brian Krzanich, Intel's vice president and general manager for assembly and test, who announced the increased investment, touted the country's “very vibrant population, an increasingly strengthened education system, a strong workforce and

a very forward-looking government” (http://www.usatoday.com/tech/news/2006-11-18-vietnam_x.htm).

Intel knew going into Vietnam that it would have to invest in workforce development, but by 2008, local and international news outlets were covering Intel’s frustration with Vietnam’s higher-education system and the lack of sufficiently skilled labor in Vietnam. Intel had to intensify its efforts to figure out how best to engage the government and build the labor pipeline they would need to sustain their enormous investment. In other countries (China, for example), Intel had engaged selectively with higher-education organizations, working with individual universities and technical colleges to create targeted courses in their engineering programs to train a workforce suited to Intel’s needs. When necessary, Intel had communicated with governments to make this happen, generally meeting little if any resistance. It tried to bring this model of educational engagement to Vietnam, but met significant resistance. The TNC could not convince the universities to change their curricular content or teaching practices to meet Intel’s needs. Yet, Intel had already made significant investments in Vietnam as part of its global manufacturing strategy, so the TNC decided it would have to try to change not just a few courses in a few institutions, but to change the educational “ecosystem”—to change the institutions.

Intel was not the first to point out the shortfalls of Vietnam’s workforce. The TNC stepped into an ongoing stream of conversation in Vietnam about the need to reform the higher-education system and, like many NGOs and donors—but few to no TNCs—before them, began actively to engage the central government in efforts to alter the Vietnamese higher-education system to make it more compatible with the country’s new and emerging economic realities.

Over the course of the coming three years Intel would find that, while the government was receptive overall to industry’s efforts to push for reforms in the education system, progress

would come only in fits and starts. Education reform in Vietnam is highly politically charged, and the Vietnamese Communist Party (VCP) is explicit in its view that debates over higher-education curriculum and political ideology are intertwined. Additionally, changes in leadership and in the nature of public and political discourse would have to occur before Intel's engagement could lead to adjustments in the system. Even then, Intel could not accomplish its goals alone.

This case provides us with a view into one major TNC's experience in trying to engage a complex and shifting set of political actors, both in public discourse and in private conversation, to bring about systemic, long-term institutional change in a fundamental and sensitive sector—education. In doing so, this TNC had to navigate the practicalities and politics of post-socialist reform in an arena in which NGOs, bilateral donors, and a slew of other experts have all been working for many years to make major changes. What might a TNC bring to the table that these actors could not?

In Vietnam, NGOs and bilateral donors faced many hurdles, including heightened sensitivity to international influences, particularly those affiliated with Western governments, and to anything that seemed to the government like outsiders pushing for changes in ideological positions. Might the engagement of a TNC be seen differently?

A persistent challenge that NGOs, multilateral donor organizations, and others have faced is the question of incentives. The Vietnamese government, like most actors, has shown itself quite willing to pick and choose reforms (and to be selective in their implementation) based on complex calculations that factor in international and domestic, as well as personal, politics. Those calculations determine the contours of the “dance” in which the government engages with international actors and which shapes adoption and implementation of reform. And, it is not only central government officials who are engaging in this dance. In the case of higher education,

university leadership and faculty are also weighing these factors, as well as the incentive systems of their particular organizational contexts, as they decide how to navigate what I will describe as Vietnam's "institutional slack"—the deliberate looseness and opacity of rules and norms that enables political actors in Vietnam to move nimbly among the shifting sands of reform—and make decisions about implementation.

In the following sections I will provide an overview of the literature on Vietnam's major marketization reforms, known as *Doi Moi*, and what it tells us about the processes and politics (domestic and international) of change in Vietnam. I will then delve more deeply into the details of education reform in Vietnam and explore in particular the touchy politics surrounding curricular reform—an area of keen interest to Intel. With this context I will then describe the co-learning processes that led to changes in Intel's workforce strategy in Vietnam and, eventually, to changes in Vietnam's education system. I argue that this case provides another example of the role that TNCs can play in institutional change in sectors that are critical to development—in this case, the education sector. This case is of particular interest because it highlights the role the TNCs can play in helping to make changes in politically charged arenas where other international and domestic actors have struggled. In addition, it clearly shows that TNCs cannot, simply by being powerful economic actors, force or even inspire a government to change institutions. Governments are not the only legitimate peripheral participant learners in this scenario, the TNCs equally must understand the rules and norms of their host countries if they hope to catalyze lasting change and, as in this case, they may not be able to do so without the help of actors that are not, themselves, TNCs. In the case of education reform in Vietnam, Intel needed another boundary-spanning organization to make them fully *legitimate* peripheral

participants in education reform; they needed to bring in partner (in this case Western) universities.

Reform, transition, and marketization

There is an ongoing debate in the academic literature regarding the nature of reform, transition, and marketization in Vietnam that is largely focused on who (which institutions and organizations) holds the real reins of power and who (which groups of people and which organizations) are the real drivers of change. Thayer (2009) identifies three principal schools of analysis: (1) the “dominating state” view that holds the Communist Party and official government agencies are the keepers of power; (2) the “mobilizational corporatist,” “state corporatist” (Gainsborough 2010), or “soft-authoritarian corporatist” (Dixon 2004) stream of analysis that emphasizes the intertwined nature of the state and other organizations that are not of, but are dominated by, the state (state-owned enterprises top this list); and (3) the “dialogical” school that focuses on non-state actors and the limitations of the state in the exercise of social and economic power. Thayer and others (e.g. Kerkvliet 2001) hold that none of these schools of thought is uniformly correct and that all three need to be deployed to gain a real understanding of the transition process in Vietnam. In fact, even those scholars with a particular view of which of these modes of analysis is closest to reality allow that the experiences of transition are quite diverse and that any understanding “largely reflects commentators ‘touching’ the system in different places, to different extents and at different times” (Dixon 2004, 16).

To the three strains of analysis outlined above, however, we must add the view that outside actors and Vietnam’s integration into the global economy are significantly affecting the role and authority of the state, particularly the central state, as international NGOs, bilateral

donors, and investors bringing private foreign capital all are now engaging in the Vietnamese economy and, in some cases, in Vietnamese politics (Dixon and Kilgour 2002). Here the discussion gains additional layers that complicate further any unidimensional understanding of Vietnam's transition from a socialist economy to a hybrid socialist-capitalist one. We must layer central-local government relations together with various views on whether transition really is "reform" from above (policy-driven and government-led); whether it is principally catalyzed from below based on local experimentation and community demand; whether it is a process conceptualized and led largely by actors "inside" (inside Vietnam, inside the Communist Party structure) or "outside" (non-governmental organizations, civil society, international aid donors, and multinational corporations and investors); and even whether it ought to be called "reform" or "transition" at all, but rather perhaps "marketization" (Gainsborough 2010).

The literature on the motivation for and intricacies of reform is simply less developed regarding Vietnam than it is for China or parts of the former Soviet bloc (Gainsborough 2010), and there is not yet a comprehensive and agreed-upon accounting of the course of reform. However, there is a great deal of literature available regarding specific aspects of transition processes. I will draw upon this literature to contextualize my case study on the role of TNCs, and Intel Corporation in particular, in transforming educational institutions in Vietnam. First I will examine the literature on the transition process overall, set out the skeleton of the reform timeline, and provide an overview of the principal academic debates around who and what have been the main drivers of transition. I will focus particular attention on discussions regarding central-local relations and the geography of power in Vietnam, while bringing in views regarding the relative influence of international actors, the money, and other resources they bring, and how this may be changing over time.

Doi Moi: transition, reform, and the changing role of the state in Vietnam

With *doi moi* Vietnam began a fundamental transformation in the role of the state. Scholars differ on whether to call the shift in the role of the state with respect to economic activity in Vietnam “reform,” “transition,” or something else entirely. What all agree upon, however, is that the role of government with respect to the economy is changing and that this change represents a “fundamental shift in the developmental and distributive roles of Vietnam’s state” (London 2004, 127). Over the course of the last three decades, Vietnam’s government and the Vietnamese Communist Party (the dominant organization in their one-party system) have moved from a committed, though perhaps not always fully capable, socialist state, in which the government sought to manage a planned economy, into one where the government sets the parameters and oversees access to resources in a “socialist oriented market economy” (Wescott 2003, 33). The Vietnamese government is no longer managing the economy in a traditional communist style, but is becoming rather what Gainsborough (2010, 41) calls the “the gatekeeping state” and what Painter (2008, 84) describes as an “arm’s-length coordinator and regulator of production units” steering economic activity.

Reform and this changing role for the state were not catalyzed by a Communist Party change of heart regarding socialism; they were driven by the will to survive and to maintain the single-party state as governor of a unified Vietnam. The state was a weak implementer of policy, and remains so, but its official say is important. The state still sets the frame and boundaries for economic activity. It sets the parameters for what is politically and economically permissible. It did so with the reforms of 1986-1989 and continues to do so today.

The official beginning of the shift in Vietnam toward a more market-oriented approach to the economy was the declaration of *doi moi*, or renovation, as an explicit goal at the 1986 Sixth Party Congress. This was followed in 1989 with relatively quick moves to combat inflation, officially recognize the value of the private sector, and stabilize the economy. Such a clear demarcation of the beginning of reform has led some to describe Vietnam's changes as belonging to the linear, "big bang" school of reform, but the reality appears to have been more gradual and multivalent (Fforde 1999; Reidel and Turley 1999).

Between 1954 and 1976 there was no unified Vietnam or Vietnamese state. Instead there were two Vietnams, each of which developed its own set of elites and institutions (Dixon 2004), and following reunification the government of Vietnam was never quite able to impose its will across the economic and geographical spectrum. As Reidel and Turley (1999, 13) put it "...the state was weak relative to the [socialist] model's requirements." Meanwhile, efforts to impose the socialist economic model on unified Vietnam were having disastrous effects on people's livelihoods (Kerkvliet et al. 1999, Kerkvliet 2005). In the period leading up to unification (1966-1975) and following, the state was cripplingly dependent on foreign grants and loans (Reidel and Turley 1999). But by 1979 Chinese and Western aid had been terminated in response to Vietnam's conflicts with China and Cambodia. At the same time, the backlash against agricultural collectivization efforts in the South was growing, leading to initial efforts by the VCP to propose a number of policies aimed at loosening some of the restrictions on private enterprise (Turley and Womack 1999). By the dawn of the 1980s a series of internal and external events were thus converging to spur what would become Vietnam's particular recipe for "renovation."

Vietnam was never able to produce sufficient levels of domestic savings to get the economy on track and invest in growth, and they had never been able to make the benefits of a traditional socialist economic model manifest (Fforde 1999). Kervliet et al. (1999, 9), in comparing the Chinese and Vietnamese experiments and policies on marketization, say that “China authorized experiments with market reforms in order to reinvigorate a stagnating economy, whereas Vietnam began reforms in an effort to pull the country back from the brink of looming disaster.” The government of unified Vietnam never managed to create an economically, and therefore politically, viable central-planning system and never was able entirely to eliminate markets and private enterprise (Beresford 2008). However, the economic stagnation that ensued from their efforts to do so, scholars argue, incited people to take matters effectively into their own hands and engage in what Fforde and de Vylder (1996) first identified in the academic literature as “fence breaking.”

Individuals, communities, and local governments began to undertake fence breaking, or “micro level adaptation” and “plan distortion,” such that, it is argued, the elements of what became *doi moi* were already in place in some areas before the central government made “renovation” official policy. By 1989, these efforts provided the foundation not only for the initial tranche of policy changes, but also for increased marketization with minimal upheaval (Fforde and de Vylder 1996, 249). Fforde (1999, 54) even characterizes *doi moi* as “an attempt to label grassroots innovations in a politically acceptable manner.” Thus, Fforde and de Vylder (1996) argue, transition should be viewed not as a government program (“reform” *per se*), but rather as an “historical process” or “an example of a historical shift in social organization” and “the outcome of the activities of a variety of [largely economic] interests” with a “bottom-up” dimension with respect to which any policy actions and political leadership were largely

responsive rather than proactive (Kerkvliet et al. 1999; Kerkvliet 2005). While scholars debate the relative importance of government policy and bottom-up action, few dispute that there was an element of “fence breaking” and that transition, or marketization, in Vietnam was a socially embedded process in which elements of top-down, bottom-up, internal and external influences converged. Fence-breaking actions by the people and by lower-level government actors met a central state that was quite weak and lacked basic institutional infrastructure for national scale policy implementation, such that lower-level actors could—quite literally—capitalize on what I call the *institutional slack* to extract economic rents (Fforde and de Vylder 1996, 5).

Characteristic of this institutional slack were unclear and unstable rules of the economic game. As fence breaking began to succeed and some reforms were taken on board, popular perception of economic boundaries began to alter substantively, such that if in the 1970s “everything that was not explicitly permitted was forbidden,” beginning in the 1980s “people could often assume that even a wide range of forbidden activities would in actual practice be tolerated, and sometimes even encouraged, by some authorities” (Fforde and de Vylder 1996, 13-14). Many were forced to work around existing rules in order to survive and thus, it is argued, “lost respect” for those rules at the same time as the central government realized the need for a change in economic strategy (Reidel and Turley 1999, 15).

Yet, if transition was a broader social process, reform itself and the policy change it required were an insiders’ game embroiled in party politics (Gainsborough 2004). The Vietnamese state adjusted policy and politics more readily in response to challenges from within the party system or changes in direction among the elite than to external or civil society-based dissent, which it tended to view as an existential threat to the one-party central government (Gainsborough 2002 and 2004b; Dixon 2004; Thayer 2009; Wischermann 2011). Understanding

the machinations and interactions among the members of this elite, Gainsborough (2010, 7) argues persuasively, is critical to understanding the ongoing process of reform. Politics in Vietnam, he argues, is much less about policy positions *per se*—as he puts it “elites in Vietnam hang loose to policy”—than it is about “money, patronage and loose political groupings linked to personalities.” This fits the view that the mechanics of policy change are driven from the inside-out (or top-down) even if the inspiration for those policy changes comes from outside-in (or bottom-up).

The Vietnamese Communist Party itself is “not an autonomous monolith, but is clearly embedded in the society that gave birth to it” and functions based on “an ongoing tradition of reaching decisions by a process of experimentation and consensus,” argues Beresford (2008, 222; Dang and Beresford 1998). Thus, internal party machinations are important to understanding policy, if often hard for scholars to access. The government elites, in Gainsborough’s view, are loathe to ally themselves too closely with a particular ideological or policy-oriented idea lest it pigeon-hole them or restrict their ability to move with the ever-shifting winds of transition and marketization. This reluctance to be pinned down on policy also stems, he says, from a desire on the part of many to maximally exploit the economic opportunities that derive from transition, particularly as they relate to the reform of Vietnam’s State Owned Enterprises (SOEs) and international influences on the course of reform. Yet, he cautions, many of the most important interactions that come to shape policy do not occur in the Party Congresses or within the bounds of the formal institutions of government at all; analysts therefore must take into account the informal institutions, interactions, and social norms as well (see also Beresford 2008; Steer and Sen 2010).

Thus while official policy changes may seem abrupt to some outside observers, in fact they are often long-negotiated and reflective of social and economic changes already underway in the unofficial institutions that govern a great deal of official and unofficial behavior (Reidel and Turley 1999). Even following the declaration of *doi moi*, policy changes have generally been incremental, occurring in what have been called “homeopathic doses” (Wischermann 2011, 406). Dixon (2004, 16) argues that they have, in fact, “principally involved the bolstering of long-established features and tendencies.” He and others note, also, that the changes have and continue to take root unevenly in “extent, depth and direction.” How one sees the economic shifts in Vietnam depends on where and when scholars are “touching” the system.

At the official level, the economic policy changes were rapid fire in the early reform period, with a relatively short experimental period followed by a strong push for liberalization in the face of events that seemed to threaten a complete breakdown of the Vietnamese governmental system as it then stood. Central planning as it had been envisioned was essentially gone by 1989, and labor markets had begun to emerge (Beresford 2008, 241). This economic and cultural shift was reflected in a political shift, and had been encapsulated in the changes adopted at the Sixth Party Congress in the form of *doi moi*. Some argue that these changes represented a “strategic shift” (Fforde and de Vylder 1996) and some argue that they were more “tactical retreat” than strategic change of course (Reidel and Turley 1999). But most agree that there was enough resistance to the changes within the government that reforms were not taken on board as a paradigmatic ideological shift, and socialism remained—and remains—the conceptual framework for economic activity.

At the same time Vietnam was stepping into the first phase of economic policy reform, it was also facing the collapse of its remaining and largest source of external support, the Soviet

Union, forcing significant alterations in the calculus of reform. Over the course of the first two years of the 1990s, Soviet assistance to Vietnam essentially disappeared, marking a final blow of sorts to the role of the central government as manager of a socialist economy. Without Soviet aid the state could no longer provide the subsidies such a system requires. This collapse heightened the urgency and volume of debate both inside the Party and central government as well as in the public sphere about market-oriented growth, as it became intertwined with fundamental questions of regime survival. The state shifted significantly over this short period toward an “accumulatory role,” reducing its range of activities and withdrawing direct financial support from social service entities, including medical and education institutions. Some argue that (perhaps counterintuitively) this led to a consolidation and recentralization of state power and influence over those areas of economic and social life over which it sought to retain control, even as it began to develop an infrastructure for decentralized economic decision-making (Fforde and de Vylder 1996).

The disappearance of funding from the Soviet Union was a serious financial, and therefore political, blow to the Vietnamese central government that forced further reexamination of the socialist economic ideology. However, by this time Vietnam was also already looking beyond the Soviet Union for models and doing so with an eye more toward economic growth than ideology. Throughout the 1980s, Vietnamese leadership had begun to look to the emerging Asian tigers—and particularly its Southeast Asian neighbors—for inspiration (Fforde and de Vylder 1996). This together with a great deal of “groping in the dark” set the scene for the reentry of a wider variety of international actors into a Vietnam where marketization was, in fits and starts, already underway (Beresford 2008).

State-owned enterprises and the emergence of state corporatism

In the early 1990s there was a dramatic increase in FDI and in Vietnamese exports as something of an investment “fever” set in (Gainsborough 2004b). By the mid-1990s the Vietnamese state was clearly emphasizing external investment as a tool of reform, and by engaging its neighbors Vietnam was able to improve its economic prospects. These changes were built to some degree on previous incremental and micro-level adjustments (some firms are said to have been experimenting with trading on the international market beginning in the 1980s), but by then the principal beneficiaries were clearly government-affiliated companies (state sector and state-owned enterprises [SOEs]) (Fforde 1999).

In 1987 Vietnam passed the foreign investment law, which opened the Vietnamese market to foreign firms while guaranteeing rights of ownership and protection from expropriation and nationalization of assets. The law was biased toward joint ventures with SOEs. A 1990 amendment, however, opened the way for non-SOE private joint-stock limited liability organizations to enter into joint ventures for the first time, and in 1992 the provisions were further expanded to include private companies. At the same time investment timelines were extended to a maximum duration of seventy years (versus an initial twenty) (Suntikul and Airey 2010).

Between 1988 and mid-1995 the Vietnamese government approved upwards of USD16 billion in FDI projects (though not all of these projects were implemented). Much of the early investment came from Asian neighbors including Japan, Singapore, South Korea, and Taiwan, with additional investors from Hong Kong and elsewhere, giving the first years of reform a distinctly regional orientation (Ahn and Meyer 1999; Palmujoki 2007). Western investment was a bit slower in coming, and the United States maintained an embargo on trade with Vietnam until

1994, but by the mid-1990s Vietnam investment fever had spread to the West (Freeman and Nestor 2004; London 2004; Gainsborough 2004b). Such was the fever that investors appeared to ignore a number of Vietnam's essential shortcomings as an FDI destination, including poor infrastructure and massive amounts of red tape wielded by a snarled bureaucracy, and the capital inflow precipitated a bubble that some scholars argue had long-term detrimental effects on Vietnam's economic development trajectory (Beresford 2008).

The government required central approval for most investments and directed the bulk of FDI toward particular sectors, which many argue did not serve Vietnam's long-term development goals (not well-developed or understood at that stage) and overemphasized real estate development, tourism, and oil (Ahn and Meyer 1999, 1414; Beresford 2008). Beresford (2008, 230) concludes that not only was the Vietnamese government not strategic about FDI, but "far from using [these initial inflows of FDI] as instruments of industrialization and modernization, the Vietnamese state allowed the priorities of the private sector, especially foreign investors, to act as the key to long-term structural change." Reidel and Turley (1999), as well as Fforde and de Vylder (1996), argue that this trajectory was shaped in part by Vietnam's lack of access to other forms and sources of international support and was not driven by one charismatic individual or one set of ideas, but rather by a collection of *ad hoc* efforts to find new economic pathways, what amounts to learning by doing.

Through the SOEs, and the government's deliberate preservation of monopolies or oligopolies in key sectors, central government players maintained a significant hold on many of the resources of Vietnam's growing economy. They also maintained this control by carefully navigating the country's institutional slack, taking advantage of Vietnam's arbitrary tax system with spotty (or perhaps selective) enforcement, and informal arrangements (e.g., "secure

enough” property rights). This enabled the growth of a Vietnamese version of state corporatism (Dixon and Kilgour 2002), or what Gainsborough citing Hibou (2004) refers to as “private indirect government,” in which Vietnam Communist Party insiders were the power players in the transition from a managed to partly privatized economy and reaped many of its rewards (Gainsborough 2010, 82).

As part of the effort to maximize investment and “marketize” in the late 1980s and 1990s, the central government continued its move from micro-management to macro-management of the economy. Provinces and local or city authorities were given greater control over local expenditures and some limited ability to approve foreign investment projects (Gainsborough 2004b). At the same time, the reform of SOEs (known as “equitization” to avoid any terminology that is explicitly connected with “markets”) moved to the forefront of the economic reform effort. These multiple trajectories of economic-policy loosening became tightly intertwined, weaving a new “state corporatist” fabric of interconnected and interdependent local and central government-industry relationships that frame the emerging market-oriented socialist economy.

