POST-OIL KNOWLEDGE: THE ACQUISITION OF HUMAN CAPITAL FOR TRANSITION IN THE ARAB GULF STATES

DISSERTATION

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Abstract

This research examines the human capital dimensions of structural change in oil economies, with a focus on the case of the Arab Gulf States: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia the United Arab Emirates (UAE). These oil-abundant, labor-deficient countries have undertaken numerous efforts over the past four decades to diversify their economies beyond oil, with varying levels of success. Oil-generated capital (rent) accumulation, however, has generated severe labor market distortions in the region, with private sector work dominated by majority foreign workforces and a high-wage public sector providing employment for the minority citizenry. The resulting human capital mix presents a structural barrier to developing the local capacity required for creating or sustaining a post-oil economy. Accordingly, this project examines the evolution of the Gulf labor markets in response to the region’s economic diversification efforts, from the first oil boom (1973-1986) through the second oil boom (1998-2008). The goal is to determine the conditions under which natural capital (oil) is converted to non-oil human capital (knowledge) or, conversely, the conditions under which oil abundance crowds out sustainable development capacity.

Utilizing a mixed-methods approach, this project consists of a four-decade analysis of historical and other secondary data analysis, a large-scale employment and human capital survey of foreign and local companies in the region, and key-informant
interviews with human resource professionals in the UAE. Secondary data analysis identified a number of promising diversification efforts in the region, especially during the recent oil boom. Yet, these efforts have also stimulated demand for new forms of labor, knowledge and technology. In order to meet these demands, the region has deployed its oil wealth to attract foreign factors of production. Indeed, the Gulf States have sought to leverage their ability to access global human capital markets, learned through the experience of oil development, as a basis on which to construct a new competitive advantage. However, as a result, economic diversification has actually amplified the region’s labor and human capital distortions.

Survey and interview results indicate only a marginal change to the region’s overall hiring and employment incentive structures over the past four decades: foreign and local private sector companies remain unwilling/unable to hire and train Gulf citizens, while Gulf citizens remain unwilling/unable to take private sector employment. These patterns, however, vary significantly by region and economic sector. Overall, while strategies to attract foreign investment, trade and migration have succeeded, incentives for local knowledge transfer have not been operationalized. The result is a dual economy: first, a dynamic, market-based economy driven by expatriate labor and knowledge, with little local content; and, second, a distorted, oil-driven public sector which provides employment to the local population. Oil wealth has provided Gulf economies with the capital to create competitive new sources of economic growth, but the challenge remains sustainability: reproducing the labor force in non-oil industries locally.
Dedication

This document is dedicated to Walter D. Ewers, 1937-2004.
Acknowledgments

I owe debts of gratitude to a number of key individuals who, on both professional and personal levels, have made this research possible. Most significantly, I would like to thank my advisor, Edward Malecki, who taught me how to conduct research and how to be a geographer. From my first days as his advisee, he encouraged me to submit papers for publication in peer reviewed journals and then showed me how to do it. I know that I am in the absolute minority of graduate students in the country with how much interaction and personal guidance I receive from my adviser. I am incredibly proud that, wherever my career takes me, I will always be identified as a former student of Ed Malecki.

I would also like to express my thanks to Larry Brown, whose door has always been open to me. When I have needed advice or felt doubts in my abilities, Dr. Brown has provided me with sound guidance and encouragement. When I thought about going to the private sector instead of staying on for my PhD, he made me realize what a mistake such a move would be. He has always been there to write thoughtful letters of support for fellowships and grants. I know that these letters have played a big role in my obtaining these awards.

While I was a Master’s student, I read about the work Hassan Aly, OSU Professor of Economics, was conducting on the Middle East. I contacted him out the blue and he...
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When I took Nancy Ettlinger's honors economic geography class an undergraduate Arabic major at OSU, she recommended that I consider applying for the Geography MA program. After all of these years I am still struck by the level of individual attention, guidance and support I have received in this department. This is a real strength of OSU Geography and I think that Dr. Ettlinger's efforts are an excellent example of how individual talent can be identified and fostered at such a large university.

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Publications


Fields of Study

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Chapter 1: Introduction to the Study

Despite the large levels of revenue they generate, oil economies have been largely unsuccessful in transitioning beyond natural resources and into more sustainable industries. One reason, perhaps, is because natural capital (oil) abundance reduces incentives to create human capital (knowledge), a key requirement for economic development (Barro, 2001; Gylfason, 2001). At the other end of the development spectrum are advanced, service- and knowledge-based economies, characterized by an abundance of human capital, and environments which are highly-attractive to flows of international investment, trade, and migration. We know a great deal about the potentially deleterious economic, social and political outcomes of natural resource-based development. Yet, we know very little about the conditions under which natural capital wealth is converted to sustainable human capital. This study will fill that gap.

As oil reserves diminish, finding new sources of revenue is a high priority for the Arab Gulf States of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). Yet, despite representing some of the wealthiest countries in the world, these states face a unique human capital barrier to sustainable economic development: a reliance on foreign labor and knowledge for economic growth. Accordingly, the objectives of this study are to obtain an understanding of how human capital evolves in oil economies to help or hinder diversification, how oil wealth can be deployed to create
post-oil economies, and how global human capital and foreign knowledge can be attracted and utilized to build local capacity.

During the first oil boom (1973-86), oil production and related construction in the Gulf required the import of foreign companies and workforces in order to provide the labor and technical knowledge for oil development. National bureaucracies expanded to distribute profits, manage oil production, and provide public employment (Henry and Springborg, 2001). These two trends created a labor market divided between locals and foreigners, with skilled and unskilled private sector work dominated by expatriates, and local employment generated through the national public sector (Chaudry, 1997; Crystal, 1995). While the import of foreign labor and knowledge was essential for achieving the dramatic economic growth of the first oil boom, this growth, in turn, promoted labor market distortions and a deep and persistent reliance on foreign labor. Most significantly, the ability to import foreign labor while providing high-wage public employment to the local population reduced incentives to promote diversified, indigenous human capital formation.

Since the 1970’s, without the population to sustain labor-intensive industrialization, but with the capital to import knowledge in new sectors, the Gulf States have searched for optimal diversification paths with varied effort and results. The oil bust of the mid-1980s forced the region to confront its inability to expand public employment in the presence of young, fast-growing populations and high levels of foreign labor (Winckler, 2005). Oil windfalls from a second (1998-2008) oil boom have provided a new opportunity for the Gulf States to deploy their naturally-endowed comparative
advantage in order to generate a new competitive advantage and post-oil development capacity. Indeed, some of the region’s strategies are unprecedented among oil economies: to leap from pre-industrialized natural resource-extraction to post-industrial service and knowledge-based development. New development trajectories, however, have required new forms of knowledge not present in local labor markets.

Research Questions

This study analyzes the evolution of the region’s development over the past four decades to determine how or whether oil abundance has been transformed into local, non-oil development capacity. It employs a mixed-methods approach, based on archival research and secondary data analysis, a human capital survey of 300 foreign and local firms throughout the region, and key-informant interviews with survey participants at firms in the United Arab Emirates. Three questions are addressed, each of different aspects of the transition from oil to knowledge: How does human capital evolve in oil economies to help or hinder processes of diversification and structural change? Can oil revenue be deployed to acquire the human capital needed to create and sustain a diversified, non-oil economy? Does the creation of new sources of economic growth address the institutional legacies of oil-driven development? As the region responds to the post-2008 global economic crisis these questions have become even more relevant.

First, this research utilizes labor markets as loci to study the relationship between human capital formation, natural capital extraction and sustainable economic development. More specifically, it examines the mechanisms through which oil-driven
development generated severe labor market distortions in the Gulf, characterized by entrenched patterns of migration and employment. It then studies how these processes have impacted the formation of non-oil human capital, and how they have evolved in response to the region’s diversification efforts. Under the theory of comparative advantage, oil wealth should represent a blessing rather than a curse – a powerful engine for new forms of economic growth. It is, therefore, quite logical that oil economies have a competitive edge over resource-poor economies in this regard. I argue that economic transition beyond oil does not necessarily imply an institutional transition. This proposition is developed by studying the relationship between the creation of competitive, non-oil economic growth in the Gulf and the development of sustainable, post-oil institutions. Diversification efforts are analyzed in terms of how they impact existing labor market institutions and/or generate the formation of new institutions. I argue that economic diversification in the Gulf, while successful as measured by contribution to GDP, has not addressed the human capital lessons and legacies of oil.

Second, this study explores how new forms of development capacity, necessary to create and sustain new industries, are created or acquired. These strategies reflect the tension between the globalization and localization of economic development in the Gulf. I argue that the Gulf States have used their ability to attract international flows of migration, trade and investment, learned through oil development, as a basis on which transition beyond oil. At a minimum, these strategies are attempts to craft the basis for sustainable economic development in a global economy that is more dependent on human capital and creativity than on natural resource wealth. If a cycle of cumulative causation
is achieved, this could represent a new competitive advantage for the region. It could alternatively represent the oil rent-dependent economy in a new guise, with post-oil economies driven by foreign factors of production and profits redistributed to local citizens through social entitlements.

Third, the geography of knowledge is studied, to understand how or whether foreign knowledge can be transferred to a local host market. The Gulf States have used their oil wealth to acquire state-of-the-art business models, industrial knowledge and technologic capability. What happens to this global human capital once it is imported? By studying the circulation of knowledge in the Gulf, embodied by foreign workers and firms, this research seeks to answer this question. I argue that the degree to which the import of foreign knowledge results in local development capacity is a function of public and private incentives for two activities: first, the transfer of knowledge from foreign participants to local workers and firms and, second, the absorption of this knowledge by those local workers and firms. This proposition is developed by first examining the Gulf States’ regimes to attract foreign participants, the conditions for entry, and the governance of activities. In light of these results, I examine how foreign knowledge behaves once present in the region and how it interacts with local markets.

Organization of the Study

Chapter 1 has presented the introduction and research questions of the study. Chapter 2 reviews the literature relevant to the study. Chapter 3 contains the methodology of the study (conceptual framework, study area, and data collection), which includes
secondary, survey and interview data. The analysis of results comprises Chapters 4-6. These chapters are presented to reflect the organization of the literature review and data collection: Chapter 4 focuses on secondary and other historical data to examine national- and regional-level processes. Chapter 5 utilizes survey and interview data to examine how the labor market dynamics explored in Chapter 4 are produced and reproduced within non-oil private sector firms in the region. Chapter 6 is also based on firm-level survey and interview data, but this chapter focuses on how or whether foreign knowledge imported in the region is transferred to and absorbed by the local populations. Conclusions are presented in Chapter 7.
Chapter 2: Literature Review

This project relies on an institutional, evolutionary economic geography framework to examine the ways in which paths of economic development are “shaped and mediated by the institutional structures in and through which those processes take place” (Martin, 2000, p. 79). More specifically, this research examines how institutions, defined as “recurrent patterns of behavior – habits, conventions and routines,” mediate the transition from oil dependence to post-oil sustainability across particular institutional spaces (Morgan, 1997, p. 493). Thus, Gulf development is placed within research on the evolutions of economic development paths – specifically, those factors which help or hinder these evolutions. This includes several factors largely ignored in neoclassical economics, including “institutional interactions, learning…diverse economic trajectories, path-dependence and ‘lock-in’” (Cooke, 2002, p. 47). This approach is inspired by a wide range of literatures, including general economic development and development in resource-based economies, international technology and knowledge transfer, and human geography. The purpose of this chapter is to provide a survey of the existing literature relevant to the research questions examined in the dissertation. It is broken into three sections: first, resource-based development – from dependence to diversification; second, drivers of development – strategies for oil windfall deployment; third, geographies of learning – knowledge transfer, absorption and circulation.
Resource-Based Development: From Dependence to Diversification

The natural resource curse. Natural resource abundance is linked to poor long-term economic performance, termed the “natural resource curse,” through a number of deleterious economic and non-economic transmission channels (Sachs and Warner, 1995). Scholars have emphasized four key channels in the literature (Sala-i-Martin and Subramanian 2003; Stevens, 2003). First, countries with natural resource abundance are more exposed to the volatility of the global commodity markets. It is therefore an external relationship between consumption and production that maintains the balance of payments (de Janvry, 1982). Second, Dutch Disease effects occur as manufacturing declines at the expense of non-tradable (government and domestic service) sectors (Stevens, 2003). Third, because natural resource revenues come in the form of rent, defined as “income generated by the natural resource above normal returns to other factors of production,” rent-seeking and corruption tend to be correlated with natural resource abundance (Gunton, 2003a, p. 2). The struggle among individuals and interest groups for a larger share of rent tends to thwart institutional development (Isham, Woolcock, Pritchett, and Busby, 2005; Lane and Tornell, 1995). Fourth, natural capital (oil, minerals, etc.), abundance tends to crowd out other forms of capital, whether human, social or physical (Birdsall et. al, 2001; Gylfason, 2005). It is this fourth channel, and the role of institutions and human capital, on which this study focuses.

Numerous large-scale, cross-country empirical studies have demonstrated some link between slow, long-term economic growth and an economic base dominated by natural resource exports, whether agriculture, minerals or oil (Stevens, 2003; Sachs and
Warner, 1995, 2001). Sachs and Warner (1997), for instance, found that of 95 developing countries, for the period 1970-90, only Malaysia and Mauritius avoided the curse. Using different methodologies, other authors have identified a larger number or different set of countries which have successfully avoided the curse. For example, employing composite indices of infant mortality, life expectancy, illiteracy and GDP, Stevens (2003) found that Botswana, Chile, Indonesia, Malaysia and Norway have steered clear of the curse.

Yet, there is a great deal of variety among natural resource exporters in geography, type of export, and institutions, which constrain cross-country studies. For instance, many countries that have oil also have productive agricultural sectors and substantial rural populations, such as Venezuela, Iran and Nigeria. Large populations also allow for a reinvestment of oil profits into the national economy (Auty, 1995; Richards and Waterbury, 2008). This is not the case in the Gulf States, with 90% of their populations living in cities and only a small fraction of their agricultural production grown locally (Bonine, 1997). Similarly, the constraints of agricultural export-based production are much different than those of oil extraction and production. Unlike oil, agricultural has the potential to be sustainable, but it also generates much lower profits.

Innis’ (1933) staple theory, which sought to explain the development of Canada as a natural resource economy in the first half of the twentieth century, has been fertile ground for the creation of natural resource-based growth theories. This theory examined the creation of forward and backwards geographic linkages required to export products to advanced industrial nations, which left marked effects on the growth of Canada’s urban system and industrial geography (Barnes, Hayter, and Hay, 2001; Hayter and Barnes,
From this theory, two schools of thought were developed (Gunton, 2003a). Dependency theories put forth the claim that resource-based development creates a situation of exploitation by advanced industrial countries (Frank, 1978). Comparative advantage theories, on the other hand, purport that resource abundance presents a key opportunity, if properly managed, for the development of peripheral economies (Leamer, 1984; Venables, 2006). Resource abundance, therefore, could potentially be a curse (dependency) or a blessing (comparative advantage) (Gelb, 1988).