The reform of SOEs provides a valuable window into the processes that reinforced or created a web of intertwined relationships between money and power, among individuals, and between SOEs and multiple levels of government, that arguably combine to define much of Vietnamese political life. Painter (2003, 22) takes a hard look at the conventional view of SOE reform as a set of top-down policy changes and finds instead that SOE reform is “shorthand for describing a complex, multi-arena process of strategic actions by state business interests, state bureaucrats, party leaders and other state actors.” Vietnam did not take a linear, analytical policy-driven approach to liberalization. Rather, he finds “essentially interest-based foundations

and institutionally shaped trajectories of the process of change and its outcomes.” Local and individual interests, financial and political power, together with the Vietnamese system of patronage drive decisions about the framework for and implementation of equitization and, in many aspects, broader economic reform (Fforde 2009).

The geography of transition: central and local; North and South

The process of reform in Vietnam has been and continues to be geographically uneven. The legacy of the North-South war and the efforts (and failures) to build a unified socialist state in its aftermath still shape the country’s development. Vietnam’s South, and particularly Ho Chi Minh City (HCMC) and the surrounding area, entered the era of reform with some distinct advantages of history and scale. The efforts in the mid-1970s to impose collectivization in the South had largely failed, and the socialist planned economic structure overall never really took hold there (Malesky and Taussig 2009). In addition, the South had endowments of natural resources superior to those in the North, as well as institutions more geared toward markets—a legacy of the pre-unification days (Fforde and de Vylder 1996). It is arguable, too, that resistance to collectivization in the South birthed what were to become national economic reforms (Chan et al. 1999; Kervliet 2005).

HCMC was among the first “fence breakers,” pushing the limits of existing policy in the 1980s by loosening some controls on retail trade and price setting, approaches that were rolled into official national *doi moi* policy in 1986. Additional national policy shifts were driven by lobbying efforts mounted by HCMC in the early reform period and in phases to follow (Turley and Womack 1999; Malesky 2004). But HCMC was not allowed free rein and was not given the kind of preferential treatment that provinces in southeastern China received, for example, as part

of that country's economic transition. From the central government's point of view, HCMC had to be integrated with the rest of Vietnam. North-South differences had to be reduced, not emphasized, and so such geographically based preferential treatment was politically impossible (Fforde and de Vylder 1996; Turley and Womack 1999). Yet HCMC was and remains an anchor for FDI, and it had to be economically successful if the overall economic health of the country was going to improve. So Vietnam's policies "remained uniform in principle if not in effect" (Turley and Womack 1999, 88).⁹

Malesky (2004) points out that as transition progressed, it was not southernness, *per se*, that led to fence breaking, but rather economic power. Provinces that attracted significant FDI were able to make their own investments in infrastructure and address local needs directly, without having to ask for transfers from the central government. In part because of this relative financial independence, they were also often able to exercise more degrees of freedom in experimentation with new economic policies, making themselves even more attractive to foreign investors.

The institutional slack and flexible arrangements that enabled Vietnam's particular story of economic growth put the relationship surrounding economic issues between the center and provinces on sometimes delicate—and shifting—terrain. Though Vietnam has a long tradition, dating back to the years of Chinese domination, of "vertical governing hierarchy extending from the capital down to every village" (Marr 2004), in the late twentieth century the legacy of wars created a strong pull toward localism, overlapping jurisdictions among state and central government entities (as well as between central government ministries), and institutional slack

⁹ Some also caution that the idea of HCMC's position at the vanguard of reform needs to be viewed with some skepticism, as this narrative for HCMC is part of a larger effort on the part of both the local and central governments to bolster the overall image of reform. HCMC is still beholden to the central state, and its bureaucracy is reportedly no better than in other parts of the country (Gainsborough 2010).

(Fforde 1997; Reidel and Turley 1999). As the transition picked up momentum in the late 1980s, central government officials saw what many considered to be a worrying trend toward decentralization (Gainsborough 2010) and what some even saw as a thoroughly eroding central government (Fforde and de Vylder 1996). Yet what has emerged, and continues to evolve, is a mix of centralization and decentralization (Gainsborough 2010).

In the course of transition, new local economic ecosystems developed and localized economic power bases have emerged, characterized by the intertwined nature of state and business activities with the emergence of private sector interests and the role of revenue generation as a counterbalance to central government power (Dixon and Kilgour 2002; Evans and Rorris 2010). Local governments, over the course of the late 1990s and into the first decade of the twenty-first century, were given new authorities, including greater control over local expenditures and the ability to approve larger foreign investments. At the same time, though, the central state bureaucracy was growing, and it exercised periodic clampdowns on speculative activity and flexed its muscle with respect to political appointments (Gainsborough 2010).

The central-local relationship is further complicated by divergent capabilities among provincial leaderships and varied implementation of central government laws and strength of formal (and informal) institutions. Local government officials in Vietnam are often ill-equipped to deal with the demands of the emerging market economy or even to provide services to their communities, let alone to manage actively an economic growth trajectory. And, like local government officials in many other countries, they are essentially caught in the middle, expected both to enforce central government policies and to represent the interests of their communities (Minh 2004; Sikor 2004). They must exist, too, within the intertwined networks of business and state, often holding multiple positions and cross-appointments, building strong “horizontal ties”

that may influence their relative allegiance to local over central ties (Sikor 2004). They are also likely to interpret central directives according to their own priorities, particularly when different central ministries issue conflicting guidance (as often happens) and the central state is relatively weak on enforcement (Dixon and Kilgour 2002; Sikor 2004). This increases the institutional variety across provinces within Vietnam and adds to the uncertainty and institutional slack.

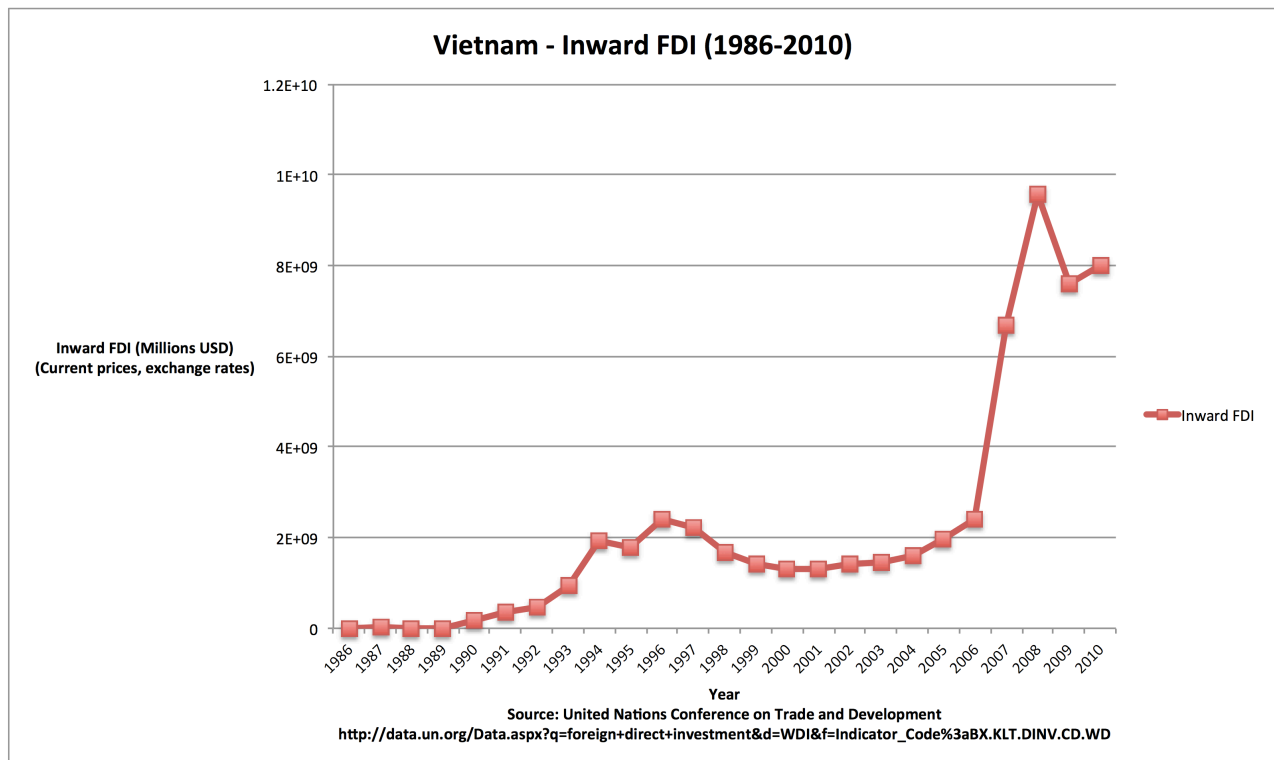
The debate continues regarding the relative power of the central state (Gainsborough 2010). In fact, both local and central government officials lack training and expertise and often struggle to address the challenges of managing an emergent market economy (Le Duc Thuy 1993; Fforde and de Vylder 1996; Minh 2004). Central-local relations are still in formation, with the central government maintaining substantial control in many areas, but also relinquishing important elements of economic oversight to the provinces and local governments (Balme and Sidel 2004). State capacity on the one hand is strengthened in light of the country's positive economic trajectory, even while the continued upward swing of that trajectory is dependent, at least in part, on advancements that are often driven by local and provincial, as well as foreign, interests. Policies are the result of negotiated positions among personal as well as political interests—as they are in many states—and the blend of rigid (though not unified) bureaucracy and flexible responses to policy challenges, the mixing of external and indigenous ideas, and the blurring of public and private roles (both for individual actors and for state organizations) continues.

International engagement and integration: foreign direct investment, overseas development assistance, learning, and institutional change in Vietnam

The Vietnamese state, at both the central and local levels, strategically borrows, or “learns” from foreign actors in ways that help it to navigate domestic as well as international concerns—crafting laws and official ways of working based often on international models and norms, but relying also on domestic calculus and using informal mechanisms for selective implementation (Gillespie 2006; Balme and Sidel 2004; Clarke 2004; McCargo 2004). At the national level this leads to a combination of periodic large pronouncements of reform that are often preceded by incremental changes, and a push and pull of domestic forces that takes place at multiple levels of government and society, all with a focus on maintaining the power and legitimacy of the central government and one-party state. It also means that the process of transition does not conform to the vision laid out by many international donors, international financial institutions, and scholars of post-socialist transition (Malesky 2004). Most scholars depict Vietnam’s engagement with international donors and investors as something of a dance. The international actors on Vietnam’s stage do influence policy-making at the national level and at the local level, but one must also be careful not to overestimate the pull of even the most powerful international players (Malesky 2004; Beresford 2008). Vietnamese leaders have consistently displayed caution and ambivalence in their dealings with foreign donors and investors and international institutions. This was particularly the case as Western donors re-entered the picture and Vietnam normalized relations with multilateral financial institutions such as the World Bank, the Asian Development Bank (ADB), and the International Monetary Fund (IMF).¹⁰ Though the Vietnamese government is still heavily dependent on multiple forms of aid,

¹⁰ By 1995, Vietnam held a Structural Adjustment Credit (SAC) from the World Bank and an Enhanced Structural Adjustment Facility (ESAF) from the IMF, and joined the Association of Southeast Asian Nations (ASEAN) that

it has shown a strong willingness, when it so chooses, to push back on the policy prescriptions of international donors, lenders, and investors.



In the second half of the 1990s, investment fever in Vietnam began to wind down, as it did in much of Southeast Asia. Vietnam, due to its relatively low level of international economic integration, was not as hard hit in the regional financial crisis as were many of its neighbors, but the regional environment combined with domestic factors to slow down international investment. Roughly coincident with and even slightly preceding the Asian financial crisis, the Vietnamese central government began to pull back from its reliance on FDI.¹¹

July (Kokko 2004). Meanwhile, FDI had increased significantly (from \$347 million in 1988 to \$3.8 billion in 1994) (Ahn and Meyer 1999, Reidel and Turley 1999).

¹¹ Measuring FDI in Vietnam presents significant difficulties, as all the official FDI numbers are based on approved projects, many of which may never be implemented. There is currently no good measure of implemented (or disbursed) FDI (Freeman and Nestor 2004, Xuan and Xing 2006). Yet, there is a clear sense that the volume of FDI is generally increasing over time. Over the course of the 1990s, FDI had emerged as an important potential avenue for capital and technology as well as learning. But, foreign investments in Vietnam have not led to significant backward linkages or, generally, the creation of locally anchored supply chains linked to the international investors. Giroud (2007) also argues that there is little transmission of technology or knowledge between multinational investors and local businesses, which may be due to a lack of baseline knowledge, expertise, and capabilities among

As early as 1994 foreign investors and scholars note a shift in attitude toward the foreign sector that was manifest in increasing regulations and significant increases in operational impediments for foreign investors (Dixon and Kilgour 2002; Freeman and Nestor 2004; Suntikul and Airey 2010). Many attribute this to an ideologically driven backlash, together with a sense on the part of the government that it was on significantly surer economic footing by that time. The backlash may be attributable to the fact that Vietnam's 20th century experience was substantially shaped by resistance to foreign influences, combined with a continued adherence to socialist ideology in word if not in deed. This was evident in the ambivalent attitude the central government displayed, even in the early 1990s, toward the attraction of foreign capital through investment promotion. By 1994 this ambivalence was coming closer to center stage.

The policy prescriptions of international institutions and donors are not viewed simply as politically neutral recommendations of global best practices for economic growth, but often rather as attempts by the West to “undermine state power” in Vietnam and force the opening of Asian markets for the benefit of Western firms. This sense was heightened following the Asian financial crisis (Gainsborough 2004b; Malesky 2008). Painter (2003, 33-34) notes that many in Vietnam “fear that entanglement with the IMF and other international donors might result in ‘losing the war by other means’ sets limits to the acceptability of monitoring and guidance, and moderates the expectations of the donors.” Thus, Painter warns, scholars and analysts should not overestimate the extent to which the SOE program or other economic policy shifts are shaped by external pressures from lenders and donors.

Vietnamese central government officials have made their willingness to “push back” on international donors apparent through direct statements such as that in 1998 by the then Minister

those potential local suppliers (Han 2008). But it appears that there is some learning in joint ventures and that FDI, with the international resources, actors, and knowledge it can bring, may be having an impact in the public sphere.

of Planning and Investment, Tran Xuan Gia, who, in response to calls by key donors for “accelerated *doi moi*,” is quoted as saying: “...you cannot buy reforms with money...no one is going to bombard Vietnam into acting” (Painter 2003, 33-34). The government also made clear its position by what the international community might consider resistance to or foot-dragging on specific reforms and international negotiations (for example, in 1998 bilateral trade agreement negotiations with the United States) (Dixon and Kilgour 2002). Demands from international institutions regarding SOE reform, in particular, were viewed with suspicion by significant elements within the party-state system as threatening the socialist ideological frame (and likely personal interests of a range of domestic actors). This suspicion even led to a breakdown of negotiations with the IMF and World Bank in 1996, at a moment when Vietnam’s relative economic strength left international institutions with limited leverage over Vietnam’s economic policy (Dixon and Kilgour 2002, 606).

Malesky (2004, 265) argues that the Vietnamese central government is selective and even strategic, perhaps increasingly so, about the foreign influence it lets in. He credits “active choices made by state actors, the varying effects of globalization on different interest groups and the variety of domestic and non-domestic pressures” with determining policy directions, and sees that “outside resources and ideas are both appropriated for domestic purposes and, in the process, transformed to support alternative outcomes to those that might be expected.” This view portrays a savvy central government, elements of which use foreign funding to reinforce their control over elements of the economy while supporting a politically (and economically) necessary growth trajectory. Overseas development assistance (ODA) in particular, since it is channeled largely through the central government, can significantly influence the balance of power among

ministries and the balance of power between central and provincial or local level government actors as well as between foreign and domestic entities.

In this context, Malesky notes, it can pay for the central government to push back on donor demands and “occasionally to be ‘difficult,’ and to present a belligerent face” because “[d]onors as a result tread more carefully for fear of creating a political backlash from ‘conservative forces.’” Such pushback can help to maintain or change the delicate and shifting balance of interests that shapes Vietnamese politics and policy-making as foreign donors often bend or soften their demands while remaining engaged and continuing to send funds. It may, in fact, be the very bureaucratic overlap and “fragmentation” lamented by so many foreigners (and by many Vietnamese) that enables the government to engage successfully in this dance. The traditions of institutional slack and the legacy of policy incoherence enable the various layers of government to manage internal and external forces without compromising their political positions. Most Vietnamese power brokers wear many hats, in government, in business, in communities, and in engagements with international partners, and the dance with international agents must accommodate the positions of various actors in those multiple spheres that make up the overlapping Vietnamese networks of government and business (Painter 2003, 39).

There is, however, little doubt that some real change and learning in the government sphere are underway, even extending to fundamental changes in institutions. Both ODA and FDI have played roles in this, with multilateral donors pushing for legal, regulatory, as well as cultural change around the opening up of the Vietnamese economy, and with foreign investors lobbying for specific changes in policy as well as broader changes in approach (Fforde and de Vylder 2006). Malesky (2007) points to specific incidences in Vietnam—particularly the changes to the competition law, the 2005 investment law, and the ban on motorcycle imports—in

which foreign investors have played important roles in advocating for institutional and legal changes. Overall he finds that the instrumented (distributed) stock of FDI has played a role in spurring structural reforms in Vietnam and that foreign investors were more likely to be successful in pushing for small and large improvements in the business environment in provinces where foreign investment was “the dominant source of local revenue” and that these changes were, in multiple cases, translated into changes at the national level. FDI, in contrast to ODA, beginning in 1996, has been increasingly managed by local authorities and not funneled through the central government (with the exception of large-scale and sensitive sector investments), and partly as a result FDI, in particular, appears to have exerted measurable influence on local institutional conditions over time.

FDI and provincial institutions

For FDI to have a positive influence, however, the right convergence of players and factors must be in place. FDI is not, in and of itself, necessarily a predictor of or catalyst for institutional change. Sub-national authorities must be ready to be proactive in changing both local or provincial conditions, often to compensate for something that is unclear in or uncovered by national law, and they must also be willing to engage, when needed, in active lobbying of the central government to change national regulations and laws (Malesky 2004). This proactivity is likely predicated on an openness among the provincial or local authorities to the recommendations and needs of foreign investors. At the same time, the investors themselves must face the right set of incentives to advocate for change—arguably some foreign investors might benefit more from the status quo than from any changes to regulation or policy (Meyer and Nguyen 2005).

In his exploration of the role of foreign investors in institutional change in the former Soviet bloc, Lewis (2005, 185) found that “[m]ultinational Companies...played a direct role in changing attitudes at lower levels of bureaucracy, as a result of their daily interaction with officials, and their long slog to improve laws that were drafted in ignorance or haste.” Malesky draws on this work—as well as that of Hewko (2002/2003), Jones-Luong (2003) and others—in his 2004, 2007, and 2009 analyses of the potential for similar interactions, building on his scholarship in Vietnam. He concluded that FDI “helps to explain differences in provincial economic governance” and that “[i]n general, foreign investment has a positive impact on governance” (Malesky 2004, 286). Dang (2010) found similar effects using the USAID-sponsored Provincial Competitiveness Index (PCI) of Vietnam to measure the relationship between FDI and market-friendly institutions, including transparency and access to information, labor and training, pro-activity of provincial leadership, and time costs and regulatory compliance, in addition to property rights, confidence in legal institutions, and firm perceptions of the corruption of provincial officials (see Malesky 2007 for more on the PCI). Provinces with more FDI, for example, had more streamlined processes and featured better relationships among the various arms of government within the province. Expanding further on this work Malesky (2009) looked across twenty-seven transition states using panel data on investor influence over the course of 1991-2004 and found that multinationals should be counted among potential and actual agents of change, and that through their “lobbying and information provision” investors could have a positive effect on reform choices (Malesky 2009, 60). The role of cumulative stocks of FDI in influencing economic reform was particularly pronounced in the manufacturing goods and export sectors (Malesky 2007).

Overall, however, the consensus still seems to be that Vietnam is not taking maximum advantage of the potential positive influences that foreign investment can have. This is in part because of a poor base of prior knowledge, weak human capital, and the continued institutional slack, even though all of these factors vary significantly from place to place across the country (Ahn and Meyer 1999; Nguyen Thi Cahn et al. 2004).¹²

WTO, institutional change, and Vietnam's reform in the early 21st century

Despite the government's ambivalence regarding international engagement, in 2000 the Tenth Plenum of the Central Committee debated the issue of an "independent and self-reliant economy and international integration" and concluded that they must continue with regional and global integration (cited in Thayer 2000). Vietnamese reform efforts were back in full swing by 1999/2000, with the passage and implementation of the Enterprise Law, which simplified the procedures for establishing businesses, leading to a take-off in private (non-SOE) sector growth for the first time, such that growth in the non-state sector began to consistently outstrip that in the state sector (Gainsborough 2004).

The Vietnamese government's reaction to the Asian financial crisis was slow, and the Enterprise Law appeared to be the first major sign that they were moving forward in trying to mitigate the impacts of the crisis. Despite such changes in law, however, the institutional slack and unclear rules that were characteristic of the early reform years and the preceding era

¹² Ahn et al. (2006) found that, under the right circumstances, joint ventures could lead to significant learning on the part of the Vietnamese partners. Building on the absorptive capacity literature to explore the nature of organizational change within joint ventures, they saw that in partnerships that built active engagement by both parties, had mechanisms for shared decision making, in which both parties had some prior related knowledge, and involved a clear investment in training, joint ventures could be a valuable vehicle for learning and organizational change. This recipe is not so easy to find (or create), however, and few companies—state-owned or private—in Vietnam appear able to take maximum advantage of the potential for learning. This may be a result partly of the sectors into which most of the FDI has been directed in Vietnam, with its emphasis first on tourism and extractive industries, and then on low-cost and hand-labor oriented manufacturing (Vind 2008).

generally remained, with a “plethora of minor revisions made to decrees and implementing regulations” of the foreign investment law (e.g., adjustments to allowable investment timelines and the rules surrounding joint ventures and “definitions of private enterprise”), piling uncertainty into the legal framework without, in many cases, actually addressing the problems that foreign investors and donors, as well as the Vietnamese private sector, had identified (Freeman and Nestor 2004, 193; Suntikul and Airey 2010; Ishizuka 2011).