More recently, geographers have employed staple theory and Innis’ use of the metaphor “cyclone” to describe the entry of foreign firms in single industry, natural resource towns, and the impact of their subsequent flight after resource reserves have been depleted (Barnes et al., 2001). The common ground between economist Innis’ work and that of modern economic geographers (but unlike that of Sachs and his colleagues) is an interest in the “deep seated origins of geographical difference,” (Walker, 2001, p. 171, as cited in Barnes et al., 2001). More specifically, Innis’ framework was based on three key concepts of geography, institutions and technology, each of which was rooted in place- and history-specific contexts (Hayter and Barnes, 1990).

Diversification. Most scholars agree that to achieve long-term economic security, “countries whose economies are based upon depletable resources must adopt policies that will enable them to maintain their standards of living after the resource is exhausted” (McKee, Garner, and McKee, 1999, p. 67). A clear path for oil economies to avoid this

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1 Some of the material in this section taken from Ewers and Malecki (Forthcoming a)
curse is *diversification*, redirecting a country’s specialization patterns towards industries associated with higher economic growth and more equitable income redistribution (Alvarez and Fuentes, 2006). Economic diversification has been shown to promote competitive, long-term economic growth by shifting production away from non-renewable resource production and by shifting the labor force into more knowledge-intensive jobs outside of natural resources (Gylfason, 2005). Modern mixed economies consist of a broad mix of industries – manufacturing, trade, and services – which have historically led to higher wages and quality of life for local populations.

As Auty (2001, 2006) points out, however, the record since the 1960s shows that natural resource economies have rarely transitioned to become developmental states – a transition most often achieved through the *competitive industrialization model*. The 20th century’s most prominent development success stories, such as South Korea, have begun with a *lack* of natural resources, but an abundance of labor, forced into learning-by-doing: labor-intensive industrialization initially provides mass employment, and competing in increasingly skill-intensive activities requires and promotes new types of human capital (Auty and Gelb, 2001). In this model, population pressure creates demands upon the government for jobs, income and education: pressures which do not exist in high-rent resource economies. In successful diversifiers, we see a pattern whereby “industrialization and reform towards an outward-oriented policy at a low per capita income triggers an expansion of labor intensive manufacturing [which] rapidly absorbs surplus rural labor and pushes the labor market to its turning point” (Auty, 2001, p. 841).
In contrast, social, produced, natural and human capital evolve quite differently under the staple trap model, where natural capital abundance crowds out human and social capital, thereby distorting the development process (Gylfason, 2001; Gylfason and Zoega, 2006). In other words, instead of acting as an engine for economic growth, natural resource abundance can, in fact, hinder the creation of new development activities. This has been demonstrated in natural resource-dependent countries through a variety of institutional mechanisms which reduce public and private incentives to develop indigenous human capital (Stijns, 2006). These mechanisms can be categorized into four types, as described and summarized below.

First, because infant, non-oil industries do not generate profits comparable to oil, oil-rich countries become “locked” in an oil-based development path (Auty, 1995). This is a process whereby, “burgeoning slow-maturing industry and bloated public service depend on transfers from commodity producing sectors … whose share in GDP declines due to both diminished incentives and ongoing structural change” (Auty, 2001, p. 4). The export mentality in resource supply regions means that investors are likely inclined to invest in staple-related projects and industries (Hayter and Barnes, 1990). The structure of labor demand drives the structure of jobs. As a result, the employment base is concentrated around natural resource extraction and production.

Second, foreign multinational corporations (MNCs) are often responsible for generating oil revenues by providing the technology and knowledge for oil extraction. Natural resource extraction, production and export in developing countries are often associated with international energy companies. Only these companies can provide the
requisite skills, technology and experience for large-scale natural resource projects. As a result, externally controlled foreign corporations are required to undertake these projects, which, in turn, “minimizes the development of higher order control and research functions” (Barnes et al., 2001, p. 2130). Even those who argue a net benefit from foreign investors in the natural resource industries of developing economies admit that “their indirect impact on both the rate and the pattern of social and economic change may be enormous (Mikesell, 1971, p. 25). The higher wages and benefits offered in the natural resource sector, especially by foreign companies, restructures employment preferences, labor demand and entrepreneurship towards that sector (Mikesell, 1971). As such, human capital demand is skewed towards natural resource-related activities.

Third, diversification strategies are often characterized by vast subsidy allocations and/or protectionist strategies to promote infant industry. Most commonly, these subsidies have been associated with poor industrial policies, and the deployment of windfalls towards elites and rent-seekers (Lane and Tornell, 1995; Mikesell, 1997; Stevens, 2003). Because these individuals manage overall extraction and production policies, oil windfalls tend to be deployed away from non-oil economic activities which could alter power and wealth distribution (Gylfason, 2005).

Fourth, many previous studies have emphasized ineffective educational policies as the key human capital constraint to diversification in oil-based economies. The presence of vast resource windfalls tends to promote short-term economic planning, without adequate investment in higher education for long-term development (Keller and Nabli, 2002). The ability to rely on the resource sector for jobs and revenue reduces
government incentives to efficiently invest in education and training in non-oil sectors and public incentives to undertake such education (Birdsall, Ross, and Sabot, 1997). While resource windfalls are often deployed towards educational expenditures in such economies, in many cases education represents a consumptive good—a social entitlement from oil revenues—rather than an investment to promote long-term economic development (Birdsall et al., 1997). Together, these trends reduce societal modernization pressures for non-oil education and occupational specialization (Isham et al., 2005).

Those exceptional natural resource economies which have diversified followed four primary approaches: Norway, with its small population and large oil reserves, took a competency-based approach, building on its indigenous maritime and shipbuilding knowledge to create a competitive advantage in offshore oil services, drilling and platform construction (Larsen, 2006; Noreng, 2004). Malaysia, a labor importer like the Gulf States, used a vertical industrialization approach, focusing on manufacturing products which added value to its diverse basket of natural resources and commodities (Abdin, 2001; Ruppert, 1999). Chile, with its wide-ranging natural resource endowment, followed a horizontal diversification approach, broadening its economic base from copper to other minerals, as well as agriculture, fishing and wine production (Alvarez and Fuentes, 2006). Finally, Singapore’s primary comparative advantage has always been its key location on world shipping routes, from which it became a major oil exporter despite having no oil reserves of its own. Through purposeful policies, the small island economy followed a money and location approach to succeed in becoming a major world city in trade and finance (Hing, 2004).
How do we define diversification? Some authors simply see it as the transition to any, non-natural resource based production. This could include such activities as petrochemical and fertilizer production in an oil-economy, termed “resource-based industrialization” (Auty, 1990). While such a strategy would benefit from the accumulated knowledge of oil-production and the comparative advantage of natural resource abundance, it would also still be largely based on oil. Other scholars have focused on more traditional, export-based manufacturing (Wood, 1999). Yet, this strategy is situated at the other end of the spectrum of resource-based industrialization, with little relationship to a natural resource economy’s industrial knowledge.

*Drivers of Development: Strategies for Oil Windfall Deployment*

*Paths of transition.* As the production process has become more complex, knowledge-intensive and international, so has the labor process – the relationship between labor skill and the organization of production. This trend is reflected in the literature, where human capital (e.g. knowledge, innovation, and entrepreneurship) is now emphasized over physical capital (e.g. technology, factories, and infrastructure) as the key determinant of place and firm competitiveness. The primary difference is that human capital is found in people: intelligent, mobile factors of production, which are capable of teaching, learning and doing.

In the standard thinking, an economy progresses from dependence on primary sectors (natural resources) to secondary industry (manufacturing), at first with labor-

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2 This section taken from Ewers and Malecki (Forthcoming a)
intensive and then more capital-intensive production. The industrialization transition is followed by a transition to dependence on services, including both consumer and producer services. Among paths of economic development, innovation- and knowledge-based economies and advanced producer services are the current best practice. As a result, “At the dawn of the 21st century, all highly industrialized countries have become ‘service economies’” (Schettkat and Yocarini, 2006, p. 128). Characterizations of contemporary labor processes require that one take into account the vast amount of coordination required in increasingly complex production systems (Pavitt, 2003). Post-industrial production requires an array of services, including advertising, accounting, marketing, logistics and technical support as part of the actual production of a product (Schettkat and Yocarini, 2006). It is now the links and transactions in the production of goods that drive demand for labor. These links are especially visible in newly emerging economies, where processes of global capital deepening, through inward foreign investment, trade and migration, have had pronounced local impacts.

Can oil windfalls present a catalyst to reproduce or accelerate processes of socio-technical transition? Can a natural resource-based economy deploy its oil revenue to escape the resource curse, and transition into a new development path? Indeed, some economists have argued that the revenue derived from natural resource booms can, if invested wisely, act as a “big push” to promote new forms of economic growth (Hirschman, 1958; Myrdal, 1959). According to big-push reasoning, oil economies can stimulate structural economic change if they make targeted investments in large-scale, infrastructure-led development projects. While financial investment represents a powerful
and necessary catalyst to create new industry, however, paths of economic development are generated through institutions (Martin, 2000). Institutional capacity cannot merely be purchased, imported or transplanted. For instance, money by itself cannot reproduce the historical conditions under which Europe or the United States transitioned from dependence on primary sectors, to labor-intensive and then more capital-intensive industry and, finally, to producer and consumer services.

**Drivers of development: infrastructure.** Physical infrastructure can stimulate supply and demand dynamics by reducing transaction costs and creating linkages, substituting capital and labor, and diversifying employment and consumption opportunities. Developing economies often have weak private sectors. Therefore, if a government takes the risk to create physical infrastructure which could be shared by firms, a virtuous cycle of cumulative causation could follow: private capital formation leads to industrial capacity, which then leads to “development” (Amsden, 2001; Sachs and Warner, 1999). In geography, Scott (2002) argues that major infrastructure projects can also present a “regional push,” by promoting the agglomeration of firms, either within a specific sector (localization economies) or across many sectors (urbanization economies). When successful, agglomeration can produce economies of scale in new industries, potentially resulting in a new competitive advantage for a region.

These desired processes of cumulative causation, however, are heavily influenced by the historical evolution of economic growth in a given region, at times preventing such strategies from producing the desired outcome (Scott, 2002). In fact, large-scale

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3 This section taken from Ewers and Malecki (Forthcoming b)
development projects, or megaprojects, have oftentimes failed to meet expectations, instead becoming symbols of wasteful spending, corruption, or population displacement (Gellert and Lynch, 2003; Gunton, 2003b). Accordingly, the World Bank recognizes a number of preconditions for success with infrastructure investments (Kessides, 1993). First, there must be an efficient strategy for which projects are undertaken, where they are located, and how they are allocated, so as not to crowd out existing production activities. Second, infrastructure cannot create new potential, but it can complement and enhance existing productive capacity. Lastly, users must be willing to pay to use the infrastructure.

What factors determine how or whether this ‘big push’, financed by natural capital and embodied in physical capital, eventually generates new paths of economic development and new forms of development capacity? When developing countries place big bets on megaprojects to generate economic growth, they often look to the world’s largest MNCs for help: consulting firms like McKinsey to create and implement a strategy, construction and engineering firms like Bechtel to design and build the project, and industrial firms like Siemens to provide hard technology and operate the project. This has been the case with Gulf megaprojects, just as it has throughout the world, whether Venezuela’s Ciudad Guayana growth pole, Malaysia’s Multimedia Super Corridor, or Egypt’s Suez Canal projects. Only the world’s top MNCs have required expertise and experience to design, build and implement projects of such massive scale and scope. Moreover, megaprojects are often designed with the final goal of creating attractive climates for flows of international trade and investment.
Drivers of development: foreign direct investment. Although there has been considerable criticism of the exploitative tactics of foreign corporations in the developing world (Amin, 1976), scholars and policymakers alike have pointed to good cause for developing economies to create foreign direct investment (FDI) and MNC attraction schemes (Markusen and Venables, 1998; Stewart and Nihei, 1987). MNCs create, utilize and hold the rights to the world’s most advanced industrial and technological knowledge. As part of foreign investment, some portion of this knowledge is delivered to a host country, packaged in a form which is adapted to specific, local context. For instance, MNCs send employees, hard technology and production practices to foreign investment locations so that their subsidiary can compete in the host market (Blömstrom and Kokko, 2001). They may hire local employees who could eventually be employed at local firms or create their own firms (Stewart and Nihei, 1987). They also can provide sponsorship and scholarships for education and financial support to business and science schools (Blömstrom and Kokko, 2001). Accordingly, the presence of MNCs in developing countries presents key opportunities to acquire and create new forms of knowledge (Markusen and Venables, 1998). The challenge is to ensure that this knowledge is transferred to the host country, and not merely a “subordinate supplier relationship” (Poon, Hsu, and Jeongwook, 2006, p. 542).

Human capital spillovers and transfers, however, vary according to several factors: industry, mode of entry, size and time horizon of investment, type of operations, and local condition. In countries with high initial levels of human capital, foreign companies in more knowledge-intensive industries may locate in order to take advantage
of this human capital and may bring higher levels of technology and higher quality employment. MNCs have a large potential impact on host-country human capital. They can provide employment opportunities for local university graduates, and can therefore create incentives for local labor to complete such training. In contexts of lower initial levels of human capital, however, companies have three choices: they bring their own employees to do the majority of knowledge-intensive activities, set up operations that have lower technological or knowledge requirements, such as distribution or low-skilled manufacturing, or operate in enclaves (such as export processing zones) where the motivation for locating is subsidies, not some competitive characteristic of the place (Blöstrom and Kokko, 2001).

Drivers of development: trade. Development policy research has sought to find ways for peripheral economies to create policies which can promote the capture and adoption of foreign technology (Browne, 2002; Chandra, 2006). Peripheral economies can potentially use trade as a vehicle to “catch up” or even “leap-frog” the technological learning curve (Hobday, 1995). In order for this to occur, history tells us that the first critical step is to master, adapt, and improve on the imported knowledge and equipment (Abramovitz, 1986). A large body of research suggests that this is not a straightforward task (Bell and Albu, 1999). While a good can be purchased and the transaction completed when physical delivery has taken place, the successful transfer of technology is typically a long process, involving local learning to complete the transaction (Lall, 2000). Foreign technology can be imported by a host market, but the embodied elements can be used at
best-practice levels only if they are complemented by a number of tacit elements that have to be absorbed locally.

According to Keller (1996), the long-run effects of trade liberalization in developing countries can be explained by the success of a host country in developing a work force capable of absorbing and implementing new technology. He claims that convergence between technological leaders and laggards cannot be achieved by liberal trade policies alone, and the mere assumption that spillovers will be accrued through the presence of foreign investment. Accordingly, the import of foreign technology must be accompanied by improvements in the quality of local labor through education and training in order to achieve local, sustainable economic development. As Cooke (2002, p. 33) aptly notes, “technology is part capital and part know-how.” The host country must have in place regimes to enhance domestic skills and capabilities in order to adopt and apply the know-how of MNCs.

Drivers of development: migration. Migration has been shown as essential for countries to reap the benefits of global flows of trade and capital and gain comparative advantage over other nations (Rudolph, 2003). Creating a world-class knowledge base has become vital for achieving global economic success and a comparative advantage over other places. The presence of skilled human capital fosters innovation and generates greater economic activity. When specific skills are lacking, the easiest way to improve a knowledge base is to import one. The knowledge base of a nation’s workforce has become a priority in this regard, as “research and innovation drives economic expansion”

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4 See Ewers (2007) and Ewers and Lewis (2008)
(Tremblay, 2005, p. 197). A place’s success in the 21st global economy depends on more than a comparative advantage in technology, services and information; cultural and linguistic understandings are key requirements for a place to reap the benefits of international trade (Tremblay, 2005). Highly-skilled foreign workers provide human capital in the form of both technical skills serving research and innovation and an intimate understanding of the markets of their respective countries and regions.