In 1999 and 2000 exports grew at an annual rate of over 20 percent, and ODA disbursements also increased as, in 1999, Vietnam and the World Bank were able to improve relations sufficiently to help pave the way for an increase in the inflows of grants and soft loans (Kokko 2004, 81). In 2000/2001 Vietnam also added the United States to the list of countries with which it enjoyed bilateral trade agreements. In 2002 a constitutional amendment gave equal status to the private sector and the state sector, and the growth of private business continued to increase. By 2004, the strong preference for joint ventures was beginning to fade as foreign investors increasingly pursued 100 percent ownership (Kokko 2004; Suntikul and Airey 2010).

These international investors, as well as the increasing number of private sector actors, are not only subject to official rules and regulations, but also, like the SOEs, must navigate the complex networks of intertwined business and government, ideology and economic goals in Vietnam. Access to state-controlled assets, and often thereby to global supply chains, required negotiating this terrain, in which private business owners’ relationships to the state are influenced by personal relationships as well as factors linked to ethnicity, geography, and, still, the roles of individuals and entities in the war (Thomsen 2007, 756).

The persistence of opacity and institutional slack were evident as Vietnam sought to join the WTO, a process that began in 1995 and did not culminate until January 2007 when

Vietnam's accession was finalized (Vietnam's accession package was approved in November 2006). By halfway through that process, WTO officials had asked over 1,500 clarifying questions of Vietnam, more than had been asked of any previous applicant. Dollar (1999, 41) notes that this indicates "Vietnam's trade regime was extraordinarily complicated and difficult to describe on paper." As a result, and as part of its effort to gain entry into the WTO, Vietnam began a new round of updating legislation and regulations related to foreign trade, such that, by the end of 2005, Vietnam had adopted or revised over "94 statutes and 265 legal acts"; but this was seen as only a decent start to what was needed (Mazyrin 2004, 94).

The attitudes and language surrounding the decade-long WTO accession effort can tell us something about the persistence of the role of the state in the socio-economic fabric of Vietnam as well. Palmujoki (2007) undertook an analysis of how the Vietnamese government navigated the domestic politics of international engagement through language. He notes that the concept of globalization was established during the 1990s in the Vietnamese political vocabulary as a signifier of the economic possibilities that could accompany participation in the global economy and had a pragmatic cast, but that Vietnamese officialdom and public political discourse still had to reconcile globalization with Marxist terminology "to directly justify Communist Party power" (Palmujoki 2007, 127). Over time, the language of the WTO, ASEAN, and other foreign actors was also integrated into the political lexicon in Vietnam, but often with an eye toward bolstering the regime. The Communist Party, he argues, used WTO engagement, for example, "as a signifier of Vietnam's sovereignty" to add to the Vietnamese Communist Party-state's "self identification as a leader among developing countries and within ASEAN," talking largely in public about technical aspects of the negotiations rather than the international politics involved (Palmujoki 2007, 131).

Overall, the central government retains its cautious approach to international engagement, even while recognizing that participation in the global economy will continue to be essential to its economic success. So, the dance continues. The networks of social relationships that continue in many ways to guide economic interactions within Vietnam, and the informal institutions that go with them, still demonstrate a bias toward institutional slack, while engagement with foreign entities continues to push Vietnam toward greater formalization of the rules of the economic game.

Education and economic development: a “general gap between will and skill” (Nguyen 2011, 239)

The shift to a more market-oriented economy revealed serious shortfalls in the education system, particularly the higher-education system, and a lack of skilled workers. Today, a higher-education system that was designed to train “cadres” is still struggling to make the shift to developing “human capital” for the market-oriented economy. Some see the situation as so dire that, despite glowing news reports of increasing FDI, human capital has effectively become a “bottleneck” in Vietnam’s development. Some foreign firms report having to scale back investments for lack of a capable workforce, while Vietnamese firms do not have the option to move and, therefore, often stagnate (Wilkinson and Chirot 2010, 15).

Scholars have called education “the unifying preoccupation of the country” (London 2011, vii) and the reform of the education system a central “political imperative” in Vietnam (Wilkinson and Chirot 2010, 16). Yet, despite decades of efforts to improve the quality of education in Vietnam, most see that little has been accomplished in the *doi moi* period, though this assessment varies across the levels of education. After a significant dip in the 1980s, for

example, basic primary education (particularly literacy) has improved significantly, as have enrollment numbers and the percentage of GDP devoted to education (Marr 2004). In the realm of higher education, however, while the sector has seen significant expansion, quality still has not reached a level at which citizens, business, or the government are satisfied. Vietnam does not have a single university that meets international standards or ranks on any of the (admittedly problematic) league tables that compare university quality across countries. Perhaps more concerning is that Vietnam's universities and fledgling community colleges, however they compare to those in other countries, do not meet Vietnam's own needs for skilled labor, training, or research, even though reforms have been adopted and many changes have taken place. Why, despite changes in law, changes in regulation, opening up to private investors, and foreign influence, has higher education not improved in Vietnam? How is the transition in education linked (or not) to the economic transition? Might there be a role for TNCs in its reform? If FDI can have a positive impact on other institutions in Vietnam, could it in some way effect the education system?

I will review the history of higher education reform efforts in Vietnam and provide an overview of the literature on the nature of and reasons for its continued shortcomings. Following this section I will move into a case study on Intel Corporation's engagement with higher education reform efforts to explore what role there might be for TNCs in the higher education transition.

Education reform and doi moi: the first stage

In 1987, in response to the initiation of *doi moi*, education officials announced that higher education institutions would now have to generate funding from outside the state sector and

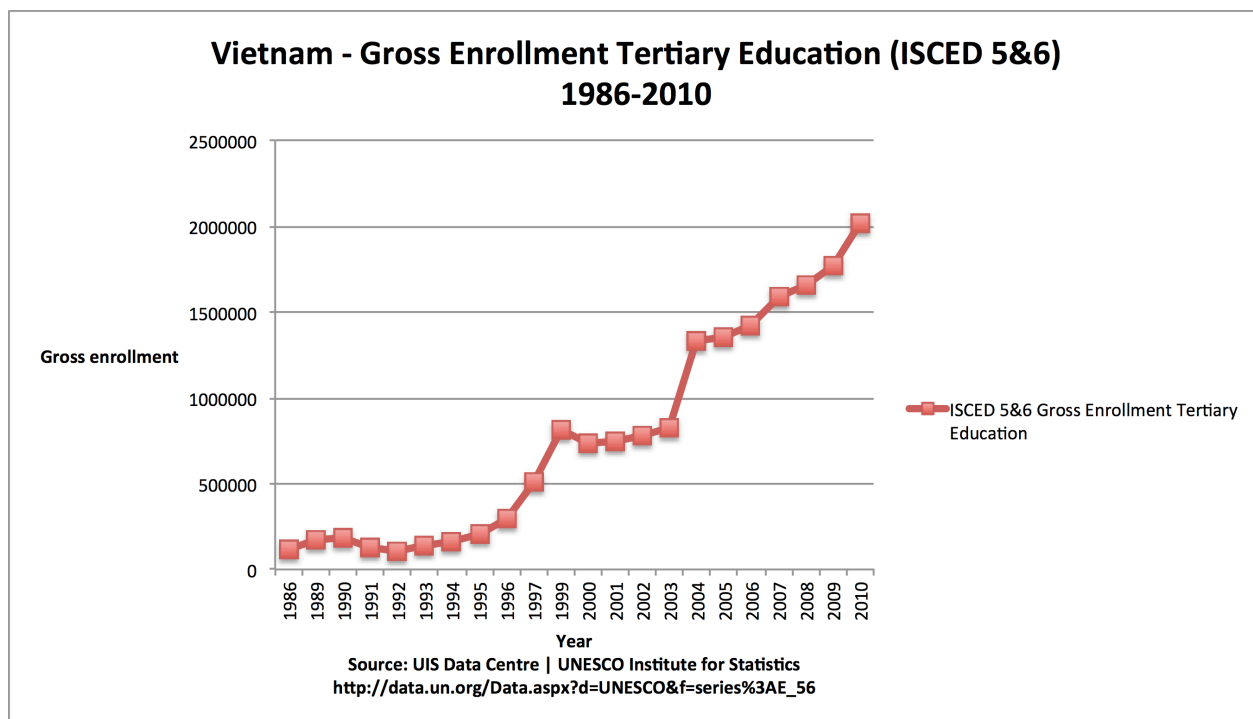
produce graduates not only for pre-allocated employment in the state sector, but also to meet needs of the wider society. The announcement began the shift from the Soviet-style concept of education for cadres to the idea that the education system should prepare a broader labor force (St. George 2010; St. George 2011, 213). Yet there was little to no guidance regarding how to make this happen, and the message was received largely as a step away from guaranteed jobs for graduates, rather than a broadening of the vision for higher education in Vietnam.

The Vietnamese education system entered the country's first full decade of "renovation" in "disarray" after a decade of dropping enrollments and funding, and as more than three decades of subsidies to education from the Soviet Union dried up completely (London 2011, 17; Marr 1993). The international community beyond the Soviet Union began to enter the picture though. In 1991-1992, UNDP and UNESCO undertook a national project entitled "Education Sector Review and Human Resources Analysis," which introduced the concept of "human resources" into Vietnamese policymaking, provided an analysis of the woeful state of education, and highlighted the almost total disconnect between educational approaches and societal (and economic development) needs (Freire 2011, 305; Mok 2008; Oliver et al. 2009; St. George 2010).

In 1992 the Vietnamese government adopted a new constitution which, among many other things, called out education and training as "priority national policy" (Article 35 quoted in St. George 2005, 129). This helped bring education, and intellectuals, in from the ideological cold so that education and the development of human capital (human resources) could be recast as direct inputs for economic growth, rather than in a dependent relationship to the economy and part of the "superstructure" (St. George 2005). At the same time, public discourse about

education in Vietnam focused increasingly on the role of education in economic growth and the role of intellectuals in society as “vital to building socialism” (St. George 2010).

In 1993, the Vietnamese Communist Party devoted its Fourth Plenum of the Communist Party Central Committee (Seventh Congress) to the education sector, declaring that education was an important investment in the nation’s development, and the Vietnamese government issued Decree No. 90/CP stating that all people have the right to pursue higher education. This set off a tide of “massification” in which enrollments in higher education began to skyrocket (from 162,000 in 1993 to 1.3 million in 2003) and the number of higher-education institutions nearly doubled over the course of a decade (from 120 in the early 1990s to 224 in 2004) (Institution of International Education [IIE] 2005; Hayden and Lam 2007). In 1993 the Ministry of Education and Training (MOET) tried to introduce structural reforms in Vietnamese universities, including a credit system and a split degree bachelors structure, but resistance from entrenched faculty proved too strong and these reforms were largely abandoned by the late 1990s (St. George 2011).



In the mid-1990s the government also sought to develop a skills training strategy, though this effort did not really take hold (Freire 2011, 307), and in 1995 the central government began what was to become a three-year process of drafting a new Education Law. The 1998 passage of the Education Law arguably marked both the end of an initial era of experimentation and boundary pushing with respect to higher education’s form and function, and the initiation of what has been called Vietnam’s “post-communist framework for higher education” and a “re-establishment of new norms and boundaries in which debates about policy and direction could be contested” (St. George 2010, 131). The 1998 law expanded the ability of educational institutions to raise resources through tuition (under a ceiling) and opened the way for the creation of more non-public institutions. At the same time, it sought to rein in an *ad hoc* approach to decision making in which decrees from different authorities and unwritten practices co-existed, often contradicting and overlapping one another, to create a “climate of uncertainty” and fear of responsibility (St. George 2005). It appears that, whereas institutional slack and opacity in

economic development and business matters as well as in politics enabled actors to move more nimbly, in higher education it led to paralysis (St. George 2010).

Since 1998, education in general, and higher education in particular, has also become increasingly important in public and political discourse. There has been a rapid increase in education funding—and in education spending by households—and an acceleration in the creation of new institutions accompanied by additional and dramatic increases in enrollment (Oliver et al. 2009; St. George 2011). Political elites see higher education as a valuable credential—so valuable that some have been known to claim degrees they did not earn (Gainsborough 2004a, 278)—and government and the media as well as students and families have integrated terms like “knowledge-based economy” and “learning society” into regular discourse (Phuong An Nguyen 2004, 165 and 175). Yet, despite additional rounds of reforms (discussed below), much of the higher-education system remains little changed, with entrenched bureaucracy and ossified educational approaches still the norm. Some of the reasons for this lack of progress are ideological and political, and some are infrastructural and organizational.

Higher education management, MOET, HERA, and the limits of reform

The year 2001 marked the first time an overt connection was made in political discourse between the creation of a network of “quality” universities and the country’s socioeconomic development (Smith and Nguyen 2010, 143), yet despite close to a decade of reform efforts and a shift in the overall perception of the role of higher education, real quality remained out of reach. Rigid bureaucracy, outdated teaching methods, curriculum, and infrastructure, poor articulation between secondary and tertiary education, lack of connectivity with employer needs, and overlapping responsibilities and mismanagement (as well as corruption) continued to plague the

system. Most institutions were still monodisciplinary and oriented toward turning out graduates for a system of government employment that was no longer an option for most students.

Vietnamese education analyst Pham Minh Hac noted in a 2002 publication that Vietnamese higher education needed more than a management or curriculum overhaul. It needed “renovation in thinking of education” and an examination of its ideological underpinnings and culture (quoted in Mok 2008, 3).

These problems persisted and yet the demand for higher education is so great that the system continued to expand. In the decade 1999-2008 the number of universities in Vietnam more than doubled, from 69 to 160, as did the number of vocational schools (colleges) from 84 to 209; and the number of Vietnamese attending colleges and universities in Vietnam is nearly double the enrollment of ten years ago at 1.6 million (London 2011, 38).

Vietnam experimented, over the course of the late 1990s and early 2000s, with a credit system, streamlining government management and oversight of higher education, the creation of a community-college system, and other new management approaches. But very few of the initiatives took hold and many were staunchly resisted by existing faculty and plagued by mismanagement both at the MOET level and at the individual university level (Dung 2004; Oliver et al. 2009; London 2011). Many of the new institutions were hastily created and ill-conceived, and the regulatory structures that were meant to guide them were poorly articulated and vague. This led to more confusion and resistance, with MOET often accused of undermining local efforts and local officials and university leadership, as well as faculty, accused of slow-rolling or simply failing to implement MOET reforms (London 2011). This was indicative of a serious implementation problem in Vietnamese higher education reform. MOET, scholars, analysts, the media, and the public, as well as foreign donors and consultants, often could all

identify the problems and propose potentially viable solutions, but even the best ideas and solutions would not make it to the implementation phase or would fall apart in execution. This continues largely to be the case (many scholars note this and provide examples, but see Chirot and Wilkinson 2010 and Smith and Nguyen 2010 for some of the clearest articulations of the scale of the implementation problem).

While different scholars emphasize different challenges and problems in the Vietnamese higher-education system, versions of the following list of hurdles appear most widely in the literature as well as in public discourse:

- Limited resources, inefficient spending, and low faculty salaries
- Outdated and inflexible curriculum
- Limited or poor training for faculty in both content and pedagogy
- Lecture-based teaching approaches with little to no opportunity for interactive learning
- Poor faculty to student ratio
- Lack of connectivity with industry/employer needs
- Entrenched interests and rigid bureaucracy
- Incompetent or poor governance and mismanagement at the university level and by MOET, including little effective oversight and a weak accreditation system, unclear and overlapping responsibilities, and little to no institutional autonomy (i.e., MOET still dictates and controls too many aspects of university management and decision-making)
- Separation of research and teaching
- Lack of incentives for innovation in teaching or research, including seniority-based (as opposed to performance-based) career advancement and a scarcity of senior academic appointments across the system

- Insufficient and outdated infrastructure

(Anh and Winter 2010; Dung 2004; K. Harman and Nguyen Thi Ngoc Bich 2010; Hayden and Thiep 2010; Ho 2011; DaoVan Khanh and Hayden 2010; Pham Thanh Nghi 2010; Westerheijden et al. 2010; Wilkinson and Chirot 2010)

The Vietnamese government itself acknowledges many, if not all, of these shortcomings and in 2005, in an effort to address many of them, it issued Resolution 14 on the “Fundamental and Comprehensive Reform of Higher Education in Vietnam 2006-2020,” also known as HERA.

HERA describes the government’s goal of “fundamental and complete renovation” of higher education by 2020. It notes the need for “renovating the thinking and system of higher education,” “clarification of the roles and responsibilities of state administration,” and “the protection of the right to autonomy, increased social responsibility, and the transparency of tertiary education institutions” (quoted in St. George 2011, 213). It outlines thirty-two reform measures including targets for enrollment and diversified funding (including from the private sector and international sources), improvements in staff quality and training, the development of an effective quality control and accreditation system, and the need to link research and teaching, and the need to build better linkages with the demands for labor (Dao and Hayden 2010, 133; Harman et al. 2010, 3). The preamble to HERA encapsulates MOET’s view of the failures of higher-education reform to that point. It states that the system has:

[Not] risen to the level of meeting the people’s demands for learning, industrialization, modernization and global integration. It is necessary to overcome many weaknesses and shortcomings in sector management, system structure, higher education institution network, training process, teaching and learning methodology, teaching staff, education managers, and resource use, as well as corruption in exams and degree issuance and other education activities (quoted in Dao and Hayden 2010, 141).

Importantly, HERA also consolidates higher-education oversight at the government level under MOET, abolishing line-ministry control over higher-education institutions, something that was

attempted but failed in the 1990s (Dao and Hayden 2010; St. George 2011).¹³ The reforms it outlines collectively draw the picture of a system headed away from state control and toward state supervision, echoing economic reforms (Dao and Hayden 2010, 138; St. George 2011; 212).

Thus HERA recognizes key weaknesses in the system, but despite laudable goals, its prescriptions are crippled by important impediments. The resolution is largely an evolution of the efforts of the 1990s and is focused mostly on actions for MOET, rather than for the universities, to undertake. Yet, the efforts at reform in the 1990s showed that individual faculties and university leaders must be engaged substantively in reform—purely top-down efforts have failed fairly consistently (Ngo et al. 2006; Smith and Ngyuen 2010; St. George 2011). More problematically, HERA includes ambitious targets but lacks implementation mechanisms; the process of its development was opaque, and there is no accompanying plan for execution (Smith and Nguyen 2010, 145). Thus the reform goals it outlines are at high risk for the same dismal fate of earlier efforts. And, in fact, implementation thus far has been slow in some areas and non-existent in others (Chirot and Wilkinson 2010, 10; St. George 2011).

Following HERA, MOET also continues to make some significant changes, including announcing in 2009 that the Vietnamese government intends to build four “international standard” universities with a loan of 400 million USD from the World Bank and Asian Development Bank, all of which will be managed entirely or in partnership with foreign institutions. Implementation has been spotty on this effort, too, with complicated partnerships and bureaucratic hurdles (London 2011).

¹³ In 1990, central government functions related to education were streamlined somewhat with the creation of a single ministry to oversee most aspects of education, MOET, though 13 ministries still had line-management responsibilities for higher-education institutions and MOET had to consult with multiple other ministries before making many of its important decisions. The new structure also included a great deal of overlapping responsibility and lines of reporting within MOET itself (Marr 1993; Dung 2004; Hayden and Thiep 2010, 19).

Management and decentralization in higher education

Wilkinson and Chirot (2010) point out that the government's approach to implementation, when any action is taken, often assumes the form of short workshops or campaigns—approaches ill-suited to the kinds of deep structural and cultural reforms that would be required to accomplish the goals HERA outlines. Even relatively successful efforts have the feel of campaigns, like MOET's initiative to add 20,000 PhDs by 2020 (Pham Thanh Nghi 2010). MOET, by its own admission, lacks the capacity to pursue the kinds of implementation mechanisms and to install the kind of oversight required. Thus, even when the central government does make significant investments in upgrading faculty capabilities, for example by sending faculty abroad for training, there is little follow-up, and faculty upon return often are put into teaching positions that are unrelated to their areas of study (Dung 2004, 150). In its own report to the National Assembly, MOET noted that it “cannot yet answer three questions; 1) What is the quality of training being offered at universities? 2) How do universities follow regulations related to training? 3) How efficiently do universities and colleges invest their budgets?” (Wilkinson and Chirot 2010, 49).

By acknowledging its own shortcomings in management and oversight, MOET has demonstrated that some attitudes are changing internally and that organizational learning is occurring (London 2011, 22), but the process is slow. MOET seems to recognize its own limited capacity, but not to trust the individual educational institutions to manage their own affairs. This concern is not without merit as university leadership may be no better equipped to implement changes and ensure quality than is MOET, and perhaps less so (Nguyen 2011, 252). Higher-education institutions themselves are generally hobbled by institutional rigidity and risk-averse,

top-heavy administrations that often lack the training and capabilities necessary to manage complex institutions; they are subsumed largely with keeping the university in line with numerous overlapping regulations (Dung 2004; Nguyen 2011).