As a result of increased economic interdependence and labor mobility, human capital now represents an international flow of economic activity (Cheng and Yang, 1998). Accordingly, just as places compete for other economic inputs, places compete to attract and retain human capital as a strategy for economic and social development (Crouch et. al., 1999). Developing countries have introduced explicit policies to ease restrictions on the entry of highly-qualified individuals in order to promote technology transfer and learning-by-doing (Markusen and Venables, 1998). Developed countries have done the same, but for the sake of economic competitiveness. In response to such policies, some researchers (e.g. Florida, 2005; Shachar, 2006; Wooldridge, 2006) have pointed to a global war for talent. Conversely, according to Markusen and Venebles (1998, p. 253), “curiously, many developed countries have also reversed their view, now seeing multinationals as ‘exporting jobs.’”

*Geographies of Learning – Knowledge Transfer, Absorption and Circulation*
Learning. Economic development includes productivity improvement but also large-scale sectoral shifts or structural changes (Syrquin, 1988). Development focuses on what Flammang (1990) has called ‘niche changing’ – changing from one niche of economic activity to another and producing ‘something different if not something more’ – in contrast to the growth process, which is primarily ‘niche filling’ (Flammang, 1979, p. 50). Competitiveness is in recent years the most common concept used to capture the process of economic development, defined by Sala-i-Martin et al. (2007) as “the set of institutions, policies, and factors that determine the level of productivity of a country” (p. 3). To put this another way, there are three general strategies for economic growth. The first is the neoclassical or factor-driven economy, in which competitiveness is based on comparative advantage of input costs, such as labor or natural resources. The second is an investment-driven economy, based on efficiency and competitive advantage. The third is an innovation-driven economy, where competitiveness is based on the unique value of products and services produced (Porter, Ketels, and Delgado, 2008). Rather than discrete choices, these strategies can be interpreted as stages of competitive development, which presents a somewhat deterministic outlook. As (Lall, 2000, p. 62) puts it, “There is no single optimum path to technological development. ... There are necessarily some common elements, such as the creation of human capital, efficient technology support systems, access to new technologies, and close contacts with world markets.”

Technological learning by “Asian latecomers,” for instance, did not occur overnight or through financial investment alone. Instead, it required planned, incremental

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5 This section taken from Ewers and Malecki (Forthcoming a)
efforts – to collect new information, try things out, create new skills and operational routines, and strike new external relationships (Lall, 2000). While the individual firm remains the fundamental unit of technological activity, national capability is more than the sum of individual firms’ capabilities. It comprises the nonmarket system of inter-firm networking and linkages, ways of doing business, and the web of supporting institutions. These affect how firms interact with each other and how effectively they exchange the information needed to coordinate activities and to benefit from collective learning (Porter, 1990; 2003). This systemic aspect is something that conventional neoclassical theory does not deal with satisfactorily: the perfect competition paradigm shies away from dealing with widespread and diffuse externalities and fuzzy learning phenomena (Lall, 2000; Lundvall and Vinding, 2004). The “institutional instruments” that compensate for “latecomer disadvantages” include: i) links with the technology frontier, links with markets (and sophisticated users); ii) supply of needed skills, services and other inputs; and iii) the local innovation system/network (Fagerberg and Godinho, 2005, p. 536). In this regard, institutional “lock-in” provides an important explanation for why the Arab Gulf States, despite intensive oil windfall deployment to promote new industries, have failed to generate sustainable, post-oil development.

Knowledge transfer. Knowledge transfer is a process that has been analyzed by scholars from a wide range of academic disciplines, across an array of geographic contexts, and with a number of different determinants, measures, actors, and outcomes (Boudreau, 2003; Evans, 2002; Navaretti, DasGupta, Maler, and Siniscalco, 1998). Research on knowledge transfer in the business literature has focused on MNCs as
vehicles and sites for knowledge transfer, both to local host country firms (inter-firm) and across the global networks of a single firm (intra-firm) (Duanmu and Fai, 2007; Dunning, 1993). Labor market mobility within and across firms and places are key sources of MNC-driven knowledge transfer (Almeida and Kogut, 1999; Gupta and Govindarajan, 2000). Yet, we know little about how processes of knowledge transfer have evolved under new forms of internationalization. Unlike products, which are more or less standardized, at least in their component modules (Sturgeon, 2002), services are more typically customized and frequently necessitate interaction with the customer (Gallouj and Weinstein, 1997). Moreover, activities such as problem-solving, systems-integration and strategic-brokering represent the primary production outputs of knowledge-intensive business services (or KIBS) (Davies, 2004; Hipp and Grupp, 2005; Miles, 2007). As a result, the human resource strategies of firms are now more important than ever.

Geographers’ interest in knowledge transfer represents part of a larger interest production, circulation and management of knowledge across space (Hughes, 2007). An emerging research agenda in this field is that of embodied knowledge transfer and the role of highly-skilled labor migrants in the international circulation and dissemination of knowledge (Williams, 2006). The notion that certain forms of knowledge are held by individuals (rather than firms, machines or places) – requiring human mobility for knowledge transfer – relates to the distinction between tacit and codified knowledge (Gertler, 2003; Williams, 2007a). Tacit knowledge is defined as “know-how,” whereas codified knowledge is characterized by recorded or written knowledge (Bunnell and Coe, 2001; Malecki, 2007). While tacit knowledge represents “a form of awareness that, at
first, is only usable by the individual, although it can be transferred to others,” codified knowledge is “communicated by symbols and language” (Williams, Baláž, and Wallace, 2004, p. 34). Similarly, although codified knowledge can be purchased through hard technology (branch plants and turn-key operations), tacit knowledge requires the presence of embodied knowledge. It then follows that the transfer of knowledge to firms and individuals in other places requires mobility, and some form of co-presence or co-learning among the knowledge holder and recipient (Williams, 2007b).

On these grounds, some authors have focused on various types of learning – such as “learning by doing” or “learning by hiring” (Malecki, 2007) – while others have focused on the need for face-to-face contact for firm competitiveness and innovation (Bathelt, Malmberg, and Maskell, 2004; Storper and Venebles, 2004). To return more explicitly to trade, migration and investment, researchers have observed patterns of “brain circulation.” In Silicon Valley, for instance, Saxenian (2006) determined that many engineers from India and China worked for a period in the US, but then brought learned skills back to their home countries. There, they become entrepreneurs, and take advantage of connections with Silicon Valley to start new firms. Similarly, Poon et al. (2006) demonstrates the multi-scalar approach of Taiwanese and Korean firms to source technology-based manufacturing knowledge as part of the “reverse product cycle model.” This includes hiring specialists with work experience in the US and significant R&D knowledge, recruiting cheap, highly-skilled Chinese engineers and scientists, and investing in US operations in proximity to agglomerations of innovative firms.
Absorptive capacity. While MNCs potentially bring foreign knowledge to a place and/or transfer it to a local market, the initial stock of human capital in a place determines a host country’s absorptive capacity: “the ability of a region to evaluate knowledge, to assimilate that knowledge through either rent or pure knowledge spillovers, and then apply that knowledge commercially” (Roper and Love, 2006, p. 438). Indeed, rather than merely evaluating the presence of foreign knowledge, one must take into account the potential for local human capital to adopt and apply this knowledge in a local context (Cohen and Levinthal, 1990).