MOET has expressed frustration with the universities, their entrenched ways, and with the “indifference” of universities and colleges to MOET directives (Wilkinson and Chirot 2010, 49). MOET has tried, for example, to push for more student-centered and interactive teaching practices, and powerful faculty have largely pushed back (K. Harman and Nguyen Tho Ngoc Bich 2010, 68-71). Faculty often complain in the same breath that they do not have enough autonomy with respect to curriculum and teaching methods, and that they do not have enough guidance regarding expected learning outcomes (based on interviews with faculty at several Vietnamese universities, 2008). There is significant debate, ambivalence, and ambiguity, therefore, regarding decentralization of responsibilities within the system of higher education (London 2011, 46; St. George 2011, 232). HERA calls out increased autonomy for higher-education institutions as a goal, but ministry officials and analysts alike wonder if most institutions are ready for increased responsibility, particularly when it does not come with additional resources (Harman et al. 2010; Oliver et al. 2009, 205; St. George 2011). Furthermore, most key academic, organizational, and operational decision-making power over finances and tuition, personnel, enrollment numbers, and curriculum is still held at the central MOET level. Some nascent efforts to improve accountability in the higher-education system are underway, however—an important step toward building an infrastructure for greater autonomy. For example, through the “Three Disclosures” campaign initiated in 2009, universities must disclose basic information about students, faculty, resources, and finances, and student assessments of teachers are being made available for the first time (Wilkinson and Chirot 2010, 47).

Curriculum, ideology, and higher education as a political element

The 1998 Education Law not only set out directions for organizational and system reform, it also took a stand on ideological and political matters in education policy. The law strongly affirmed the role of socialist ideology in education, stating in Article 3 that “Vietnamese education is socialist education with popular (*nhan dan*), nationalist (*dan toc*), scientific and moral characteristics, based on the foundation of Marxism-Leninism and Ho Chi Minh thought.” The law tasked higher education with supporting and reinterpreting the theoretical foundations of communist rule and the Communist Party of Vietnam (quoted in St. George 2010, 46-47). The importance of Marxism-Leninism and Ho Chi Minh thought comes up throughout the 1998 law, which extends earlier instructions prescribing the number of hours that should be dedicated to its study (up to one full year out of a four-year program). This has led St. George (2005, 115 and 124), among others, to conclude (1) that the Vietnamese government considers “the education sector as the principal vehicle for the transmission of socialist theory and ideology—even as its importance is being downplayed in other sectors”; and (2) that from the Vietnamese government’s perspective “education is an intrinsically ideological and political activity.” While the Vietnamese government was willing to bring in external ideas about the organization and funding of education, the content is less flexible.

St. George (2010, 42-43) even argues that, for some in higher-education leadership, efforts to shift time away from Marxist-Leninist content to make space for new subject matter or additional time in project-based learning amounts to an “attack against the Vietnamese nation,” making higher education something of an “ideological battleground for perpetuation of the current political regime.” Universities are a principal conduit for the articulation and

dissemination of Marxism-Leninism and Ho Chi Minh thought, which many feel are at the core not only of the political, but also moral identity of Vietnam. Many scholars in Vietnam also consider Marxism-Leninism and Ho Chi Minh thought to be the preferred scientific method of inquiry, and therefore question how a person could be considered educated without it. Thus its teaching is staunchly defended. This belief both politicizes any attempts at curriculum reform and leaves little room for flexibility to adjust content.

Beginning at the primary-school level and extending through higher education, curriculum in Vietnam is set by MOET with little opportunity for customization and localization (Dung 2004). In higher education, MOET establishes “curriculum frameworks” for all programs of study across the system. The frameworks provide guidelines within which universities are supposed to be able to exercise some flexibility, but in reality the frameworks are quite prescriptive and limiting. They set objectives, minimum knowledge requirements, and require that particular amounts of time be devoted to theory and rote learning, practice, and internship experience (Hayden and Thiep 2010; Nguyen 2011, 244). Technically universities and colleges are allowed to create their own texts for teaching, but only in specialist areas, upon approval by a curriculum committee and for branches of study (which can be quite narrowly defined) for which the institution has already received approval (St. George 2005). For areas that touch on Marxist-Leninist theory and related topics, MOET produces the textbooks and courses of study directly, and legislation prescribes the number of hours that should be devoted to different aspects of the texts and theory by different categories of students (St. George 2005). This approach is meant to impose quality control, but whether or not it controls for quality is debatable, while it is clear that it places limits on what can be taught and learned (McCargo 2004).

Even following the HERA reforms of 2005, which mention little about curriculum frameworks other than to say that they need to be refined, curriculum setting is quite centralized and curriculum frameworks remain rigid (Hayden and Thiep 2010, 26). As St. George (2011, 223) notes, changes to the management and oversight of curriculum that would increase institutional autonomy are, in fact, among the “least welcome” of reform efforts at the MOET level. The frameworks are developed by academics, but at the national level by members of the Communist Party of Vietnam, not at the university level. At the university level, faculties—and even rectors—have little leeway to design truly new courses or significantly alter what they teach or their teaching materials. Younger faculty who often want to develop new material receive little support and often no recognition for the time this effort requires, leaving most of them without incentives to push for changes (St. George 2011).

International development agencies, bilateral donors, private university leaders, and corporations have all made efforts to change curricula and move Vietnamese universities from a lecture-oriented, rote-teaching model to a more interactive learning environment, all generally with little to no success. The Dutch government, for example, invested significant time and resources in a bilateral aid project of particular note that aimed to link Vietnamese education with the “world of work” (London 2011). The project on Professionally Oriented Higher Education (PROFED) ran from March 2005 to March 2009 and focused on eight universities from across Vietnam that were selected in consultation with MOET. The goals were to increase managerial autonomy and to help these universities work with local businesses to develop curriculum grounded in “competency-based principles” and industry needs (Nguyen 2011, 237). As part of the project Hung Yen University of Technical Teacher Education (HYU), for example, developed a “learner-centered” curriculum based on the first extensive survey ever

conducted of employers in the Red River Delta (Nguyen 2011, 238). But, following years of work, the pull of more “traditional” ways of teaching, both in terms of content and pedagogical methodology, won out and change only succeeded around the edges (Nguyen 2011).

In addition to sometimes actively hostile leadership resistant to changes in content and pedagogical practice, the institutional structures in place for faculty career advancement and remuneration are arrayed against reform. Faculty are paid largely for time spent lecturing, thereby limiting research, dissuading encouragement of students to engage in peer-oriented, project-based or interactive learning, or engagement of guest lecturers or multidisciplinary approaches that would require collaboration (all of which potential employers and scholars of education alike have said are necessary ingredients for successful reform of teaching methods) (Nguyen 2011, 246). Pressure for modification is increasing, however. Calls for curricular reform and changes in the incentive structure for faculty, including increased pay, are not new, but the chorus appears to have gotten louder in the first decade of the 21st century as government, the public, and universities are all becoming more focused on Vietnam’s desire to become a robust participant in a more market-oriented “knowledge economy” (Ho 2011; London 2011). For all its flaws, higher education is still in great—and increasing—demand in Vietnam. In 2004, roughly 160,000 out of 2 million candidates gained admission to a greatly expanded set of available higher-education institutions (Dung 2004, 151). Yet it may be that universities are considered by government to be so important in shaping an overall institutional culture in the country that changes to them will continue to prove particularly contentious and challenging.

Higher education and industry

The higher-education system remains the locus of a struggle between the demands of socialism and the desire to develop economically and engage increasingly in the global marketplace. Ideology still plays a strong role in the content of and approach to education, limiting flexibility. Institutions are still hidebound by bureaucracy and rigidity, while at the same time suffering from the complexity and opacity of a kind of multilayered responsibility system that leads to little to no accountability. And, while there is a great deal of strong rhetoric coming from the government, targeted both at the Vietnamese people and at international donors and investors, about the commitment to (1) improving higher education and (2) making higher education more oriented toward labor market needs, in fact there is little in the way of integrated innovation or economic policy, let alone implementation mechanisms, to realize this vague vision. Some go so far as to say that it is “striking how little Vietnamese industrial policy has targeted skill upgrading” even for ICTs and other sectors that the government says it has singled out for accelerated development (Vind 2008, 1491; Fatseas 2010; Linh 2010).

Overall, higher education is disconnected from industry demand for employees and R&D. With *doi moi*, universities were at once freed from the strictures of linking education only to the government-managed employment system of the planned economy, and charged with providing “human capital” for the new, more market-oriented economy and emerging labor market. Yet, despite input from the World Bank and other international donors and advisors, as well as the proliferation of higher-education institutions aiming to meet the newly defined need for labor, most universities and colleges have been unable to adjust to the new environment. The World Economic Forum’s *Global Competitiveness Report for 2008-2009* called out the low quality of Vietnam’s educational system overall, particularly in its higher education and training

institutions, and low university enrollment rates as significant factors hindering the country's ability to compete in the global economy (Porter and Schwab 2008). Vietnamese universities remain among the worst in Southeast Asia, despite the multiple efforts at reform detailed above (Wilkinson and Chirot 2010). Companies report that their inability to find skilled workers—lack of qualified engineers comes up as a consistent concern—keeps them from investing in Vietnam (Smith and Nguyen 2010, 149).

Employers of all stripes, from local enterprises to multinational corporations, have trouble finding enough skilled labor and sufficient R&D support in Vietnam (Ca 2006; Wilkinson and Chirot 2010). As of 2008, roughly 80 percent of Vietnam's workforce could be considered "unskilled" (Freire 2011, 299). Vietnamese firms and international investors report that they struggle to find skilled workers and, if they do find well-trained workers—or train them in-house—find it hard to keep them from job-hopping (Ca 2006; Freire 2011, Nguyen 2011, Wilkinson and Chirot 2010). Among those hired many still need an additional eighteen to twenty-four months of training before they can perform their jobs satisfactorily; some companies are reluctant to invest in workers they fear will be more marketable (and therefore unretainable) once trained. In addition to technical skills, new employees tend to lack problem-solving, work-planning, communication, presentation, and teamwork skills (Nguyen 2011).

Reform efforts and changes to the regulatory and legal structure continue, with the government making more changes to the 2005 Education Law in 2009 with more still to come, and new institutions being developed and opening, some with niche approaches to particular industry areas. Thus actors, including TNCs, wishing to engage in education reform should be pushing on a somewhat open door and moving into a slipstream of organizations and institutions in which change is in the air, if not already underway. Some have already tried and, like the

Dutch government and multilateral donors, achieved only moderate successes. Coca Cola led an effort to try to revise the English language curriculum, but MOET's engagement was extremely slow and the project largely foundered (Dung 2004; St. George 2011). The first corporately owned university in Vietnam, FTP university, which specializes in IT courses for the FTP Company, tried to build a curriculum that would fit its needs, but went back and forth with MOET on the need to build flexibility into the curriculum for a fast-changing discipline. MOET insisted that FTP needed to work within a curriculum framework, but provided none and asked, at the same time, for specific curriculum to approve, resulting in a stalemate. At the same time, a few universities have made it a priority to engage industry and to try to reshape their approaches to meet industry needs (Can Tho and Ho Chi Minh City University of Technology are cited as positive examples). And, local government in Ho Chi Minh City has begun actively encouraging the development of technologies with input from local businesses (e.g., through a plan called Program 04) (Fasteas 2011), indicating that some positive engagement between universities and industry is possible and that local institutions and environmental factors can play a role (Ca 2006; Wilkinson and Chirot 2010).

One to two percent: Intel and the workforce pipeline

In 2004 Intel determined that it would build its seventh assembly and test manufacturing facility. In 2006 Intel decided to become, according to the company's own literature, the first high-technology company to make a major investment in Vietnam. It was also Intel's largest single ATM investment in the world. The site was to start up operations in mid-2009 and be fully up and running by 2013, at which point it was slated to employ about 4,000 people, the majority of them local. It had selected a 47-hectare (about 100 acres) site with enough land to double in

size if they so chose after 2013. The initial investment was for a 150,000 square-foot factory, but by the end of 2006 Intel had decided that the site would more than double in size and would encompass the company's own power substation and nitrogen facility to support a 500,000 square-foot assembly test facility.

In March 2007 Intel held its official groundbreaking in HCMC. In April 2007, Intel administered an exam to evaluate 1,965 engineering students to determine if graduating seniors would match the company's entry-level workforce requirements. It tested seniors in thirteen engineering majors, expecting the average score to be somewhere around 60 percent. When the results came back, the average score was about 42 percent. The top 20 percent of students (about 320 students) scored 52 percent to 76 percent, and only 62 of those students scored 60 percent or better on the exam. But the field of eligible potential employees became even narrower when Intel layered on their requirement that new employees speak English, and as Intel representatives met with the students, they found that most were sorely deficient in the soft skills of teamwork, creative problem-solving, and analytical thinking that the company needed. This left Intel with about one to two percent of those tested as potential employees. The results were covered widely in the Vietnamese media. Intel had done some evaluation of the education system prior to committing their investment, but these exam results turned up a situation worse than what they had anticipated.

From Intel's perspective, it had to develop a long-term strategy to address the lack of a viable workforce. It was not the first to encounter this problem, particularly in engineering (Chirof and Wilkinson 2010, 13), but Intel's investment commitment was so large and the scale of its vision for the Vietnam site was such a significant part of its worldwide strategy that it could not afford to wait for the government's ongoing reform process to run its course. Intel's

facilities around the world are built on a “copy-exact” model, meaning that there is little to no difference among facilities with the same purpose, with the exception of age and size. Thus its view is that the “main difference in success of sites is due to the competency of workers at each site,” and it had found that the workforce pipeline in Vietnam would not measure up to its current standards. At most sites, up to 70 percent of Intel’s hires are new graduates, but in Vietnam it was clear from the initial testing of seniors that this would not be possible. Intel also tried to hire overseas Vietnamese (as they had done with overseas Chinese) to staff their facility but had little success, perhaps in part because many overseas Vietnamese still do not feel welcome or feel that their skills are sufficiently valued in Vietnam (Welch 2010, 209; Overland 4/25/2008).

Intel did not begin its engagement with MOET and Vietnamese higher education wanting to change the system. Rather, Intel hoped to create stand-alone or discrete projects and programs to fit its needs, much as it had at other sites. Intel’s usual approach to improving the stock of graduating seniors eligible for Intel employment is to engage universities directly, making donations of equipment and working with engineering departments to transplant or craft courses specific to Intel’s needs. This is what they had done in Chengdu, for example, where they worked with multiple local universities to train faculty, import curriculum, and outfit laboratories. In Vietnam, however, they quickly learned that this would not be a viable path. Universities are not authorized to change the curriculum. It was even difficult to donate equipment to the state universities, and the private universities were of even lower quality than the publics. Intel quickly found out that it would have to engage the national government—the Ministry of Education and Training—in order to make any headway. They wanted to bring a “leapfrog” idea to MOET.

In 2004, before the company had decided to make its substantial investment in Vietnam, Intel had begun working with MOET on education-focused programs through their corporate social responsibility arm and encouraging the uptake of computers in classrooms. In May 2007, Intel's leadership in Vietnam together with Intel's workforce and education experts from the United States held an initial meeting with then Minister of Education Nguyen Thien Nhan to propose the company's first stab at a solution to the problems the company saw in higher education. Minister Nguyen's personal political weight was significant, and in July of that year he would be appointed deputy prime minister as well as minister of education and training. He had received his higher education in the United States and was a vocal supporter of education reform. Intel used the widely covered exam results as a starting point to describe the company's—and industry's—needs, and found MOET to be quite open to a broad discussion, as Intel leadership put it, “because it fit with their reforms.” According to Intel leadership, Nguyen was not only supportive, but saw “Intel as a way to accelerate university reform.”

Intel's “huge voice”

Intel stands out in Vietnam among other investors because of its marquee brand status, the size of its investment, its high technology focus, and its need for a higher-end and more educated labor force. To Intel, when compared with their other sites around the world, Vietnam was what Rick Howarth, Intel's first general manager in Vietnam, called a “clean slate” for TNCs, and Intel was a “big fish in a small pond.” Intel leadership contrasts this with China, for example, where there are many large companies vying for comparable attention to their needs. As such a large investor, Intel immediately had privileged access to government officials and a “huge voice.” Intel felt that both the national government and the local Ho Chi Minh (HCMC)

government were extremely engaged in Intel's success and "doing anything in their power to make [Intel] successful." Howarth noted that the government was not only interested in responding to all of Intel's needs, it was also interested in learning from the first high-tech company to make such a major investment in Vietnam, and in improving services to attract additional investments from other high-tech companies. Both the local and national governments were unfamiliar with many of the demands of high-tech companies and were still developing the rules, regulations, and policies around things like e-customs support. Intel helped them to develop these systems and took an active role in determining their direction. For example, Intel stepped in to an ongoing effort led by the World Bank to reform the customs system and pushed the Vietnamese government to take an approach different from that recommended by the World Bank. Though it took three years, the government eventually adopted Intel's recommended approach.

Yet even as such a "huge voice," Intel found, as NGOs and other companies had before them, that the education system was a particularly difficult target for externally driven reform. As we have seen, reform efforts were already underway in Vietnam, as was a vibrant public discussion about the utility of those reforms. The government had instituted changes in the law, but these had not yet resulted in necessary on-the-ground and organizational shifts. Intel was focused on changing the curriculum, as well as on the teaching methodology—two areas that had already proven to be particularly ideologically and institutionally fraught.

MOET wanted to use Intel's entry as an opportunity for reform, but the ministry was not open to Intel's specific proposal, which was the creation of a U.S. university engineering campus in HCMC. After assessing the existing Vietnamese universities, Intel leadership in Vietnam and the United States felt it would be "better for Intel to create this U.S. curriculum [on an

independent branch campus] than [to provide] scholarships to existing universities.” The company wanted to recruit a U.S. university to create a branch campus and build undergraduate programs in electrical engineering, mechanical engineering, computer science, and other related disciplines, all to be taught by U.S.-based and U.S.-trained faculty in a hands-on laboratory-oriented environment with a focus on interactive teaching methods. Intel saw its role in this as “a catalyst” that would bring other corporations in, provide some seed money, and have input into the curriculum, but turned to MOET to provide or help raise the majority of the funding as well as for endorsement. And, Intel was hoping to get all this going within less than a year. Intel’s view in 2007 was that it had already “tried to be an activist for education reform in Vietnam... raised awareness in the country,” but felt that its proposal was the only “real solution” on the table.

MOET was not interested in contributing any funding to a new university, however. The ministry had already committed to the creation of the World Bank-supported Vietnamese-German University (VGU) near Ho Chi Minh City, which would be established officially in 2008, and wanted any U.S. campus to be located elsewhere, but Intel wanted its pipeline institution closer to its base of operations. The company also felt that, in order to move at the speed required, it should create a stand-alone institution, whereas the ministry favored partnerships with existing Vietnamese institutions (even VGU is a partnership). Additionally, Minister Nguyen’s political weight, while great, was perhaps not enough. He was already taking a great deal of political heat for his vocal criticism of higher education and he, like everyone else, had to engage in the delicate dance of domestic politics and international ambitions.

Intel was certainly not the only company—local or TNC—calling for improvements in the education system, and they were not the only ones taking action. Boeing, Cargill, FedEx,

Kodak, Renesas, Siemens, and others were all sponsoring scholarships, or working with the elementary and secondary school systems, for example, but none had yet gone to MOET asking for the kind of wholesale and systemic changes that Intel was beginning to advocate. According to those watching this engagement from the U.S. Consulate, “no one” among the companies investing in Vietnam was “as focused as Intel” on the challenges of the higher-education system and workforce pipeline. Intel’s corporate affairs and government relations staff in Vietnam felt that, while other companies were making donations for laboratories and perhaps providing scholarships, they were not addressing the fundamental challenges of the system; they were not engaging the faculty or working to change the curriculum; in short, they did not have an “action plan.” Intel’s needs were so great that it would have to take another approach—it would need an action plan.

By September 2008, Intel had begun to consider other approaches. Its U.S. university idea was not gaining traction, either financially or conceptually, and while according to Intel’s Vietnam-based government relations staff, it was clear that MOET leadership, and much of the university leadership in Vietnam, realized that “things have got to change,” there was “no evidence that things [were] changing.” Even the much-heralded VGU was not receiving as much autonomy as was promised.

Intel began exploring how to work with the faculty as well as the MOET leadership, taking a bottom-up and top-down approach, building trust with both the ministry and the universities so that the universities themselves would feel that they “had a real partner” and Intel would be “the first company on MOET’s mind when they think of higher education” (interviews with Intel staff 9/2008). Intel wanted to help develop what it would later begin to call an education and workforce “ecosystem” to serve a long-term investment strategy for the

company's largest site in the world. For this the Intel leadership team increasingly felt that they needed to build long-term collaborations with the universities, work with MOET and the universities to make substantial changes in the curriculum, and change teaching methods to “upgrade the whole industry and human capital.” Perhaps most importantly, Intel noted that it also had to work to change the “mindset” of the ministry, encouraging MOET to focus its own investment spending on these areas, rather than using most or all of that money for infrastructure (Wilkinson and Chirot 2010).

In the meantime, to serve their immediate needs, Intel increased the number of expatriate employees at its HCMC site, with many coming from sites in the Philippines and China, created a program to fund forty scholarships to send Vietnamese students who had committed to work at Intel after graduation to U.S. universities in their third year of study, expanded their search for Vietnamese students already studying in the United States, and continued to recruit Vietnamese students—all of whom would be sent to Malaysia for additional training.

As Intel began its ecosystem approach, leadership was working more closely not only with MOET and the universities, but also with other companies invested in Vietnam (local and TNCs), many of which were busily setting up their own programs to try to address the workforce pipeline problem. With a small industry consortium, Intel began to improve communication with a select set of universities (HCMC University of Technology, Hanoi University of Technology, HCMC University of Technical Education, DaNang University of Technology, and Can Tho University of Technology) to develop and introduce new curriculum based on feedback articulating the needs of industry. The company also began bringing in Intel engineers to give talks to professors in Vietnamese universities. Many of the universities, in fact, began asking for the feedback not only to improve their own programs, but to give them “leverage with MOET”

in negotiations about curriculum. The curriculum frameworks are revised every four to five years, but at those intervals the universities would have to justify why they wanted to make particular changes. Feedback from industry could be an important element in that conversation. Intel wanted the consortium to help “speed up MOET.” It was not just the curriculum, however, that caught Intel’s attention as an area for improvement: like experts before (and after) them, Intel saw that the teaching methods needed to be changed as well. Not just students, but also faculty needed training. Meanwhile Intel leadership was convinced it could “bring a new culture.”