More recently, economic geographers have adopted the tools of knowledge management research to examine absorptive capacity, yet they have also been critical of this research. Several authors have pointed out that this literature has focused too heavily on firms to understand knowledge absorption and transfer, rather than on social actors, social systems, and formal and informal rules and regulations (Bathelt, 2003; Faulconbridge, 2006; Faulconbridge and Muzio, 2007). As Bathelt and Gluckler (2005) observe, knowledge is differentiated from material resources or firm products in that it is difficult to transfer to other actors and places; it is controlled by and limited to the social spaces where it is being used. For instance, occupational opportunities in MNC subsidiaries – a key requirement for the local absorption of foreign knowledge – are often only available to a “circle of eligibles,” designated through an “ensemble of technical, cultural and social requirements” (Faulconbridge and Muzio, 2007, p. 255).

Another approach has been to employ sociological frameworks and terminology, such as embeddedness, to understand how the production practices of global firms
interact with local cultures and institutions (Gluckler, 2005; Westlund, 2005). To be sure, local culture and institutions can help or hinder learning and knowledge transfer. Lastly, a key factor in determining the absorptive capacity of a place is its past experiences and collective, existing knowledge (Bathelt and Gluckler, 2005).

Spaces of knowledge and learning. Geographic studies of knowledge and learning have examined the role of spatial actors (cities and regions, firms, and nations) in regulating (promoting or constraining) the exchange and circulation of knowledge in and across particular institutional spaces (Amin, 1999; Gertler, 2003; Hughes, 2007). The key research question explored in this field is, under what conditions knowledge can be transferred or, conversely, under what conditions it is territorially bounded (Williams et al., 2004)? Lundvall (1992), for instance, claims that “because tacit knowledge is collective in nature and, because it is wedded to its human and social context, it is more territorially-specific than is generally thought” (as cited in Morgan, 1997, p. 495). A common observation amongst these studies is that knowledge transactions and transfers are situated in particular places and institutional contexts, dependent on localized and distantized relationships (Amin, 1999; Williams, 2007b). In this regard, one must examine a particular learning space to understand how or why knowledge is transferred.

Analyses have been conducted at three main scales in the literature: global, national, and sub-national (Bunnell and Coe, 2001). At the global scale, host countries have been shown to influence the global knowledge activities of MNCs through the attraction of subsidiaries and the regulation and leverage of MNC knowledge in the domestic market, such as through joint ventures. Faulconbridge (2006) explores notions
of “global best practices” in MNCs and how the leverage of these practices through organizational networks creates new spaces of learning. These spaces comprise globally stretched “communities of practice” where knowledge is created and exchanged. Other researchers have examined how global knowledge flows affect local industrial practices (Gerler and Vinodrai, 2005) or the role of “global pipelines” of knowledge creation in competitive agglomerations of firms (Bathelt et al., 2004). Still others have noted that while geographic borders can promote or constrain flows of knowledge, institutional factors and firm-level linkages matter more, regardless of distance (Tallman and Phene, 2007), or that knowledge exchange and circulation operates at multiple scales (Bunnell and Coe, 2001; Iammarino, 2005). For the most part, this research has focused on MNC knowledge networks across advanced economies, not to subsidiaries in the developing world, with a few exceptions (Poon et al., 2006). Yet, the spatial manifestation of the global job market is seen in the continuum from global cities in core economies to towns and villages in peripheral economies (Polese and Shearmur, 2002).

At the national scale, research on national innovation systems has determined that, while MNC activities have become increasingly internationalized, innovation still occurs in MNCs’ home countries. Nation state-based institutions are responsible for promoting connections between science and industry (Bunnell and Coe, 2001; Lundvall, 1992). More significant to this study, states play a key role in attracting international knowledge through immigration policies (Alarcon, 2004; Crouch, Finegold, and Sako, 1999). Similarly, states are responsible for national innovation policies and for guaranteeing the rights of capital, each of which is necessary for fostering the economic
growth that provide jobs to foreign and local skilled labor (Nelson and Rosenberg, 1993; Sassen, 1999). When a host country allows entry to MNCs, the country is responsible for setting the regulations which largely determine how the MNC interacts with the local population and economy, including employment and hiring regulations, training requirements, and length of stay. Thus, the power to regulate global knowledge in a local context remains a national-level phenomenon (Gertler, 2003).

At the sub-national scale, world cities, knowledge nodes, agglomeration economies and learning regions represent territorial bodies of analysis for the spatial concentration and localization of knowledge activities (Beaverstock, 2004; Morgan, 1997; Simmie, Sennett, Wood, and Hart, 2002). Broadly, these entities are referred to as regional innovation systems (Cooke, 2004; Iammarino, 2005). This literature has focused on territorially bounded spaces and geographies of learning and innovation, identifying regions which have high levels of knowledge creation, circulation and exchange (Faulconbridge, 2006). Some researchers have examined the production and reproduction of knowledge in agglomeration economies (Boddy, 1999, p. 827), where firms take advantage of the “buzz” afforded by localization or urbanization economies in urban areas (Asheim et al., 2007; Bathelt et al., 2004; Storper and Venebles, 2004). If a region does not have an adequate local knowledge supply, it follows that we should see little evidence of agglomeration economies. Indeed, little is known about the potential to import skilled labor to achieve the critical mass of knowledge which preceded the formation of competitive agglomerations in advanced economies (Malecki, 2007).
Conclusions

This chapter has reviewed three bodies of literature pertinent to the research questions addressed in this study. First, this chapter presented a broad set of perspectives on the problems and prospects of economic development and diversification in natural resource economies. From this literature we learned how and why the majority of oil economies have failed to transition beyond natural resources and into more sustainable forms of development. Most significantly, oil abundance serves to distort the development process and reduce public and private incentives for diversification. Second, this chapter examined key drivers of economic development in order to determine how, or whether, oil revenue can be deployed to generate a post-oil transition. Each of the drivers of development examined is relevant for the global economy, as well as for the specific development context of the Gulf region. This includes infrastructure-led development strategies as well as efforts to attract and benefit from global flows of investment, trade and migration. Lastly, this chapter reviewed prior research on the geography of knowledge. As will be examined in the results section, the Gulf’s development strategies challenge our understandings of how knowledge moves across geographic space, whether knowledge can be imported, and what determines whether it is transferred or absorbed in a particular institutional landscape.
Chapter 3: Methodology

The previous chapter reviewed the existing literature on topics of oil dependence and diversification, the drivers of economic development, and the geographies of knowledge. This chapter presents the methodology of this study, to include the conceptual framework, study area, data collection and data analysis. The goal is to describe how the literature reviewed in Chapter 2 is operationalized in order to examine a set of research questions within a specific empirical, geographic and historical context.

Conceptual Framework

Markets and institutions. This section serves to synthesize the literature reviewed in Chapter 2 into a theoretical framework for application to the Gulf development context. From this literature, the economic development process can be conceptualized from two basic perspectives: market and institutions. From a market-based approach, development is driven by supply and demand. Public and private investment decisions determine the structure of supply and demand dynamics in a given market. If government revenue is invested wisely and purposefully, it can stimulate these dynamics as to produce economic output. If private investors are attracted to this public investment, and supply and demand conditions can be reproduced at increasing rates, then a cycle of
cumulative causation will emerge. That place will see a higher quality and quantity of employment and, eventually, higher standards of living.

This same logic can be used to explain poor long-term economic performance in oil economies. Oil abundance should be a blessing according to neoclassical economics, a comparative advantage over places without natural capital wealth. The problem with oil, however, is that it distorts markets, thereby forestalling the development process. These market distortions include the classic problems identified in oil economies, such as exposure to global commodity markets, a decline in manufacturing at the expense of distributive sectors, and an unbalanced relationship between production and consumption, both locally and internationally. Just as oil distorts the development process via markets, it is also via markets that oil economies can escape the resource curse and transition to beyond oil. For instance, the windfalls from oil booms can serve as a “big push” to correct the market distortions created through oil-based development. If governments deploy their oil windfalls towards a few key development projects, they can create a process of cumulative causation which can lead to new development paths.

This logical can be applied to knowledge as well: human capital is created through investment in education. Oil economies are characterized by a lack of human capital. The solution for oil economies, therefore, is to make more significant educational investments. Similarly, the literature has established a positive relationship between the human capital in a place and its openness/attractiveness to global trade, migration and investment. If oil economies implement policies and strategies which make their markets more attractive to these flows, local human capital spillovers can be accrued.
In sum, from a market-based approach, a place’s success or failure in economic development can be assessed through the level of economic competitiveness it has achieved. Economic competitiveness can be measured by indicators, such as industrial output, levels of education, openness, quality of life and per capita income. Examining development processes from a market-based approach is especially useful in that it is empirically sound. We can generate metrics to explain natural resource dependence, to identify the determinants of development, and to ground the fuzzy concept of “knowledge.” Moreover, this approach accounts for the agency of places to transform their current situation. The limitation, however, is that the role of social relations in determining both positive and negative outcomes is largely ignored.

From an institutional approach, development is mediated by social relations as much as it is driven by supply and demand (Martin, 2000). As discussed in Chapter 2, institutions can be defined as “recurrent patterns of behavior – habits, conventions and routines” (Morgan, 1997, p. 493). While development outcomes can be examined at the national or firm level, these outcomes embody the collective behavior of individuals, organizations and social actors (Nelson, 1995). Such a perspective has powerful implications for how we understand contemporary development processes, because we must first consider how institutions have evolved over time and across space to produce current conditions. Under this approach, the West’s transition from pre-industrial natural resources to labor- and capital-intensive industry to post-industrial services and knowledge is more than a story of technological progress: it is “a social learning process,
the technological and institutional conditions of which change with each techno-
economic paradigm” (Hayter and Le Heron, 2002, p. 13).

Oil abundance should represent a blessing from an institutional approach, just as
from a market-based perspective. The reason that it has been a curse for most oil
economies, however, is because it distorts social processes. Without public and private
incentives for human and social capital, a place lacks the necessary technological and
institutional conditions to create new forms of development. Contrary to “big push
theories,” the deployment of oil windfalls into non-oil industries, even if invested wisely,
cannot simply erase the social relations formed during previous investment regimes
(Massey, 1995). Even if new industries are created, and economic competitiveness is
achieved, institutions can remain entrenched.

According to this perspective, just as economic development is mediated by
institutions, knowledge is generated via institutions. More than merely an investment
outcome – a factor of production which can purchased, imported or transplanted –
knowledge is situated in particular places and institutional contexts (Amin, 1999;
Williams, 2007b). Because knowledge is controlled by social relations and confined by
social spaces, it is more difficult to transfer across space than material resources (Bathelt
and Gluckler, 2005). The processes of knowledge production and exchange which drive
economic development are, in fact, “social activities, enhanced by personal interaction,
by a common language, and by a common understanding of the problems and strategies”
(Rigby, 2000, p. 216). From an institutional perspective, a place’s success or failure in
economic development can be assessed through the level of economic sustainability it has
achieved; that is whether it can produce and reproduce the technical capacity and know-how needed to sustain an economic activity. Examining processes of development from an institutional approach is especially useful because it accounts for the role of social relations in mediating broader outcomes. The key limitation of this approach, however, is that it is deterministic; it provides very little agency for a place to change its fate. How can we apply the literature reviewed in Chapter 4, including the market-based and institutional approaches identified above, to the case of the Gulf States?

The evolution of Gulf development. During the 1970s, the oil-abundant, labor-deficient Arab Gulf States made investments for the eventuality that their oil would run out, but not in time for an unexpected oil bust in the mid-1980s which continued for over a decade. The recent oil boom, however, provided a second opportunity for the Gulf States to prepare for their inevitable post-oil future: “Three decades ago, OPEC nations didn’t know what to do with their oil money. This time, they’re spending it” (Reed, 2006, p. 32). The pace and scale of megaproject construction in the Gulf from 1998 to 2008 was awe-inspiring: the tallest buildings, largest ports and airports, biggest malls, and even artificial islands. In December of 2008, however, only five months after crude oil had peaked at a record US $145 per barrel, prices plummeted to under US $39 per barrel. Instead of being awash in petrodollars, and announcing the latest, biggest development project yet, budget deficits were projected across much of the region. By late 2009, international media speculated that the region’s investment bubble could drag the world

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6 This section taken from Ewers and Malecki (Forthcoming b)
into a double-dip recession. The largest of the region's diversification megaprojects – most of which were multi-year undertakings – may never be completed.

The Gulf’s diversification strategies undertaken during first oil boom provides striking parallels to recent events. In 1982, for instance, Time Magazine proclaimed: “In all the expansive sweep of civil engineering, from the pyramids to the Nile to the construction of the Panama Canal, nothing so huge, or costly, has ever before been attempted by anyone … It is of moon-landing proportions” (Taylor, 1982, p. 1). Saudi Arabia had hired the best in the world, San Francisco-based Bechtel Engineering, to “construct” a post-oil development path. They proposed creating two petrochemical cities, Jubail and Yanbu, on either side of the Arabian Peninsula, tied by a pipeline: “two industrial lungs for the country, with an artery in between” (Pampanini, 1997, p. 13). Despite a rocky start as global ethylene prices collapsed in the mid-1980s, these cities are today a major success from a strictly economic standpoint. Jubail alone is responsible for almost 7% of the entire world’s petrochemical production and nearly half of Saudi Arabia’s non-oil foreign investment. Yet, there is another side to the story. Despite their industrial output, the low employment multiplier of the cities’ capital-intensive industries has done little for a country of 29 million people, where foreigners comprise over 50% of the total labor force, yet unemployment among local citizens aged 16-24 is estimated at nearly 35% (Cordesman and Obaid, 2005). In fact, the 90,000 jobs total created in the cities today, some 35 years since inception, remain filled predominately by foreign workers.
The Jubail and Yanbu projects represent only two among many undertaken in the region during the 1970s. Indeed, the Gulf governments have been trying to generate sustainable, diversified economic growth, to solve the tension between oil and jobs, at least since the first oil boom of the mid-1970s. It seems that the legacies of oil-driven development are profound, and institutions (like old habits) are hard to change. While the Gulf’s unique physical and human geography distinguish it from most development contexts, the region’s development experience is clearly a variation on the “staple trap” theme first developed by Harold Innis in the Canadian frontier (Innis, 1933; Innis and Drache, 1995). It seems that the legacies of oil-driven development are profound, and institutions are hard to change.

How can we conceptualize a process whereby a place’s physical and economic landscape is so profoundly transformed, while its institutional landscape remains unchanged? I argue that this can be explained by approaching economic development from an evolutionary perspective. A paradigm to explain this process for the Gulf is presented in Figure 3-1. This figure describes how the composition of the region’s industrial trajectories, development strategies and foreign participants has changed, while the role of its governments and institutions has largely remained the same. Foreign labor and knowledge have represented vital tools for the Gulf States to achieve past and present economic development. Since the initial oil and construction boom, there has come the need for a variety of types of human capital in response to respective development and diversification strategies. Just as foreign companies and their workers were imported to fill specific skill gaps and increase production capacity in oil sectors, the same has
occurred in non-oil sectors as part of the region’s many and varied diversification strategies; new economic activities require new and different industrial cultures, skill sets, occupational specialties and technologies.

The presence of foreign companies and labor is justified in Gulf political discourse as a necessary and temporary evil required for jump-starting local capacity in non-oil industries. Upon completion, the region’s development projects are promised to provide jobs to the local populace and a future beyond oil for the country. However, the ability to import foreign labor and knowledge while providing high-wage public employment to local citizens has reduced incentives to create local development capacity. Most importantly, the role of government remains that of wealth distributor and employer for the region’s minority citizenry.