Ho Chi Minh University of Technology began working with Intel early on and was among the first universities to partner with the TNC and work to change their curriculum. It is among the premier technology universities in the country, with 17,000 students, 930 teaching staff, and a focus on engineering disciplines. Working with Intel and other industry partners, the university used its place in the four- to five-year curriculum revision cycle to propose a revised curriculum in 2008. It even included industry members on its curriculum committee. While it still only had limited leeway to propose new curriculum, this was a shift, and the university was deploying linkages with industry to make its case with MOET, which they (like others) found to be inflexible on matters of curriculum and not focused on matching the curriculum frameworks with the “needs of industry and society.” As one university leader put it in an interview as early as 2007: “we are a public university so we have not much autonomy...we want support from outside...so after graduation [graduates] can work with industry.” Universities were starting to look to engagement with companies to help advance their interests with MOET and to improve their product—education—so that graduates would be more employable. Of course, industry was not the only set of actors pushing for particular institutional changes. MOET continued to

advance official reforms, and universities were reaching out to a range of partners, including foreign donors and foreign universities. And Intel was looking for new ways to bring all these actors together to advance its own vision of institutional change in Vietnamese higher education.

Intel commenced production at its Vietnam plant in 2010, but still faced major challenges filling the positions it needed with Vietnamese workers, and it saw more workforce problems coming down the line. The company's leadership in Vietnam had begun to talk about site sustainability as distinct from factory sustainability. In other words, they were thinking about the workforce ecosystem, rather than just Intel's immediate and pending workforce needs. As more companies came to invest in Vietnam (some following Intel's lead), the demand for qualified engineers would only increase. At the same time, Intel was now substantially committed to a long-term and large-scale investment in not just a factory, but likely a larger operation in Vietnam, so it had to secure a pipeline of workers. It was already facing issues of "poaching" and "job-hopping," with up to 20 percent turnover in some areas, as demand outstripped supply for the most qualified labor. At the same time, Intel was learning more about Vietnamese culture and the Vietnamese education system.

The company continued to send new employees (around 250 by this time) to Malaysia to inculcate them in Intel's culture. Intel also sent a select group of Vietnamese students to Portland State University for courses. Its view was still, however, that the company needed to engage with the government to accelerate change in the higher-education system. So, Intel's leadership in Vietnam continued to work with MOET (by now under the leadership of a new minister) and with universities directly, and they had started a new approach, a program called the Higher Engineering Education Alliance Program (HEEAP).

The Higher Engineering Education Alliance Program

In 2007 Intel had begun working with U.S. universities, including Arizona State University (ASU) and Portland State University (PSU), on ways to address the workforce challenges in Vietnam. They had talked to these U.S. universities and others about the company's university branch campus idea, and in 2008 starting talking seriously about additional approaches. In December 2009 ASU and Intel Corporation submitted a proposal to the United States Agency for International Development (USAID) for funding for a program to train Vietnamese faculty in U.S. engineering content and pedagogy (with PSU as a sub-contractor), what was to become HEEAP, and the centerpiece of Intel's revised strategy to address its workforce problems by pushing systemic institutional change in Vietnamese higher education.

In June 2009 Intel and ASU met together in Vietnam with leadership at University of DaNang, Hanoi University of Technology, and HCMC University of Technology to begin discussions about a new program in which cohorts of Vietnamese engineering faculty would participate in an ASU-run Faculty Development Program consisting of four core components:

1. A six-week training program at ASU
2. Curriculum design and instructional lab
3. Faculty mentor program
4. Implementation of new instructional pedagogy in Vietnam

Vietnamese faculty would receive instruction from ASU and PSU faculty as well as interact with Intel engineering leadership and other industry partners. The six-week program would be combined with ongoing mentoring for the Vietnamese faculty (by ASU and PSU faculty) once they returned to teach in Vietnam. In their June meeting, ASU, Intel, and the three initial Vietnamese partner universities established an agreed-upon list of gaps in pedagogy and

instruction and discussed different approaches to curriculum. This program, initially called Intel Vietnam Engineering Education Excellence Program (IVEEE), aimed to provide a “multidisciplinary and multicultural experience [to] provide students with a more realistic model of how multinational corporations operate, better preparing them to enter into today’s global workforce” (IVEEE USAID proposal 12/2009, 78). The IVEEE proposal describes the project’s long-term goal as follows: “Develop a highly skilled technical workforce that will attract and sustain an entire high-tech manufacturing industry, thus positioning Vietnam to compete among high-tech centers of excellence” (IVEEE USAID proposal 12/2009, 96). In addition to training the teachers, the U.S team would assist with evaluation design for students, “providing hands-on training, development, and coaching in the development and implementation of outcomes based on student assessment.” IVEEE would also include a university leadership training component that would bring together ASU and Vietnam National University-Hanoi (VNU-Hanoi) leaders, and likely future leaders, to address the “strategic goals” of MOET and VNU and to develop approaches for “applying international reform practices to the Vietnamese context, and for pushing changes at the policy level” through hands-on projects and ongoing exchange (IVEEE USAID proposal 12/2009, 110). In August 2010 the program was funded as the Higher Engineering Education Partnership with USD2 million from USAID, USD2.6 million from Intel Corporation, plus USD400,000 from ASU.

Over the course of 2010 and 2011, Intel continued to build the industry side of the HEEAP partnership, bringing in Siemens, Cadence Inc., and Danaher Corporation. HEEAP mounted a significant push to bring in additional corporate partners as well, working with the American Chamber of Commerce in HCMC and Hanoi and others. The program now included Can Tho University, DaNang University of Technology, Hanoi University of Technology, Ho

Chi Minh City University of Technology, Ho Chi Minh City University of Technical Education, and was expanding to include others. HEEAP was also approaching the Ministry of Labor Invalids and Social Affairs in Vietnam (MOLISA), to bring in a more targeted vocational and community college-oriented component to the program.

By April 2011 the first cohort had successfully completed the HEEAP curriculum and, while some were still struggling to implement what they had learned in their home universities, things were changing. Both rectors and faculty were reporting to Intel that they had more flexibility and freedom than they had two years ago. But Intel's interaction with MOET was changing substantially as well. In 2010 a new minister of education and training was appointed, Dr. Pham Vu Luan, who was trained in the former Soviet Union and was initially far less supportive of Intel's engagement in higher education than his predecessor had been.

The general manager of Intel Products Vietnam, Rick Howarth, described the arc of Intel's interactions with the new MOET leadership as follows: "the first meeting in June or July 2010 [with the new minister] was chilly. It was about twenty minutes long and they lectured us about embarrassing them about quality of education. In the next meeting we brought HEEAP returnees [faculty and rectors] and let the faculty talk. That was night and day and [the minister] was enthusiastic and asked us to come back for four hours and 'really educate me' about what this is." Howarth also noted that "a week before our meeting the National Assembly had really blasted MOET for slow progress on education reform." Intel had its third meeting with MOET leadership in April 2011, and "this time [Intel] didn't even have to sell them. They were ready to put in resources. They said we have money and we want to put it into HEEAP." In April 2011 MOET committed \$7-9 million USD out of existing budgets to support HEEAP.

***HEEAP as a vehicle for legitimate peripheral participation and institutional learning:
opportunities and limits***

The decay of our science and education is not due to a lack of money but to the fact that we do not know what to do or how to manage.

--Professor Hoang Tuy (in Vallely and Wilkinson 2008)

With the HEEAP program we have a chance to accelerate our program but HEEAP is still just a first step, so what is the long term plan? Vietnamese universities must upgrade and the future of Vietnamese education belongs to Vietnamese universities, so what is the long term plan?

--Dr. Vu Dinh Thanh, Rector, HCMC University of Technology (HEEAP roundtable 4/18/2011)

Intel was, as we saw in preceding sections, not the only entity proposing changes to Vietnamese higher education. The Harvard Kennedy School's center in Vietnam proposed multiple specific changes, including the creation of an "apex" university to serve as a model for reform of the rest of the system. The World Bank was funding (and continues to fund) major partnerships between foreign and Vietnamese universities in an effort to build "world class" universities in Vietnam (including VGU). The Atlantic Philanthropies provided significant funding to the Royal Melbourne Institute of Technology, which set up a private (non-partnered) university campus in Vietnam. All these efforts were underway and all of these entities were working closely with MOET.

Intel, together with U.S. and Vietnamese university partners and with funding from companies as well as from USAID for the project, was working in this mix, and was doing so at a time when the Vietnamese government was intensifying its call for industry and foreign investors to make greater contributions to Vietnam's "social development," including education. Intel (and HEEAP) entered the higher-education reform field in Vietnam at an opportune time.

The problem was fairly well defined and there were multiple other actors pushing the system for change. Intel took the view, though, that it had a particularly loud and articulate voice pushing for change, due not only to the scale of its investment and its brand, but its desire to propose specific solutions and to try to help implement those solutions quickly. Intel also brought something that other institutions might not have been able to supply—a clearly articulated, tangible goal for its efforts.

As a major TNC seeking to employ graduates in large numbers in Vietnam, Intel brought a specific kind of credibility to the table with the Vietnamese government that other actors might have lacked. Relationships between the Vietnamese government and many other international actors tended to be defined by the “dance” described earlier, in which there was an ongoing renegotiation of trust relationships and a need to articulate goals in the context of a fraught history of international engagement. NGOs and others could argue that they shared the same goals with the Vietnamese government of improving education and graduating more employable students from the Vietnamese higher-education system, and they could even bring resources, but they could not supply the direct link between their proposals and employment the way a major TNC seeking to hire a large number of graduates could. But, Intel alone (and an industry consortium alone) couldn’t make the case that it would be able to advance and implement the kind of long-term, sustainable changes to the education system that it wanted.

Wilkinson and Chirot (2010, 138) argue that “it takes universities to build universities” and if Vietnam wants to develop quality higher-education institutions it must build international partnerships to help guide that development. In other words, there must be avenues for legitimate peripheral participation (LPP) and engagement with strong organizations in order to enable significant and sustainable change (see also Chirot and Wilkinson 2010). Intel’s ability to bring

U.S. universities (as well as U.S government and industry financial resources) to the table in IVEEE and then HEEAP provided the consortium with not just the ends (which industry and Intel could help define), but the means to pursue the elusive and still somewhat amorphous goal of “better” engineering education in Vietnam.

While some of the effects of HEEAP remain to be seen, Rick Howarth of Intel Products Vietnam encapsulated the Intel approach in a conversation with the American Chamber of Commerce in Hanoi in April 2011. This is the “pitch” that Intel is making, on behalf of HEEAP, to potential industry partners and business leaders, mostly from foreign TNCs, all over Vietnam: “We are not about one class, we are about transforming the universities overall starting with engineering, but extending to the rest of the university and system. Our hope is that it’s an institutional transformation. In the next year, two years, five years, we are going to transform the universities.” Intel is now, in its own eyes, arguably in the eyes of MOET, and in the eyes of other investors in Vietnam, a go-to catalyst and idea generator for education reform. In the words of one member of Intel Vietnam’s leadership—words that were echoed in interviews with leadership of the American Chamber of Commerce, the U.S. Embassy, and MOET leadership—Intel sees itself “clearly viewed as a leader of education reform in Vietnam. People come to Intel when they want to know about education and education reform. We were pretty critical when we came in five years ago,” Intel leaders note. Now Intel feels that government and industry “see us [Intel as] a leader to build the ecosystem.” This is, in Intel’s view, because it proposed specific solutions to a large and, in many ways, seemingly intractable problem, at a time when the government and the public were eager for concrete steps to be taken.

One major criticism of MOET’s efforts to reform both the higher-education system overall and specific university practices is that the ministry and its documents provide goals, but

fail to provide pathways to achieving those goals. With little to no strategic planning or implementation guidance, government documents provide no means to achieve their goals, however admirable (Smith and Nguyen 2010). The combination of specific learning outcomes for students (largely defined by industry with assistance from foreign partner universities) and which guide the learning outcomes for faculty participating in HEEAP; engagement by U.S. university leadership in an LPP setting; and alignment with Vietnamese government goals could make HEEAP a potent program, particularly if it proves to be scalable.

It is one thing to set as goals developing a “better” education system, a “world class” university, or a “highly skilled” workforce, but figuring out how to achieve those goals without a framework for institutional change and learning is difficult, if not impossible. HEEAP establishes mechanisms for legitimate peripheral participation as well as more specific sub-goals and tools to pursue those goals. The project defines its aims as follows:

The overarching learning outcomes for the faculty development program include:

- Learn applied teaching strategies and approaches to advance the engineering curriculum through innovative instructional methods;
- Design multidisciplinary curriculum approaches to prepare students to solve complex engineering problems;
- Develop a strong mathematical foundation to design engineering experiments and understand how to analyze and interpret data;
- Adapt project-oriented approaches to instruction demonstrating application of new knowledge and achievement of learning outcomes;
- Learn the principles, applications, and importance of business communication, leadership, and role as a global engineer

- Learn leadership approaches to be “engines” for curriculum and instructional transformation by demonstration of learning outcomes.

The outcome of the faculty development program goals will be linked and measured based on the following student desired learning outcomes, including:

- Apply creativity and innovation theories and methods to advance engineering outcomes;
- Ability to apply knowledge of mathematics to engineering problems;
- Design robust experiments to analyze and interpret data;
- Understand a system or process to meet desired needs within realistic constraints such as design, economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
- Ability to work in multidisciplinary project teams;
- Communicate effectively through English speaking, writing, and presentation;
- Knowledge of contemporary issues and how engineering can impact these Grand Challenges in society;
- Ability to use the techniques, skills, and modern engineering tools necessary for engineering application;
- Develop global knowledge and competencies to work in multicultural teams;
- Commitment to lifelong learning.

(<http://hecap.org/objectives>)

Vietnamese faculty who participated in HEEAP reported by 2011 that they learned about new instructional models and pedagogical approaches, and that they were able to change their approaches to teaching in the classroom. In particular, they learned how to manage and integrate

question-and-answer sessions, hands-on assignments for students, and learning in teams. They also reported learning new content and using it to change their syllabi in their advanced courses.

The scalability of the HEEAP model is a serious question both for Intel and for anyone interested in its potential to help catalyze institutional change. Despite the Vietnamese government's investment, there is still concern among industry partners about a "lack of direction in leadership" both at the individual university level and at the MOET and MOLISA level. It is an open question, both for the HEEAP program leadership and for university and ministry leadership, whether the models can be scaled from a handful of cohorts at select universities to a larger change in the culture of those universities. The industry consortium is relying very heavily both on its voice with the ministries and on the U.S. university partners to convey the value of and potential for systemic institutional change along the lines that HEEAP provides.

MOET, for its part, has provided some additional flexibility to universities, and universities have provided that flexibility to faculty to participate in HEEAP and to bring what they are learning into their classrooms, but most universities have not encouraged or enabled HEEAP participants to share what they are learning with fellow faculty at their home universities. There are some exceptions. Hanoi University of Technology, for example, has had three of their faculty participate in HEEAP and as a result has changed the required course list for students and plans to hold seminars for non-HEEAP faculty in the new teaching methods, but as of April 2011 was still awaiting the go ahead (and funding) from MOET.

More importantly, perhaps, MOET has also not taken action to change the incentive structure that drives recognition and promotions of faculty and university leadership. For example, there is no framework for assessing teachers based on their newly acquired teaching

skills, and their ability to convey information is still measured by how clearly they can write on a chalkboard and whether or not they know how to use a PowerPoint projector. The measures of success for HEEAP are laudable, but they are not yet reflected in or aligned with institutional measurement and incentive structures. There is work underway to align HEEAP with a larger effort in Vietnam to bring engineering programs in compliance with Accreditation Board for Engineering and Technology (ABET) standards (<http://www.abet.org/History>), but it is too early to tell whether this attempt to build up accreditation at Vietnamese universities will take hold, or whether it will go the way of so many similar efforts. Perhaps the engagement of Intel, of other industry partners, of ASU, PSU, and HEEAP will make a difference in Vietnamese universities' and MOET's ability to follow through and establish an accreditation system in Vietnam. HEEAP and Intel are certainly focused on this goal and on working with MOET and individual universities to achieve it, building what they are calling HEEAP 2.0.

There is a clear sense in industry and in the public that a major culture change—institutional change—is needed in higher education and that it has not yet occurred (*Viet Nam News*, 4/21/2011, 5), and a number of HEEAP participants remain frustrated, but believe that the effort to change the culture may be at a “tipping point.” While TNCs are only one set of players among many on a complex field, they can have a role that is both distinct from and complementary to the NGOs, bilateral, and multilateral government foreign partners, as well as to the local and national governments and other domestic actors engaged in the overall effort to transform Vietnamese higher education. The private sector and industry are the new “end-users”—the employers—in Vietnam's still developing market-oriented economy and as such they are important voices in the redefinition of a higher-education system that was largely developed to supply workers to meet government, not private sector, demand in a managed

economy. TNCs have a particular role to play, both as large investors and as employers—in the case of Intel, for example—but also as conveyors of international standards and practices related to workforce development and employer needs. They can also be critics of government policy, conveners of relevant change agents (e.g., industry, foreign, and Vietnamese universities partnering to pursue specific outcomes, as in the case of HEEAP) and, thus, perhaps catalysts for institutional change.

Chapter 7: Conclusion

The problem...is that we know very little about what facilitates the emergence of institutions conducive to sustained economic growth.

--(Gelbach and Malesky 2010, 36)

TNCs are not new actors in developing countries, but their role in development, and particularly in institutional reform, remains poorly understood. The cases above demonstrate that TNCs can be influential actors in development, encouraging and teaching institutional reform. NGOs, bilateral donors, multilateral lenders, and other development actors have a spotty record when it comes to institutional reform (World Bank 2000). The introduction of TNCs as deliberate development actors, perhaps in partnership with NGOs and civil society actors as well as donors and lenders, could advance institutional change and economic growth.

Both China and Vietnam turned gradually (starting with select sectors) to integration with global markets and away from highly interventionist central planning to improve their economic prospects. They adopted some of the development strategies of their neighbors who went before them, the East Asian NICs, and evolved many of their own, as Deng Xiaoping said by “crossing the river by groping for stones.” Their unique combinations of learning by doing and learning by borrowing (or policy transfer) have enabled each country to make significant development strides and to integrate much more deeply with global markets. In the cases described above, both places found that in order to land one of the biggest prizes in the global marketplace—a TNC ready to invest large sums—they had to engage in an intensive process of learning that would lead to important changes in each place’s institutional fabric.

The development literature tells us clearly that institutions are important determinants of economic potential and economic growth. Scholars are relatively clear about which “bad”

institutions tend to hamper growth (corruption and rent-seeking, for example), but know less about the full roster of “good” institutions necessary to encourage growth. Secure property rights, clear contract laws—and the trust relationships they enable—are important in developed countries and valuable to international investors, but the list does not end there. It is important to understand not only the types of institutions that encourage growth, but how developing countries can build, borrow/transfer, and maintain good institutions. Yet, it goes (almost) without saying, that institutions cannot be transferred as whole cloth from one context to another, or from one place to another, from one organization to another.

The basic prescription of institutional economics is that, in order to enable economic development, economies must have clear transactional rules. Thus, development practitioners who subscribe to institutional economics push for clarity in transactional rules. This seems simple enough, but such an effort is not merely a “clearing away” of institutional debris, as it is often characterized. Institutional changes—be they created organically, imported by colonists, recommended by economists, or imposed by international lenders, donors, or NGOs—are neither created nor altered in a vacuum. They are layered on top of existing institutions. Property rights, or contracting regimes, for example, brought whole from country X to country Y must be grafted onto country Y’s existing framework of transactional norms and expectations. The cultures, sub-cultures, path dependencies, and absorptive capacities of each place determine the “stickiness” of an institution in a new place, thus the process by which that institution is transferred is arguably as important as the institution itself. The principal way we can explore such processes is through a focus on the interactions of specific organizations working on particular institutions. A change in institutions often requires that actors in existing organizations essentially change their self-

perception as well as their activities—they must take on a new idea of what their organization’s “job” is.

As TNCs invest around the world, they encounter locationally bound actors and power structures. These local actors have entrenched interests and live within existing institutional environments. If a TNC requires adjustments in that institutional environment in order to achieve its business aims it can, under the right circumstances, catalyze significant change, perhaps engaging in what Lundan and Mirza (2010) call a process of “institutional co-evolution.” Not all change spurred by the arrival of TNCs is likely to be positive for the long-term development of all its locations, and Intel may in many ways be uniquely suited to be a catalyst. It is a seasoned first-mover marquee multinational with an organizational culture that is committed to local employment and education. But these cases make clear that opportunities exist for places to leverage the attraction of a TNC in order to learn new approaches to improving their economic prospects.

In particular, in transitioning post-communist economic environments, it seems that there is a role for TNCs to play in helping government entities learn new approaches to overseeing economic growth. Transitioning from a communist to a post-communist economic model is not as simple as declaring it so or changing macro-economic policies; it requires changes to the norms and values that guide the everyday work of organizations governing economic activity, and these sorts of changes in turn require deep engagement and opportunities for learning. Given this, it is possible that interaction with TNCs can help transitioning governments to learn and, eventually, to adjust their understanding of what government’s job is with respect to the economy and the inputs, including human capital, required to make their locations economically successful.

Intel is one TNC that is actively and deliberately changing the map of global production by choosing to locate large-scale new investments in places that most investors might previously have considered backwaters, or locations not suitable for high-tech manufacturing. The company recognizes that being an early entrant carries with it a higher level of risk that it will likely confront and have to clear institutional hurdles, though the company's surprise at the level of upgrading required for Vietnam's education system to suit their needs also demonstrates that those hurdles are not always obvious prior to Intel making its investment. At the same time, Intel is a marquee multinational because of its significant resources and recognizable brand, and as it enters into new locations it attracts the attention of its industry and of the broader community of high-tech companies to these places. Intel's presence can put places where it invests on the proverbial and literal economic map. This can lead directly to industrial agglomerations but, as importantly, it can lead to a broader sense that these locations are viable places in which to invest and do business. It does this in part by signaling that the institutions in these places are friendly to investors and conducive to business success. This signaling is valuable in and of itself, but Intel plays an additional role beyond simply lighting up the marquee. It has proven its ability to be a boundary-spanning organization, enabling a form of policy transfer by catalyzing institutional change and encouraging an environment in which governments, as well as new employees and others interacting with the company, can learn to become more effective agents in the global market.

Intel's engagements with the local government in Chengdu, China, and the local and national governments in Vietnam provided opportunities in both places for institutional change. Intel was committed in both places to working with the governments to make changes, rather than simply demanding that changes be made. The TNC chose these locations as part of a global

strategy that involves considering market potential as well as least-cost manufacturing, and all TNCs may not have the corporate culture or financial wherewithal to make the kind of time and resource investments that encouraging institutional change requires. But by examining the experience of this major TNC and its interactions with government entities in both places, we can enhance our understanding of what role TNCs can play in shifting institutional environments, and what circumstances and attributes make them able to play that role successfully.

Intel was not the only TNC in either of these locations and it was not the only actor trying to change the institutional fabric, but as a marquee multinational interested in institutional change, it was able to play a niche role that others, including NGOs, bilateral donors, or other companies could not. In both Vietnam and Chengdu, China, Intel's arrival spurred changes in embedded organizations and institutional structures. I argue that Intel did this by engaging government entities in a form of legitimate peripheral participation.

In Chengdu, the city's efforts to attract and then work with Intel led to a restructuring of Chengdu's economic-development organization and to a rethinking of the nature of the city's economic-development trajectory. Through engagement with Intel, those locationally bound actors charged with attracting mobile capital to Chengdu learned how to change their city's economic development and business attraction narrative and some of their government organizations' structure and behavior in order to make Chengdu more competitive on a global stage. Intel enabled city officials to enter into the TNC's sphere of activity, visiting other Intel sites and engaging heavily with Intel staff, in an interactive and iterative process that led first to Intel choosing Chengdu as a location for investment, and then to the city changing parts of its institutional infrastructure to meet the TNCs' needs on the ground on an ongoing basis. The city

now projects itself differently into the global marketplace and engages in new ways, learned at least partly through partnering with Intel, with potential investors. The customs service changed its approach in an area fundamental to making Chengdu a more efficient place to manufacture for the global economy. These changes were not simply cosmetic one-offs. They are deeper and more sustainable perhaps because they were not adopted in response to a command or abstract recommendation from a donor or higher government power; they were undertaken in partnership with an entity—in this case, a TNC—that created long-term incentives and embedded itself in the city’s process of development, enabling an ongoing LPP learning experience.

In Vietnam, Intel’s push for improvements in higher education has instigated a new kind of effort—both for Intel and for Vietnam—to change a higher-education system. This TNC is moving the needle in a sector where international organizations, NGOs, and other donors have struggled. In other locations the company has been able to engage particular universities and colleges, or even just particular departments and professors, to make changes in curriculum or training approaches and to build the local workforce pipeline it feels it needs to make its investment in a place viable. In Vietnam Intel had to engage the entire governmental apparatus surrounding education, its assumptions and biases, in order to advance the changes the company felt were required to meet its needs. Government officials at multiple levels and members of the university community (as well as external development actors) had been working to improve the higher-education system, but were unable to align incentives to outcomes. The system was effectively stuck. It remains to be seen whether Intel’s efforts (via HEEAP) can fully “unstick” things, but the trajectory thus far is positive. It is to be hoped that HEEAP’s LPP approach will provide faculty and administrators in higher education with new opportunities, and new tools, to make changes in their organizations. USAID’s participation in the HEEAP effort also points to

an eagerness on the part of some donors to encourage TNCs to become engaged development actors in ways that go beyond simply bringing funds or direct employment, and that also go beyond traditional corporate social responsibility efforts. Intel's position as an end consumer of talent engaging actively with government officials to change the higher-education culture and approaches, rather than as an advisor or donor, appears to have enabled it to advance some efforts at institutional change where others have previously failed.

In these post-communist transitioning economies, the private sector is a relatively new “end user” or “consumer” of labor, land, infrastructure, and services. Instead of government-assigned employees, the education institutions must now produce labor employable by the private sector. TNCs can help education organizations and the government entities that oversee them learn how to produce graduates whom private industry will want to employ. Instead of government-directed industrial sectors locating in particular places, localities must now compete, over and above traditional tax and resource incentives, for the opportunity to become a link in globally deployed production chains. One important way that they can compete is by changing the services that government provides to businesses, and one way they can learn how to adjust those services is by engaging with TNCs.

Intel, in pursuit of its own goals, created opportunities for members of institution-determining organizations to engage in experiential learning through legitimate peripheral participation. Intel found that simply telling the economic development organizations in Chengdu and—even more so—the higher-education institutions in Vietnam what it wanted was not sufficient to secure the TNC's desired outcomes. Especially since what Intel wanted was institutional change. It wanted to move the economic development and higher-education organizations toward a new way of behaving, which required a redefinition of these

organizations' roles, not just in relation to companies but also with respect to other governmental organizations, and even with society more broadly. For the economic-development apparatus in Chengdu to make these shifts, it needed to rethink and reorganize itself. The engagement with Intel, and the access Intel provided to other places where it had facilities, helped direct and establish tangible goals for this rethinking and reorganizing. For the higher-education institutions in Vietnam both a clear set of goals and a programmatic connection to higher-education colleagues who could demonstrate and teach faculty in Vietnamese universities how to make the changes required are helping advance reforms that many recognize are needed.

TNCs can act as conveyors of international norms and standards for human capital, infrastructure, and services, drawing new locations into the marketplace for investment. TNCs are only one set of players among many on a complex development field, but as a major “end user,” they can have a role that is both distinct from and complementary to the NGOs, bilateral, and multilateral government foreign partners, as well as to the local and national governments and other domestic actors. TNCs can be criticized as development actors because they are self-interested and not value neutral. Though NGOs, multi- and bilateral donors, as well as philanthropic organizations are also not value neutral, TNCs are often viewed as particularly deeply vested in particular outcomes that favor their financial interests (Heydemann and Hammack 2009). The financial power of TNCs can also lead locations to take steps that are, by most measures, developmentally detrimental (selling off significant natural resources for little societal gain, for example). But it is also precisely because of their deeply vested interest that TNCs are in a position to act as credible development drivers as well.

TNCs are extending their reach and drawing many new places into the global economy, so it is important that we understand these interactions and the changes they can bring. Not every

TNC-government interaction will catalyze lasting institutional change—most will likely not—and not every change will be for the better. Some might reasonably argue that the kinds of institutional change I highlight in this project are not valuable for development, but rather are pernicious because they encourage places to privilege a Western economic-development paradigm. I argue that through case studies of particular TNCs in particular places we can illuminate the ways in which TNCs' interests align (and do not align) with the larger development interests of those places, and how TNC advocacy leads to changes in the institutional fabric that support (or do not support) broader development goals. We can learn also what forms of interaction between location-bound actors (government, educational institutions, etc.) and transnationally mobile investors are likely to have the most salutary development effects.

I have focused on one particular company here that is often a large-scale and early entrant into developing areas. Further studies could focus on the efforts of business advocacy organizations that represent collections of smaller companies (e.g., chambers of commerce) or on large companies in other industries. I suspect that the findings might be quite different. Though Intel is collaborating with other companies to demonstrate to the Vietnamese government that the demand for higher-education reform would serve more than one “end user,” it was primarily Intel's brand and the scale of Intel's investment that commanded the intense attention of both the Vietnamese government (local and national) and the Vietnamese press and public.

Large TNCs (and other large investors), therefore, may have a particularly valuable role to play as boundary spanners supporting institutional change. TNCs can bring a kind of legitimacy (to paraphrase Heydemann and Hammack 2009) to certain economically focused development efforts that perhaps other development actors cannot. Even among large investors,

not all are created equal as co-developers of institutions. Each TNC and each place has its own unique culture, so every story will be different, but there are lessons to be learned. The approach an investor takes to governments matters. Rather than simply expecting to make demands and have them met, a true boundary spanner—and effective change agent—will create a mutually advantageous learning environment that enables legitimate peripheral participation, such that government actors can gain a fuller understanding of the nature of the TNC’s needs and, ideally, also of the demands of industry more broadly so that they can become better suppliers of services, infrastructure, and labor. For such an approach to be successful, it should also encourage government and other “learners” in such a scenario to see a direct connection between their own interests and the TNC’s goals, and acknowledge the learners as leaders and proactive participants in the processes of institutional change.

Organizations can learn and institutions can change through their interactions with TNCs, and such organizational learning and institutional change can help shape the character and potential of the places where TNCs locate. These changes do not need to take the form of new laws on the books or explicit new policy positions. In fact, changes in the day-to-day workings of government and related organizations may be equally, if not more, important to institutional change. When organizations with strong influence over the economic trajectory of places change their perspectives and ways of working—for example, economic development and education organizations—they can be particularly important and valuable actors in institutional change. Education organizations are, by definition, partly conveyors of norms and values, economic and otherwise. Economic development organizations are essential actors in the competition for mobile capital. If these organizations can learn as a result of interaction with certain TNCs and, as a result, change the institutional infrastructure of a place, the process can have a profound

impact on development. Locations, as well as other development actors, can look at these and additional cases to help them figure out how to make the most of the entry of a large TNC.

As they invest in new places, TNCs' organizational cultures intersect with localized norms and values, institutions, and locationally specific organizational forms. These interactions help to make up the "infrastructure of globalization" (Palan et al.) and to shape the shifting geography of economic power—they are shaping the "socially constructed economy" (Vidal and Peck 2012). Places need not be passive recipients in this relationship, and they are often working directly and deliberately with TNCs to enhance their localities' position in that shifting economic geography—they are place-making. By studying the development of relationships between TNCs and place-bound actors, we can begin to understand the myriad ways in which the interactions that comprise those relationships might lead to fundamental and persistent changes in the government, governance, and institutions that help shape the character and potential of places.

Appendix A: Interview questions

The questions below were used to kick off interviews with a range of interlocutors. The interviews I conducted were semi-structured to allow interviewees the leeway to convey their full perspective of the Intel location story and how it related to their experiences. Some of the discussions were quite wide-ranging. In the HEEAP interviews, in particular, I simply asked the interviewees to recount their experiences as HEEAP participants and how they were able to integrate the things they learned in HEEAP into the classroom in Vietnam.

General/Intel

Can you tell me about the history of Intel's presence in HCMC/Chengdu from your perspective?

Tell me about economic development/the economic trajectory in recent years

What sort of challenges does Vietnam/China (or Ho Chi Minh City/Chengdu) face in terms of economic development? What do you see as the biggest impediments? Opportunities?

Tell me about the role of government here (local, national) in economic development/economic activities

What is your view on the quality of higher education locally and nationally?

What do you think about the quality of the workforce locally and nationally?

What future do you envision for Vietnam/China?

How has that vision changed over the last three years?

Did Intel's arrival play any role in shifting that vision?

Higher Education

Has the educational environment or the education students receive at your institution changed in the past few years?

If so, do you see any connection to shifts in corporate presence?

Intel specifically?

How much does Intel work with local higher-education institutions and in what ways?

Has working with Intel changed curriculum?

Has Intel's presence changed, in your perception, employment or workforce ambitions of students? Others?

What about other multinationals?

Did you work with companies directly before Intel's arrival?

If so, were they multinationals?

Is there any difference working with multinationals vs. local companies? If so, what?

If you didn't work with companies before and now you are working with Intel, has that changed things in your institution at all? Culture? Curriculum? Expectations and ambitions?

If you did work with companies before, has working with Intel generated any shift in how you work with your pre-existing partners? Find new ones?

High Tech Park Officials/Local Officials

What was your involvement in the attraction of Intel to HCMC/Chengdu?

Why was it important to Vietnam/China to attract Intel?

What benefits do you expect to see and in what time frame?

How integrated is Intel with local companies—does Intel have suppliers here?

Do you have a sense of the numbers of companies that have arrived following Intel's arrival and what role Intel has played in attracting them?

Tell me about the immediate local environment. Was it a greenfield site before Intel's arrival? If so, how has Intel changed the immediate local environment?

Infrastructure changes?

Distribution of workforce?

Have other companies (re)located to be in Intel's immediate environment?

Are any of these companies that were elsewhere in Vietnam?

If they are from elsewhere, where are they from?

Overall can you tell me the story of Intel's impact here?

To what extent have you modeled your development efforts on those of other countries and regions? How has this information influenced/not influenced your interaction with Intel and how has it been influenced by/not influenced by your interaction with Intel?

Government Officials

What was your involvement in the attraction of Intel to HCMC/Chengdu?

What was your agency's role/why was your agency involved?

If your agency was involved, did you do anything special/different in your efforts to attract Intel (compared to when you work to attract other companies)? Did any of those changes become permanent?

How (if at all) does Intel's presence affect the work of your agency?

Why was it important to Vietnam/China to attract Intel?

What benefits do you expect to see and in what time frame?

Are you seeing any impacts yet?

Does your agency/do you see any changes since Intel's arrival in the business/education environment here?

If so, what are these changes?

Do you think Intel's presence was the driver/reason for these changes? In what way?

Why do you think Intel was the driver?

What future do you envision for Vietnam/China?

How has that vision changed over the last three years?

Did Intel's arrival play any role in shifting that vision?

To what extent have you modeled your development efforts on those of other countries and regions? How has this information influenced/not influenced your interaction with Intel and how has it been influenced by/not influenced by your interaction with Intel?

Bibliography

- Abbot, Andrew. "What Do Cases Do? Some Notes on Activity in Sociological Analysis." In *What Is a Case? Exploring the Foundations of Social Inquiry*, edited by C.C. Ragin and H.S. Becker. Cambridge: Cambridge University Press, 1992.
- Acemoglu, Daron, Simon Johnson, and James A. Robinson. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91 (December 2001): 1369-401.
- Agnew, John. *Geopolitics: Re-Visioning World Politics*. New York: Routledge, 1998.
- . *Hegemony: The New Shape of Global Power*. Philadelphia, PA: Temple University Press, 2005.
- Ahn, Ta Thai, and Richard Winter. "Processes of Modernisation in Two Public Universities in Vietnam: University Managers' Perspectives." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- Aitken, B., and A. Harrison. "Do Domestic Firms Benefit from Foreign Direct Investment? Evidence from Venezuela." *The American Economic Review* 89, no. 3 (June 1999): 605-618.
- Almeida, Paul, and Anupama Phene. "Subsidiaries and Knowledge Creation: The Influence of the MCN and Host Country on Innovation." *Strategic Management Journal*, 25 no. 8-9 (2004): 847-64.
- Alston, Lee J. "Empirical Work in Institutional Economics: An Overview." In *Empirical Studies in Institutional Change*, edited by Lee J. Alston, Thrainn Eggertsson, and Douglass C. North. Cambridge: Cambridge University Press, 1996.
- , Thrainn Eggertsson, and Douglass C. North, ed. *Empirical Studies in Institutional Change*. Cambridge: Cambridge University Press, 1996.
- Amin, A, and N. Thrift, eds. *Globalization, Institutions and Regional Development in Europe*. Oxford: Oxford University Press, 1994.
- Anh, Dang Nguyen, and David R. Meyer. "Impact of Human Capital on Joint-Venture Investment in Vietnam." *World Development* 27, no. 8 (1999): 1413-26.
- Arizona State University Ira A. Fulton School of Engineering. "IVEEE USAID Proposal." 2009.
- Arrow, Kenneth. "The Economic Implications of Learning by Doing." *The Review of Economic Studies* 29, no. 3 (1962): 155-73.
- Balme, Stephanie, and Mark Sidel, eds. *Vietnam's New Order: International Perspectives on the State and Reform in Vietnam*, edited by Christophe Jaffrelot, Ceri Series in International Relations and Political Economy. New York: Palgrave Macmillan, 2007.

- Beresford, Melanie. "Doi Moi in Review: The Challenges of Building Market Socialism in Vietnam." *Journal of Contemporary Asia* 38, no. 2 (1998): 221-43.
- Black, Jan Knippers. *Development in Theory and Practice: Paradigms and Paradoxes*. 2nd ed. Boulder, CO: Westview Press, 1999.
- Blom-Hansen, Jens. "A 'New Institutional' Perspective on Policy Networks." *Public Administration* 75, no. 4 (Winter 1997): 669-93.
- Blomstrom, Magnus. "Host Country Benefits of Foreign Investment." Cambridge, MA: National Bureau of Economic Research, 1991.
- , Steven Globerman, and Ari Kokko. "The Determinants of Host Country Spillovers from Foreign Direct Investment: Review and Synthesis of the Literature." Stockholm, Sweden: The European Institute of Japanese Studies, 1999.
- , and Ari Kokko. "Home Country Effects of Foreign Direct Investment: Sweden." In *Canadian-Based Multinationals*, edited by Steven Globerman. Industry Canada Research Series, Vol. IV, 341-64. Calgary: University of Calgary Press, 1994.
- , and Ari Kokko. "How Foreign Investment Affects Host Countries, World Bank Policy Research Working Paper No. 1745 (Mar)." Washington D.C., 1997.
- , and Ari Kokko. "Multinational Corporations and Spillovers." *Journal of Economic Surveys* 12, no. 3 (1998): 247-77.
- Boettke, Peter J., Christopher J. Coyne, and Peter T. Leeson. "Institutional Stickiness and the New Development Economics." *American Journal of Economics and Sociology* 67, no. 2 (2008): 331-58.
- Bordieu, Pierre. "The Forms of Capital." In *Readings in Economic Sociology*, edited by Nicole Woolsey Biggart. Malden, MA: Blackwell, 2002.
- Bordo, Michael D., Alan M. Taylor, and Jeffrey G. Williamson, eds. *Globalization in Historical Perspective*, National Bureau of Economic Research Conference Report Series C. Chicago: Chicago University Press, 2003.
- Branstetter, Lee. "Is Foreign Direct Investment a Channel of Knowledge Spillovers? Evidence from Japan's FDI in the United States." *Journal of International Economics* 68, no. 2 (March 2006): 325-44.
- Brenner, Neil, Bob Jessop, Martin Jones, and Gordon MacLeod, eds. *State Space: A Reader*. Malden, MA: Blackwell, 2003.
- Ca, Tran Ngoc. *Universities as Drivers of the Urban Economies in Asia: The Case of Vietnam*. Washington, D.C.: World Bank, 2006.
- Canh, Nguyen Thi, Hoang Tho Phu, Cung Tran Viet, Nick J Freeman, and David Ray. "An Empirical

- Study of Corporate Income Tax Investment Incentives for Domestic Companies in Vietnam,” edited by Vietnam Competitiveness Initiative. Washington, D.C.: USAID, 2004.
- Cartier, Carolyn. *Globalizing South China*. Oxford: Blackwell, 2001.
- . “City-Space: Scale Relations and China’s Spatial Administrative Hierarchy.” In *Restructuring the Chinese City: Changing Society, Economy and Space*, edited by Laurence J.C. Ma and Fulong Wu, 21-38. London: Routledge, 2005.
- Castree, Noel. “Differential Geographies: Place, Indigenous Rights and ‘Local’ Resources.” *Political Geography* 23 (2004): 133-67.
- Cerny, P. “Globalization and the Changing Logic of Collective Action.” *International Organization* 49 (1995): 595-625.
- Chan, Anita, Benedict J. Tria Kerkvliet, and Jonathan Unger, eds. *Transforming Asian Socialism: China and Vietnam Compared*. Lanham, MD.: Rowman & Littlefield, 1999.
- Chang, Ha-Joon. “Understanding the Relationship between Institutions and Economic Development: Some Key Theoretical Issues.” World Institute for Development Economics Research: United Nations University, 2006.
- Chen, Yun-Chung. “Dancing with the Wolves: Localization of Multinational Corporations’ R&D Centers in Shanghai.” Presented at *The First Globelics Conference: Innovation Systems and Development Strategies for the Third Millennium*. Rio de Janeiro, 2003.
- Chirot, Laura, and Ben Wilkinson. “The Intangibles of Excellence: Governance and the Quest to Build a Vietnamese Apex Research University.” Ho Chi Minh City: New School, the Harvard Kennedy School, and the Fulbright Economics Teaching Program (FETP), 2010.
- Clark, Gordon L. “Money Flows Like Mercury: The Geography of Global Finance.” *Geografiska Annaler, Series B: Human Geography* 87, no. 2 (2005): 99-112.
- Clarke, Gerard. “The Social Challenges of Reform: Restructuring State-Owned Enterprises in Vietnam.” In *Rethinking Vietnam*, edited by Duncan McCargo. London: RoutledgeCurzon, 2004.
- Clemens, E. S., and J. M. Cook. “Politics and Institutionalism: Explaining Durability and Change.” *Annual Review of Sociology* 25 (1999): 441-66.
- Coase, R. H. “The Nature of the Firm.” *Economica* 4, no. 16 (November 1937): 386-405.
- Cohen, W., and D. Levinthal. “Absorptive Capacity: A New Perspective on Learning and Innovation.” *Administrative Science Quarterly* 35 (1990): 128-52.
- Craig, David, and Douglas Porter. *Development Beyond Neoliberalism? Governance, Poverty Reduction and Political Economy*. New York: Routledge, 2006.
- Cronon, William. *Changes in the Land: Indians, Colonists and the Ecology of New England*. New York:

- Hill and Wang, 1983.
- Dahlman, Carl J., and Jean-Eric Aubert. "China and the Knowledge Economy: Seizing the 21st Century." Washington, D.C.: World Bank, 2001.
- Dalum, B., B. Johnson, and B.-Å Lundvall. "Public Policy in the Learning Society." In *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*, edited by B.-Å Lundvall. London: Pinter, 1992.
- Dang, D. Anh. "Trade Liberalization and Institutional Quality: Evidence from Vietnam." *MPRA Paper*, 2010.
- Dani Rodrik. "Trade and Industrial Policy Reform in Developing Countries: A Review of Recent Theory and Evidence." NBER Working Paper 4417 (1993).
- Dao, Van Khanh, and Martin Hayden. "Reforming the Governance of Higher Education in Vietnam." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- De Propis, L , and NL Driffield. "The Importance of Clusters for Spillovers from Foreign Direct Investment and Technology Sourcing." *Cambridge Journal of Economics* 30, no. 2 (March) (2006): 277-91.
- Development, UNCTAD - United Nations Conference on Trade and. "World Investment Report 2012: Towards a New Generation of Investment Policies." New York and Geneva: United Nations, 2012.
- Dicken, Peter, and Michel Quévit, eds. *Transnational Corporations and European Regional Restructuring*. Utrecht, Netherlands: Royal Dutch Geographical Society, 1994.
- Dicken, Peter. "Global Manchester: From Globaliser to Globalised." In *City of Revolution: Restructuring Manchester*, edited by J. Peck and K. Ward, 18-33. Manchester: Manchester University Press, 2002.
- . *Global Shift: Reshaping the Global Economic Map in the 21st Century*. 4th Edition. New York, NY: Guilford Press, 2003.
- . *Global Shift: Mapping the Changing Contours of the World Economy*. New York, NY: Guilford Press, 2007.
- Dicken, Peter, P.F. Kelly, K. Olds, and H. W-C Yeung. "Chains and Networks, Territories and Scales: Towards a Relational Framework for Analysing the Global Economy." *Global Networks* 1, no. 2 (April 2001): 89-112.
- Dixon, Chris. "State, Party and Political Change in Vietnam." In *Rethinking Vietnam*, edited by Duncan McCargo. Rethinking Southeast Asia. London: RoutledgeCurzon, 2004.
- , and Andrea Kilgour. "State, Capital, and Resistance to Globalisation in the Vietnamese

- Transitional Economy.” *Environment and Planning A* 34 (2002): 599-618.
- Dollar, David. “The Transformation of Vietnam’s Economy: Sustaining Growth for the 21st Century.” In *Market Reform in Vietnam: Building Institutions for Development*, edited by Jennie I. Litvack and Dennis A. Rondinelli. Westport, CT: Quorum Books, 1999.
- , and Aart Kraay. “Institutions, Trade, and Growth: Revisiting the Evidence.” Policy Research Working Paper Series. World Bank, 2003.
- Dolowitz, David, and David Marsh. “Who Learns What from Whom: A Review of the Policy Transfer Literature.” *Political Studies* XLIV (1996): 343-57.
- . “Learning from Abroad: The Role of Policy Transfer in Contemporary Policy-Making.” *Governance* 13, no. 1 (2000).
- Dos Santos, Theotonio. “The Structure of Dependence.” *The American Economic Review* 60, no. 2, Papers and Proceedings of the Eighty-second Annual Meeting of the American Economic Association (1970): 231-36.
- Driffield, N., and D. Hughes. “Foreign and Domestic Investment: Regional Development or Crowding Out?” *Regional Studies* 37, no. 3 (2003): 277-88.
- Dung, Doan Hue. “Centralism—the Dilemma of Educational Reforms in Vietnam.” In *Rethinking Vietnam*, edited by Duncan McCargo. London: RoutledgeCurzon, 2004.
- Economist*. “The CEO Presidency.” *Economist*. June 13, 2002.
- Eggertsson, Thrainn. “A Note on the Economics of Institutions.” In *Empirical Studies in Institutional Change*, edited by Lee J. Alston, Thrainn Eggertsson, and Douglass C. North, 6-24. Cambridge: Cambridge University Press, 1996.
- Epple, Dennis, Linda Argote, and Rukmini Devadas. “Organizational Learning Curves: A Method for Investigating Intra-Plant Transfer of Knowledge Acquired through Learning by Doing.” *Organization Science* 2, no. 1 (1991): 58-70.
- Escobar, Arturo. *Encountering Development*. Princeton, NJ: Princeton University Press, 1995.
- . “Culture Sits in Places: Reflections on Globalism and Subaltern Strategies of Localization.” *Political Geography* 20 (2001): 139-74.
- . “Beyond the Third World: Imperial Globality, Global Coloniality, and Anti-Globalization Social Movements.” *Third World Quarterly* 25, no. 1 (2004): 207-30.
- Evans, Kiri, and Adam Rorris. “Optimising the Impact of Vietnam’s Higher Education Sector on Socio-Economic Development.” In *Reforming Higher Education in Vietnam*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. Higher Education Dynamics. London: Springer, 2010.
- Evans, Peter. “Development as Institutional Change: The Pitfalls of Monocropping and the Potentials of

- Deliberation.” *Studies in Comparative International Development* 38, no. 4 (2004): 30-52.
- Fan, C. Cindy. “Of Belts and Ladders: State Policy and Uneven Regional Development in Post-Mao China.” *Annals of the Association of American Geographers* 85, no. 3 (Sept. 1995): 421-29.
- . “The Elite, the Natives, and the Outsiders: Migration and Labor Market Segmentation in Urban China.” *Annals of the Association of American Geographers* 92, no. 1 (2002): 103-24.
- Fatseas, Marea. “Research-Industry Cooperation Supporting Development in Vietnam: The Challenge of Translating Policy into Practice.” In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- Fforde, Adam. “From Plan to Market: The Economic Transition in Vietnam and China Compared.” In *Transforming Asian Socialism: China and Vietnam Compared*, edited by Anita Chan, Benedict J. Tria Kerkvliet, and Jonathan Unger. Lanham, MD.: Rowman & Littlefield, 1999.
- . “Luck, Policy, or Something Else Entirely? Vietnam’s Economic Performance in 2009 and Prospects for 2010.” *Journal of Current Southeast Asian Affairs* (April 2009): 71-94.
- , and Stefan de Vylder. *From Plan to Market: The Economic Transition in Vietnam*. Transitions: Asian and Asian America, edited by Mark Selden. Boulder, CO: Westview Press, 1996.
- Flores, R.G., and R.V. Aguilera. “Globalization and Location Choice: An Analysis of US Multinational Firms in 1980 and 2000.” *Journal of International Business Studies* 38 (2007): 1187-1210.
- Forbes. Emerging Global Cities. http://www.forbes.com/2006/01/30/06caphosp_globalcities_slide.html
- Freeman, Nick, and Curt Nestor. “Rethinking Foreign Direct Investment in Vietnam: Fuzzy Figures and Sentiment Swings.” In *Rethinking Vietnam*, edited by Duncan McCargo. Rethinking Southeast Asia. London: RoutledgeCurzon, 2004.
- Freire, Alexandre Dormeier. “WTO Accession, Socioeconomic Transformation, and Skills Development Strategies in Vietnam.” In *Education in Vietnam*, edited by Jonathan London. Singapore: Institute of Southeast Asian Studies, 2011.
- Friedman, Thomas. *The World Is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus and Giroux, 2005.
- Gainsborough, Martin. “Political Change in Vietnam: In Search of the Middle Class Challenge to the State.” *Asian Survey* 42, no. 5 (2002): 694-707.
- . “Ho Chi Minh City’s Post-1975 Political Elite: Continuity and Change in Background and Belief.” In *Beyond Hanoi: Local Government in Vietnam*, edited by Benedict J. Tria Kerkvliet and David G. Marr. Singapore: Institute of Southeast Asian Studies (ISEAS) Publications, 2004a.
- . “Key Issues in the Political Economy of Post-Doi Moi Vietnam.” In *Rethinking Vietnam*, edited

- by Duncan McCargo. London: RoutledgeCurzon, 2004.
- . *Vietnam: Rethinking the State*. London: Zed Books, 2010.
- George, Alexander, and Timothy McKeown. “Case Studies and Theories of Organizational Decision Making.” In *Advances in Information Processing in Organizations*, edited by Robert Coulam and Richard Smith. Greenwich, CT.: JAI Press, 1985.
- Geppert, Mike. “Competence Development and Learning in British and German Subsidiaries of MNCs.” *Personnel Review* 34, no. 2 (2005): 155-77.
- Gereffi, Gary. “The Global Economy: Organization, Governance, and Development.” In *The Handbook of Economic Sociology*, edited by Neil J. Smelser and Richard Swedberg, 160-82. Princeton, NJ: Princeton University Press and Russell Sage Foundation, 2005.
- Gertler, Meric, and David A. Wolfe, eds. *Innovation and Social Learning: Institutional Adaptation in an Era of Technological Change*, International Political Economy Series. New York: Palgrave MacMillan, 2002.
- Giarratana, Marco, Alessandro Pagano, and Salvatore Torrìsi. “Links between Multinational Firms and Domestic Firms: A Comparison of the Software Industry in India, Ireland and Israel.” *LEM Papers Series, Laboratory of Economics and Management (LEM), Sant’Anna School of Advanced Studies, Pisa, Italy*, no. 2003/22 (2003).
- . “The Role of Multinational Firms in the Evolution of the Software Industry in India, Ireland and Israel.” In *DRUID Summer Conference 2004*. Elsinore, Denmark, 2004.
- Gillespie, J. *Transplanting Commercial Law Reform: Developing the Rule of Law in Vietnam*. Aldershot, UK: Ashgate, 2006.
- Glaeser, Edward L., Rafael La Porta, Florencio Lopez de Silanes, and Andrei Shleifer. “Do Institutions Cause Growth?” *Journal of Economic Growth* 9, no. 3 (2004): 271-303.
- Goodman, David S. G. “The Campaign to “Open up the West”: National, Provincial-Level and Local Perspectives.” *The China Quarterly* 178 (2004): 317-34
- Granovetter, Mark, and Richard Swedberg. *The Sociology of Economic Life*. Boulder, CO: Westview Press, 1992.
- . *The Sociology of Economic Life*. Second ed. Boulder, CO: Westview Press, 2001.
- Greif, Avner. *Institutions and the Path to the Modern Economy: Lessons from Medieval Trade*. Political Economy of Institutions and Decisions. Series edited by Randall Calvert and Thrainn Eggertsson. New York: Cambridge University Press, 2006.
- Grin, John, and Anne Loeber. “Theories of Policy Learning: Agency Structure, and Change.” In *Handbook of Public Policy Analysis: Theory, Politics, and Methods*, edited by Frank Fischer, Gerald J. Miller, and Mara S. Sidney, Public Administration and Public Policy: 125. Boca Raton,

- FL: CRC Press/Taylor and Francis Group, 2007.
- Group of Lisbon. *Limits to Competition*. Cambridge, MA: MIT Press, 1995.
- Hall, Peter, and Rosemary C. R. Taylor. "Political Science and the Three New Institutionalisms." *Political Studies* 44, no. 5 (December 1996): 936-57.
- Hall, Robert E, and Charles I. Jones. "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" *Quarterly Journal of Economics* 114, no. 1 (Feb. 1999): 83-116.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3 (August 1988): 575-99.
- Harman, Grant, Martin Hayden, and Thanh Nghi Pham, eds. *Reforming Higher Education in Vietnam: Challenges and Priorities*. Higher Education Dynamics series, vol. 29, edited by Peter Maassen and Johan Muller. London: Springer, 2010.
- Harman, Kay, and Nguyen Thi Ngoc Bich. "Reforming Teaching and Learning in Vietnam's Higher Education System." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. New York: Springer, 2010.
- Hayden, Martin, and Q.T. Lam. "Institutional Autonomy for Higher Education in Vietnam." *Higher Education Research & Development* 26, no. 1 (2007): 73-85.
- , and Lan Quang Thiep. "Vietnam's Higher Education System." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- Hayhoe, Ruth, and Qiang Zha. "Becoming World-Class: Chinese Universities Facing Globalization and Internationalization." *Harvard China Review* (Spring 2004): 87-92.
- Hewko, John. "Foreign Direct Investment in Transitional Economies: Does the Rule of Law Matter?" *East European Constitutional Review* 11, no. 4 (2002/2003): 71-79.
- Heydemann, Steven. "Institutions and Economic Performance: The Use and Abuse of Culture in New Institutional Economics." *Studies in Comparative International Development* 43, no. 1 (2008): 27-52.
- , and David C. Hammack, eds. *Globalization, Philanthropy, and Civil Society: Projecting Institutional Logics Abroad*. Bloomington, IN: University of Indiana Press, 2009.
- Hibou, Béatrice. *Privatizing the State*. CERI Series in Comparative Politics and International Studies, edited by Christophe Jaffrelot. New York: Columbia University Press, 2004.
- Hirst, P. and G. Thompson. *Globalization in Question: The International Economy and the Possibilities of Governance*. Cambridge: Polity Press, 1996.
- Ho, Vu Khue Ngoc. "Market-Led Globalization and Higher Education: The Case of Da Nang

- University.” In *Education in Vietnam*, edited by Jonathan London. Singapore: Institute of Southeast Asian Studies, 2011.
- Hoff, Karla, and Joseph E. Stiglitz. “Modern Economic Theory and Development.” In *Frontiers of Development Economics*, edited by Gerald Meier and Joseph E. Stiglitz. New York: Oxford University Press, 2001.
- Holbig, Heike. “The Emergence of the Campaign to Open up the West: Ideological Formation, Central Decision-Making and the Role of the Provinces.” *The China Quarterly*, no. 178 (2004): 335-57.
- Howarth, Rick. Remarks to the American Chamber of Commerce (April 2011).
- Hsing, You-Tein. *Making Capitalism in China: The Taiwan Connection*. New York: Oxford University Press, 1998.
- Hudson, Ray. “‘The Learning Economy, the Learning Firm and the Learning Region’: A Sympathetic Critique of the Limits to Learning.” *European Urban and Regional Studies* 6, no.1 (January 1999): 59-72.
- Hurwicz, Leonid. “What Is the Coase Theorem?” *Japan and the World Economy* 7, no. 1 (1995): 49-74.
- Institute of International Education (IIE). “Higher Education in Vietnam Update – May 2004.” (2005).
- Ishizuka, Futaba. “Economic Restructuring and Regional Distribution of Enterprises in Vietnam.” IDE Discussion Paper (2011). <http://www.ide.go.jp/English/Publish/Download/Dp/pdf/293.pdf>.
- Intel Corporation. “Intel Expands Investment in Vietnam.” 2006.
- . “Intel Timeline: A History of Innovation.” <http://www.intel.com/about/companyinfo/museum/archives/timeline.htm>.
- . <http://www.intel.com/community/china/>.
- Intel Products (Chengdu) Ltd. “Intel Products (Chengdu) Ltd. Newsletter 2006: Leap Ahead.” Chengdu, China: Intel Products (Chengdu) Ltd., 2006.
- Jones-Luong, Pauline. “Economic Decentralization in Kazakhstan: Causes and Consequences.” In *The Transformation of Central Asia: States and Societies from Soviet Rule to Independence*, edited by Pauline Jones-Luong. Ithaca, NY: Cornell University Press, 2003.
- Jütting, Johannes. “Institutions and Development: A Critical Review.” Research Programme on Social Institutions and Dialogue (2003).
- Kerkvliet, Benedict J. Tria. *The Power of Everyday Politics: How Vietnamese Peasants Transformed National Policy*. Ithaca, NY: Cornell University Press, 2005.
- . “Introduction: Analyzing the State in Vietnam.” *Journal of Social Issues in Southeast Asia* 16, no. 2 (October 2001): 179-86.

- , and David G. Marr, eds. *Beyond Hanoi: Local Government in Vietnam*. Singapore: Institute of Southeast Asian Studies (ISEAS) Publications, 2004.
- Kirby, Peadar. “Macroeconomic Success and Social Vulnerability: Lessons for Latin America from the Celtic Tiger.” Santiago: CEPAL, 2003.
- . “Development Theory and the Celtic Tiger.” *The European Journal of Development Research* 16, no. 2 (Summer 2004): 301-28.
- Knack, Stephen, and Philip Keefer. “Institutions and Economic Performance: Cross-Country Tests Using Alternative Institutional Indicators,” MPRA Paper 23118 (1995).
- Köhler, Gabriele. “Development Intervention: A Parade of Paradigms.” In *Questioning Development: Essays on the Theory, Policies and Practice of Development Interventions*, edited by Gabriele Köhler, Charles Gore, et al. Marburg, Germany: Metropolis-Verlag, 1996.
- Kokko, Ari. “Growth and Reform since the Eighth Party Congress.” In *Rethinking Vietnam*, edited by Duncan McCargo. London: RoutledgeCurzon, 2004.
- Kotkin, Joel. “The World’s Fastest-Growing Cities.” *Forbes.com* (2010)
<http://www.forbes.com/2010/10/11/cities-innovation-texas-great-plains-indianapolis-opinions-columnists-joel-kotkin.html>.
- Krugman, Paul. “Competitiveness: A Dangerous Obsession.” *Foreign Affairs* 73, no. 2 (Mar-Apr 1994): 28-44.
- Kuznets, Simon. “Modern Economic Growth: Findings and Reflections.” *The American Economic Review* 63, no. 3 (June 1973): 247-58.
- Lagendijk, A., and J. Cornford. “Regional Institutions and Knowledge: Tracking New Forms of Regional Development Policy.” *Geoforum* 31, no. 209-218 (2000).
- Larrian, B.F., L. López-Calva, and A. Rodríguez-Clare. “Intel: A Case Study of Foreign Direct Investment in Central America.” CID Working Paper 58. Cambridge, MA: Harvard University, Center for International Development, 2000.
- Latham, Robert. “Mapping Global/Local Space.” In *Political Space: Frontiers of Change and Governance in a Globalizing World*, edited by Yale H. Ferguson and R.J. Barry Jones. Albany, NY: State University of New York Press, 2002.
- Lave, Jean, and Etienne Wenger. *Situated Learning: Legitimate Peripheral Participation*. Learning in Doing: Social, Cognitive, and Computational Perspectives, edited by John Seely Brown. Cambridge: Cambridge University Press, 1991.
- Leung, Chi Kin. “Personal Contacts, Subcontracting Linkages, and Development in the Hong Kong-Zhujiang Delta Region.” *Annals of the Association of American Geographers* 83, no. 2 (1993): 272-302.

- Levitt, Barbara, and James G. March. "Organizational Learning." *Annual Review of Sociology* 14 (August 1988): 319-38.
- Lewis, Charles Paul. *How the East Was Won: The Impact of Multinational Companies on Eastern Europe and the Former Soviet Union*. New York, NY: Palgrave Macmillan, 2005.
- Li, X., and Y. Yeung. "Inter-Firm Linkages and Regional Impact of Transnational Corporations: Company Case Studies from Shanghai." *Geografiska Annaler, Series B: Human Geography*, no. 2 (1999): 61-72.
- Lin, Sen. "A New Pattern of Decentralization in China: The Increase of Provincial Powers in Economic Legislation." *China Information* 7, no. 3 (1993).
- Lin, Wu-Long, and Thomas P. Chen. "China's Widening Economic Disparities and its 'Go West Program'." *Journal of Contemporary China* 13, no. 41 (2004): 663-86.
- Lloyd-Jones, G. "Design and Control Issues in Qualitative Case Study Research." *International Journal of Qualitative Methods* 2, no. 2, Article 4 (2003).
- London, Jonathan, ed. *Education in Vietnam*. Singapore: Institute of Southeast Asian Studies, 2011.
- Lorentzen, J. "MNCs in the Periphery: DaimlerChrysler South Africa (DCSA), Human Capital Upgrading and Regional Economic Development." In *Multinationals on the Periphery*, edited by G.R.G. Benito and R. Narula. New York: Palgrave Macmillan, 2007.
- Lozano, J. Felix, and Alejandra Boni. "The Impact of the Multinational in Development: An Ethical Challenge." *Journal of Business Ethics* 39 (Aug 2002): 169-78.
- Lundvall, B.-Å. *National Systems of Innovation: Towards a Theory of Innovation and Interactive Learning*. London: Pinter, 1992.
- Malecki, Edward. "Jockeying for Position: What It Means and Why It Matters to Regional Development Policy When Places Compete." *Regional Studies* 38, no. 9 (2004): 1101-20.
- Malesky, Edmund J. "Push, Pull, and Reinforcing: The Channels of Fdi Influence on Provincial Governance in Vietnam." In *Beyond Hanoi: Local Government in Vietnam*. Singapore: Institute for Southeast Asian Studies (ISEAS) Publications, 2004.
- . "Provincial Governance and Foreign Direct Investment in Vietnam." In *20 Years of Foreign Investment: Reviewing and Looking Forward (1987-2007)* (2007). Published electronically August 31, 2010. <http://ssrn.com/abstract=1669742>.
- . "Foreign Direct Investors as Agents of Economic Transition: An Instrumental Variables Analysis." *Quarterly Journal of Political Science* 4 (2009): 59-85.
- , and Mark Taussig. "Out of the Gray: The Impact of Provincial Institutions on Business Formalization in Vietnam." *Journal of East Asian Studies* 9 (2009): 249-90.

- Management Committee of Chengdu Hi-Tech Zone. "Chengdu Hi-Tech Industrial Development Zone (Brochure)." Chengdu, China: Chengdu Hi-Tech Industrial Development Zone (CDHT), 2006.
- Manhnke, Volker, Torben Pedersen, and Markus Verzin. "The Impact of Knowledge Management on MNC Subsidiary Performance: The Role of Absorptive Capacity." Copenhagen, Denmark: Copenhagen Business School, 2005.
- Mantzavinos, Chris, Douglass C. North, and Syed Shariq. "Learning, Institutions, and Economic Performance." *Perspectives on Politics* 2, no. 1 (2004).
- Marr, David G. "Education, Research, and Information Circulation in Contemporary Vietnam." In *Reinventing Vietnamese Socialism: Doi Moi in Comparative Perspective*, edited by William S. Turley and Mark Selden. Boulder, CO: Westview Press, 1993.
- . "A Brief History of Local Government in Vietnam." In *Beyond Hanoi: Local Government in Vietnam*. 28-53. Singapore: Institute for Southeast Asian Studies (ISEAS) Publications, 2004.
- Martin, Ron. "Institutional Approaches in Economic Geography." In *A Companion to Economic Geography*, edited by Eric Sheppard and Trevor J. Barnes, 77-94. Oxford: Blackwell, 2003.
- Mason, Margie. "Intel to Invest \$1 Billion in Vietnam as Country Strives to Raise High-Tech Profile." *USA Today* (November 18, 2006).
- Massey, Doreen. "A Global Sense of Place." In *Reading Human Geography: The Poetics and Politics of Inquiry*, edited by T. Barnes and D. Gregory. London: Arnold, 1997.
- Mazyrin, Vladimir. "Vietnam's International Commitments Upon Entry into the WTO: Limits to Its Sovereignty? A View from Moscow." In *Vietnam's New Order: International Perspectives on the State and Reform in Vietnam*, edited by Stephanie Balme and Mark Sidel. New York: Palgrave Macmillan, 2007.
- McCargo, Duncan, ed. *Rethinking Vietnam*. Rethinking Southeast Asia series. London: RoutledgeCurzon, 2004.
- McNally, Christopher A. "Sichuan: Driving Capitalist Development Westward." *The China Quarterly* 178 (2004): 426-47.
- Meyer, Klaus E., and Hung Vo Nguyen. "Foreign Investment Strategies and Sub-National Institutions in Emerging Markets: Evidence from Vietnam." *Journal of Management Studies* 42, no. 1 (January 2005).
- Milberg, William. "Foreign Direct Investment and Development: Balancing Costs and Benefits." *International Monetary and Financial Issues for the 1990s* 11 (1999): 99-116.
- Minh, Phan Quang "Caught in the Middle: Local Cadres in Hai Duong Province." In *Beyond Hanoi: Local Government in Vietnam*, edited by Benedict J. Tria Kerkvliet and David G. Marr. Copenhagen: Nordic Institute of Asian Studies, 2004.

- Miyamoto, Koji. "Human Capital Formation and Foreign Direct Investment in Developing Countries." OECD Development Centre Working Paper No. 211 (2003).
- Mok, Ka Ho. "When Socialism Meets Market Capitalism: Challenges for Privatizing and Marketizing Education in China and Vietnam." *Policy Futures in Education* 6, no. 5 (2008).
- Naughton, Barry. "China's Transition in Economic Perspective." In *The Paradox of China's Post-Mao Reforms*, edited by Merle Goldman and Roderick MacFarquhar. Boston, MA: Harvard University Press, 1999.
- , and Adam Segal. "Technology Development in the New Millennium: China in Search of a Workable Model." Cambridge, MA: MIT Japan Program, 2000.
- Ngo, Than Ming, Bob Lingard, and Jane Mitchell. "The Policy Cycle and Vernacular Globalization: A Case Study of the Creation of Vietnam National University: Ho Chi Minh City." *Comparative Education* 42, no. 2 (May 2006): 225-42.
- Nguyen, Minh Hong. "Challenges to Higher Education Reform: A University Management Perspective." In *Education in Vietnam*, edited by Jonathan London. Singapore: Institute of Southeast Asian Studies, 2011.
- Nguyen, Phuong An. "Pursuing Success in Present-Day Vietnam: Young Graduates in Hanoi" In *Rethinking Vietnam*, edited by Duncan McCargo. London: RoutledgeCurzon, 2004.
- Nojonen, H., A. Markusen, and K. Driessen. "Trade and American Cities: Who Has the Comparative Advantage?" *Economic Development Quarterly* 11 (1997): 76-87.
- North, Douglass C. *Institutions, Institutional Change and Economic Performance*. Political Economy of Institutions and Decisions. Cambridge, UK: Cambridge University Press, 1990.
- . "Economic Performance through Time." The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 1993 Prize Lecture. Stockholm, Sweden: The Nobel Foundation 1993.
- . "The New Institutional Economics and Third World Development." In *The New Institutional Economics and Third World Development*, edited by J. Harris, J Hunter, and C.M. Lewis, 17-26. London: Routledge, 1995.
- OECD. "Foreign Direct Investment for Development." Organisation for Economic Co-Operation and Development, 2002.
- Oi, Jean C. "Fiscal Reform and the Economic Foundations of Local State Corporatism in China." *World Politics* 45, no. 1 (1992): 99-126.
- Oliver, Diane E., Pham Xuan Thanh, Paul A. Elsner, Nguyen Thi Thanh Phuong, and Do Quoc Trung. "Globalization of Higher Education and Community Colleges in Vietnam." In *Community College Models*, edited by Rosalind Latiner Raby and E.J Valeu. New York: Springer, 2009.
- Overland, Martha Ann. "Private: No Longer a Dirty Word in Vietnamese Education." *Chronicle of*

- Higher Education* (June 9, 2006).
- . “Vietnam’s Half-Hearted Welcome Home.” *Chronicle of Higher Education* (April 25, 2008).
- Painter, Martin. “The Politics of Economic Restructuring in Vietnam: The Case of State-Owned Enterprise ‘Reform’.” *Contemporary Southeast Asia* 25, no. 1 (April 2003).
- . “From Command Economy to Hollow State? Decentralisation in Vietnam and China.” *Australian Journal of Public Administration* 67, no. 1 (2008): 79-88.
- . “Low Quality Government as a Development Strategy: Dilemmas of Governance in China and Vietnam.” Presented at the Conference on the New Public Management and the Quality of Government. Quality of Government Institute, Goteburg University, Sweden, 2008.
- Palan, Ronen, Jason Abbot, and Phil Deans. *State Strategies in the Global Political Economy*. London: Pinter, 1996.
- Parente, Stephen L., and Edward C. Prescott. *Barriers to Riches*. Walras-Pareto Lectures, École des Hautes Études Commerciales, Université de Lausanne. Cambridge, MA: The MIT Press, 2002.
- Paus, Eva A., and Kevin P. Gallagher. “The Missing Links between Foreign Investment and Development: Lessons from Costa Rica and Mexico.” Medford, MA: Global Development and Environment Institute, Tufts University, 2006.
- Peck, J. “Remaking Laissez-Faire.” *Progress in Human Geography* 32, no. 3 (2008).
- Peet, Richard, and Elaine Hartwick. *Theories of Development*. New York: Guilford Press, 1999.
- , and Michael Watts. “Introduction: Development Theory and Environment in an Age of Market Triumphalism.” *Economic Geography* 69, no. 3. Environment and Development, Part 1 (Jul. 1993): 227-53.
- Pham, Thanh Nghi. “The Higher Education Reform Agenda: A Vision for 2020.” In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- Phong, Dang, and Melanie Beresford. *Authority Relations and Economic Decision Making in Vietnam—an Historical Perspective*. Copenhagen: Nordic Institute of Asian Studies, 1998.
- Porter, Michael E. *The Competitive Advantage of Nations*. London: Macmillan, 1990.
- , and Klaus Schwab, eds. *Global Competitiveness Report 2008/2009*. Geneva: World Economic Forum, 2008.
- Rahnema, M., and V. Bawtree, eds. *The Post-Development Reader*. London: Zed Books, 1997.
- Ranis, Gustav, and John C.H. Fei. “A Theory of Economic Development.” *The American Economic Review* 51, no. 4 (Sept 1961): 533-65.

- Reidel, James, and William S. Turley. "The Politics and Economics of Transition to an Open Market Economy in Viet Nam." OECD Development Centre Working Paper 152 (1999).
- Rigby, David L. "Geography and Technological Change." In *A Companion to Economic Geography*, edited by Eric Sheppard and Trevor J. Barnes. Malden, MA: Blackwell, 2003.
- Roach, Brian. "A Primer on Multinational Corporations." In *Leviathans: Multinational Corporations and the New Global History*, edited by Alfred D. Chandler Jr. and Bruce Mazlish. Albany, NY: State University of New York Press, 2005.
- Rodríguez-Clare, A. "Costa Rica's Development Strategy Based on Human Capital and Technology: How It Got There, the Impact of Intel, and Lessons for Other Countries." In *UNDP Human Development Report*, edited by UNDP, 4-8. New York: United Nations, 2001.
- Rodrik, Dani. "Institutions for High-Quality Growth: What they are and how to Acquire them." NBER Working Paper 7540 (2000).
- . *One Economics, Many Recipes*. Princeton, NJ: Princeton University Press, 2007.
- Rosaldo, Renato. "Ideology, Place, and People without Culture." *Cultural Anthropology* 3, no. 1 (1988).
- Rose, Richard. "What Is Lesson Drawing?" *Journal of Public Policy* 11 (1991): 3-30.
- Rostow, W.W. "The Takeoff into Sustained Growth." *The Economic Journal* 66, no. 261 (March 1956): 25-48.
- . "The Stages of Economic Growth." *The Economic History Review* 12, no. 1 (August 1959): 1-16.
- Ruttan, Vernon W. *Technology, Growth, and Development: An Induced Innovation Perspective*. Oxford: Oxford University Press, 2001.
- Sangmpam, S.N. "Politics Rules: The False Primacy of Institutions in Developing Countries." *Political Studies* 55, no. 1 (March 2007): 201-24.
- Sassen, Saskia, ed. *Global Networks Linked Cities*. New York: Routledge, 2002.
- Scott, Allen J., ed. *Global City-Regions: Trends, Theory, Policy*. Oxford: Oxford University Press, 2001.
- , and Michael Storper. "Regions, Globalization, Development." *Regional Studies* 36, nos. 6&7 (Aug/Oct 2003): 579-93.
- Seely Brown, John, and Paul Duguid. "Organizational Learning and Communities of Practice: Towards a Unified View of Working, Learning, and Innovation." *Organization Science* 2, no. 1 (1991): 40-57.
- Selznick, Phillip. "Institutionalism 'Old' and 'New'." *Administrative Science Quarterly* 41, no. 2 (June 1996): 270-77.

- Sen, Amartya. *Development as Freedom*. 1st edition. New York: Knopf, 1999.
- Sichuan University Center for Development and Strategy. "Economy Impact of Intel's Operation in Chengdu." 2005.
- Sikor, Thomas. "Local Government in the Exercise of State Power: The Politics of Land Allocation in Black Thai Villages." In *Beyond Hanoi: Local Government in Vietnam*, edited by Benedict J. Tria Kerkvliet and David G. Marr. Copenhagen: Nordic Institute of Asian Studies, 2004.
- Silver, Mariko. "Land and Water Cambodia." Presented at the American Association of Geographers Annual Meeting. Chicago, 2005.
- Sklair, Leslie. *The Transnational Capitalist Class*. Oxford: Blackwell, 2000.
- Smart, Alan. "The Emergence of Local Capitalisms in China: Overseas Chinese Investment and Patterns of Development." In *China's Regions, Polity, and Economy: A Study of Spatial Transformation in the Post-Reform Era*, edited by Si-Ming Li and Wing-Shing Tang. Hong Kong: Chinese University Press, 2000.
- Smith, Larry, and Nguyen Quang Dong. "Processes for Strategic Planning in Vietnam's Higher Education System." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- So, Anthony. *Social Change and Development: Modernization, Dependency, and World-System Theories*. Sage Library of Social Research. Newbury Park, CA: Sage, 1990.
- Spar, Deborah. "Attracting High Technology Investment: Intel's Costa Rica Plant." Foreign Investment Advisory Service Occasional Paper 11. Washington, DC: World Bank, 1998.
- St. George, Elizabeth. "Socialist Ideology and Practical Realism: The Process of Compromise in Vietnam's Law on Education." In *Asian Socialism and Legal Change: The Dynamics of Vietnamese and Chinese Reform*, edited by J. Gillespie and Pip Nicholson. Canberra: ANU Press, 2005.
- . "Higher Education in Vietnam 1986-1998: Education in Transition to a New Era." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. New York: Springer, 2010.
- . "Higher Education Reform in Vietnam: Boundaries of Autonomy." In *Education in Vietnam*, edited by Jonathan London. Singapore: Institute of Southeast Asian Studies, 2011.
- Steer, Liesbet, and Kunal Sen. "Formal and Informal Institutions in a Transition Economy: The Case of Vietnam." *World Development* 38, no. 11 (2010): 1603-15.
- Stiglitz, Joseph E. "Some Lessons from the East Asian Miracle." *The World Bank Research Observer* 11, no. 2 (August 1996): 151-77.
- . *Globalization and Its Discontents*. New York: W.W. Norton, 2003.

- Stone, Diane. "Transfer Agents and Global Networks in the 'Transnationalisation' of Policy." *Journal of European Public Policy* 11, no. 3 (2004): 545-66.
- Storper, Michael *The Regional World: Territorial Development in the Global Economy*. New York: Guilford Press, 1997.
- . "Lived Effects of the Contemporary Economy: Globalization, Inequality, and Consumer Society." *Public Culture* 12, no. 2 (2000).
- Sun, Haishun, and Ashok Parikh. "Exports, Inward Foreign Direct Investment (FDI) and Regional Economic Growth in China." *Regional Studies* 35, no. 3 (2001): 187-96.
- , and Frank Bo Tipton. "A Comparative Analysis of the Characteristics of FDI in China 1979-1995." *Journal of Developing Areas* 32, no. 2 (1998): 159-86.
- Sunley, P. "Relational Economic Geography: A Partial Understanding or a New Paradigm?" *Economic Geography* 84, no. 1 (2008): 1-26.
- Suntikul, W, R. Butler, and D. Airey. "The Influence of Foreign Direct Investment on Accommodation Patterns in Vietnam as a Result of the Open-Door Policy." *Current Issues in Tourism* 13, no. 3 (2010).
- Suttmeier, Richard P, and Cong Cao. "China Faces the New Industrial Revolution: Achievement and Uncertainty in the Search for Research and Innovation Strategies." *Asian Perspective* 23, no. 3 (1999).
- Taylor, Ed. "Intel Prowls for Tax Breaks." *Atlanta Journal-Constitution* (5/31/2005).
- Taylor, Peter J. "New Political Geographies: Global Civil Society and Global Governance through World City Networks." *Political Geography* 24, no. 6 (2005): 703-30.
- Tennenhouse, David. "Intel's Open Collaborative Model of Industry-University Research." *Research Technology Management* 47, no. 4 (2004): 19-26.
- Thayer, Carlyle A. "Vietnam's Reforms: New Momentum." In *Vietnam Business Journal* (2000). <http://www.viam.com/archive/2000/08/vrn.htm>.
- . "Political Legitimacy of Vietnam's One Party-State: Challenges and Responses." *Journal of Current Southeast Asian Affairs*, no. 4 (2009): 47-70.
- Theng, Tan Wee. *Embedded: Intel inside China, the inside Story*. Singapore: Marshall Cavendish Business International (Asia), 2010.
- Thomsen, Lotte. "Assessing Global Value Chains? The Role of Business-State Relations in the Private Clothing Industry in Vietnam." *Journal of Economic Geography* 7 (2007): 753-76.
- Thorbecke, Erik. "The Evolution of the Development Doctrine and the Role of Foreign Aid, 1950-2000." In *Foreign Aid and Development: Lessons Learnt and Directions for the Future*, edited

- by Finn Tarp. London: Routledge, 2000.
- Thuy, Le Duc. "Economic Doi Moi in Vietnam: Content, Achievements, and Prospects." In *Reinventing Vietnamese Socialism: Doi Moi in Comparative Perspective*, edited by William S. Turley and Mark Selden. Boulder, CO.: Westview Press, 1993.
- Tian, Qunjian. "China Develops Its West: Motivation, Strategy and Prospect." *Journal of Contemporary China* 13, no. 41 (2004): 611-36.
- Toye, J. F. J. "Economic Development." In *The Social Science Encyclopedia*, edited by Adam Kuper and Jessica Kuper, 223-25. New York: Routledge, 1996.
- Turley, William S., and Mark Selden, eds. *Reinventing Vietnamese Socialism: Doi Moi in Comparative Perspective*. Boulder, CO.: Westview Press, 1993.
- , and Brantly Womack. "Asian Socialism's Open Doors." In *Transforming Asian Socialism: China and Vietnam Compared*, edited by Anita Chan, Benedict J. Tria Kerkvliet, and Jonathan Unger. Lanham, MD.: Rowman & Littlefield, 1999.
- UNCTAD. "World Investment Report: The Shift toward Services." New York and Geneva: United Nations, 2004.
- . "Transnational Corporations and the Internationalization of R&D." New York and Geneva: United Nations, 2005.
- . "Trade and Development Report, 2008." New York and Geneva: United Nations, 2008.
- Vallely, Thomas, and Ben Wilkinson. "Memorandum to the Vietnamese-US Higher Education Task Force: Vietnamese Higher Education: Crisis and Response." Cambridge, MA: Ash Institute, Harvard Kennedy School of Government, Harvard University, 2008.
- Van Apeldoorn, Bastiaan. "The Struggle over European Order: Transnational Class Agency in the Making of Embedded Neo-Liberalism." In *State Space: A Reader*, edited by Neil Brenner, Bob Jessop, Martin Jones, and Gordon MacLeod. Malden, MA: Blackwell, 2003.
- Vaughan, Diane. "Theory Elaboration: The Heuristics of Case Analysis." In *What Is a Case? Exploring the Foundations of Social Inquiry*, edited by C.C. Ragin and H.S. Becker. Cambridge: Cambridge University Press, 1992.
- Vidal, Matt, and Jamie Peck. "Sociological Institutionalism and the Socially Constructed Economy." In *The Wiley-Blackwell Companion to Economic Geography*, edited by Trevor J. Barnes, Jamie Peck, and Eric Sheppard. Malden, MA: Blackwell, 2012.
- Viet Nam News. "Experts Criticise New Higher Education Bill." *Viet Nam News* (April 21, 2011).
- Vind, Ingeborg. "Transnational Companies as a Source of Skill Upgrading: The Electronics Industry in Ho Chi Minh City." *Geoforum* 39 (2008): 1480-93.

- Vogelstein, Fred. "Inside the New China: How Intel Got Inside, the American Chip Giant's Hunger for a Huge New Marketplace Has Driven It Deep into China." *Fortune* (Oct. 4, 2004).
- Wang, James Jixian, and Weidong Liu. "The Dynamic Relationship between the Central Government and Local Authorities in Orienting Foreign Direct Investment: A Case Study of the Automotive Industry." In *China's Regions, Polity, and Economy*, edited by Si-Ming Li and Wing-Shing Tang. Hong Kong: Chinese University Press, 2000.
- Welch, Anthony R. "Internationalisation of Vietnamese Higher Education: Retrospect and Prospect." In *Reforming Higher Education in Vietnam: Challenges and Priorities*, edited by Grant Harman, Martin Hayden, and Thanh Nghi Pham. London: Springer, 2010.
- Wenger, Etienne. *Communities of Practice: Learning, Meaning, and Identity*. Learning in Doing: Social, Cognitive, and Computational Perspectives. Series edited by John Seely Brown. Cambridge: Cambridge University Press, 1999.
- Wescott, Clay G. "Hierarchies, Networks, and Local Government in Viet Nam." *International Public Management Review* 4, no. 2 (2003).
- West, Jonathan. "Limits to Globalization: Organizational Homogeneity and Diversity in the Semiconductor Industry." *Industrial and Corporate Change* 11, no. 1 (2002): 159-88.
- Wilkinson, Ben, and Laura Chirot. "Beyond the Apex: Toward a System Level Approach to Higher Education Reform in Vietnam." Ho Chi Minh City: New School, Harvard Kennedy School, and the Fulbright Economics Teaching Program (FETP), 2010.
- Wischermann, Jorg. "Governance and Civil Society Action in Vietnam: Changing the Rules from within—Potentials and Limits." *Asian Politics & Policy* 3, no. 3 (2011): 383-411.
- Wolfe, David A., and Meric S. Gertler. "Innovation and Social Learning: An Introduction." In *Innovation and Social Learning: Institutional Adaptation in an Era of Technological Change*, edited by Meric S. Gertler and David A. Wolfe. Basingstoke: Palgrave, 2002.
- World Bank. "The Impact of Intel in Costa Rica: Nine Years after the Decision to Invest." Washington, DC: World Bank MIGA, 2006.
- . *The East Asian Miracle: Economic Growth and Public Policy*. World Bank Policy Research Reports. New York: Oxford University Press, 1993.
- Wright, Melissa W. "Factory Daughters and Chinese Modernity: A Case from Dongguan." *Geoforum* 34 (2003): 291-301.
- Xu, Bin. "Multinational Enterprises, Technology Diffusion, and Host Country Productivity Growth." *Journal of Development Economics* 62 (2000): 477-93.
- Yeh, Anthony Gar-on. "Foreign Investment and Urban Development in China." In *China's Regions, Polity and Economy*, edited by Si-Ming Li and Wing-Shing Tang. Hong Kong: Chinese University Press, 2000.

- Yeung, Henry Wai-chung. "Business Networks and Transnational Corporations: A Study of Hong Kong Firms in the Asean Region." *Economic Geography* 73, no. 1 (January 1997): 1-25.
- Yeung, Henry W.C., Weidong Liu, and Peter Dicken. "Transnational Corporations and Network Effects of a Local Manufacturing Cluster in Mobile Telecommunications Equipment in China." *World Development* 34, no. 3 (2006): 520-40.
- Young, S., N. Hood, and E. Peters. "Multinational-Enterprises and Regional Economic Development ". *Regional Studies* 28, no. 7 (1994): 657-77.
- Zhiling, Huang. "Chengdu Tech Park Welcomes Influx of Firms." *China Daily* (12/16/2011).