*Competitiveness versus sustainability.* How have the region’s entrenched labor market distortions – legacies of oil-driven development – evolved as the Gulf States have embarked on major efforts to transition beyond oil? I argue that, in the Gulf, public and private institutions mediate these processes, thereby determining whether the creation of new sources of economic growth is accompanied by the formation of new forms of local human capital. The tension between the need for foreign labor and knowledge to create diversification and the need for local capacity to sustain diversification reflects three aspects of economic development in an oil- and expatriate-dependent economy: i) overcoming the lessons and legacies of oil-based development, ii) the need to import new forms of knowledge for diversification strategies, and iii) the transfer of knowledge from expatriate to local labor.
While oil wealth has provided the Gulf economies with the capital to generate competitive non-oil growth, the larger challenge is one of sustainability: being able to reproduce non-oil development capacity locally. This is illustrated in Figure 3-2. Nevertheless, the ability to import foreign knowledge makes the process of diversification itself a potential vehicle for human capital development, if the presence of foreign knowledge is leveraged for local development. This requires that the local populations of the region meet the skill requirements sought by global firms (Malecki, 1997; Malecki and Hospers, 2007; Westlund, 2005) currently locating in the region – skill requirements currently being met by expatriates.

Knowledge transfer and absorption. Sustainable development in the Gulf would require the ability reproduce the labor force in non-oil industries locally. This could be accomplished by leveraging the presence of foreign knowledge in order to create indigenous human capital. Little research has examined the region’s successes and failures in operationalizing incentives for knowledge transfer in order to address the social and political legacies of natural resource-based development. One incentive is labor indigenization policies that require the hiring and training of nationals by private sector corporations in particular fields. However, they have been loosely enforced. Alternatively, a disincentive is the allocation of subsidies to foreign corporations to locate in free zone enclaves without local employment regulations. Educational reform is currently being undertaken through the “importation” of prestigious foreign universities and their faculty (“Wandering scholars,” 2005; Krieger, 2008a, 2008b), but can the human capital legacies of the first oil boom be remedied by educational expenditures
alone? I argue that sustainable local development in this context requires a broader interpretation of human capital. Rather than evaluating merely educational attainment, *local knowledge capacity*, is defined to include “knowledge, competence, skill, and organizational culture” (Morgan 1997, p. 494). This local capacity could be achieved by leveraging the presence of foreign knowledge and technology for the benefit of local populations and markets.

National and regional innovation systems can be designed to enhance this absorptive capacity by managing three key elements and requirements of knowledge transfer: stocks, flows and enablers (Boudreau, 2003). *Stocks* are local human capital capacity, local labor market processes, and skill gaps. *Flows* are the imports of foreign knowledge from MNCs and highly-skilled labor, and the dissemination of this knowledge to the local population. *Enablers* are public and private institutions which govern flows of knowledge from the global to the local, as well as the territorial actors which promote or constrain the circulation and exchange of knowledge. In sum, for the context of Gulf economic development and the examination of labor markets as the locus for knowledge transfer, I define knowledge transfer as the following: the import of foreign knowledge (through inflows of investment, technology and labor), the exchange of foreign knowledge with local labor (dissemination and absorption), and the reproduction of this knowledge locally (based on Roper and Love, 2006; Stewart and Nihei, 1987).
Study Area

The Gulf as a region. The geographic scope and empirical focus of this research is the Arab Gulf States: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. As a result of a political and economic unification agreement signed by each of the six countries in 1981, this Middle East sub-region is commonly referred to as the Gulf Cooperation Council (GCC). The GCC was established with the goal of ‘developing coordination, integration, and cooperation in the military, economic, social, and cultural fields’ (Kapiszewski, 2001, p. 3). It is generally known more for rhetoric than action; the GCC does not play a role in population and labor issues. The GCC countries have many similarities (Kapiszewski, 2001). They are all relatively young political entities. Saudi Arabia was established as a kingdom in 1932; Kuwait became fully independent in 1961; and the other states did so in 1971. All have colonial histories linked to Great Britain. The populations of these six countries have similar social fabrics, customs, traditions, Bedouin heritage, and tribal identity. The economies are liberal, free-market oriented, and reliant on oil and gas production; GCC countries have approximately 60% of world oil reserves. Politically, the GCC countries are all conservative monarchies. The majorities of their imports and foreign investment are from the West. The primary commercial links of all six countries are largely with countries outside of the Arab world. Finally, all owe their development to large numbers of foreign workers.

The Arabian Peninsula is a landscape of abundance and scarcity, as illustrated in Table 3.1. The Gulf is home to approximately 41% of the world’s proven oil reserves, 23% of natural gas deposits and the top four countries in the world in oil reserves per
capita. This natural abundance has provided an extreme abundance of wealth. Four of the world’s top ten sovereign wealth funds are located in the region, with the UAE’s fund at the top of the list (Truman, 2007). This has also resulted in high levels of personal wealth, as represented by its position on rankings of overall GDP per capita and homes of the world’s wealthiest individuals (“World’s richest people,” 2009). However, the region also has the lowest percentage of arable land and the largest expanses of desert in the world, with few sources of fresh water. Only a fraction of the region’s agricultural consumption is produced locally. These factors, along with extreme temperatures, meant that the peninsula could only accommodate very small populations before the oil era, most of which were nomadic tribes.

From 1960 to 2000, these countries have experienced the highest levels of population growth in the world. Nearly all of this population growth has occurred in the region’s cities. The Gulf has become the most urbanized region in the world. Except for Saudi Arabia, all of the countries of the GCC have more than 90% of their population living in urban areas, and the primate cities of the region hold the majority of the urban population (Bonine, 1997). In Dubai, for example, 97% of the population lives in the city (Keivani, Parsa, and Younis, 2003). Unlike Dubai, however, the largest of the region’s cities are products of “oil urbanization” created since the mid-twentieth century. These former villages experienced globally unprecedented levels of urban growth as they were transformed into gateways to the world’s major oil supply regions, seats of national government, and permanent settlements for Bedouin tribes (Lawless and Seccombe, 1993). More significantly, these cities are an example of the contribution of
(international) rural-to-urban migration to urbanization: higher wages and better health and living standards in the urban areas of the Gulf have caused international migration, from both the Middle East and South Asia.

The Gulf region has long represented a key historical crossroad connecting the East with the West, from the frankincense trade to the Mongol Silk Road to the global oil trade. By the 1960s the Arab Gulf States had become the key global suppliers of oil, integrally linked to the world economic system (Wilson, 1995). Today, it represents the primary source of all of the world’s seaborne trade. It is home to the world’s largest ports, harbors, airports and free zones. The Arabian Peninsula is the birthplace of Islam and home to religion’s two holiest cities: Mecca and Medina. It has equally been distinguished by war and conflict, though. Israel and Palestine are located on the northwestern side of the Peninsula, Iraq to the north, and Afghanistan, Pakistan and Iran sit to the northeast. Most recently, it has become famous as the birth place of Osama bin Laden and Al Qaeda.

*Sub-regional and sub-national diversity.* Despite the many shared features which tie these countries together politically, historically, and geographically as a region, significant differences exist both across the region and within individual countries. These include variations of natural resource abundance, demographic traits, and foreign labor presence. Such diversity has prompted widely differing diversification efforts and results across the Gulf, trends which have remained largely ignored in economic development studies of the region. While it is logical and practical to examine the six Gulf States as a
region, it is also important to recognize the region’s substantial national and sub-national
diversity.

Secondary data covering the entire Gulf region are analyzed in this study to
account for the region’s shared history and a set of common features. Variations across
the countries are discussed in some measure, and some analysis is conducted at the sub-
national scale in reference to the region’s urban development strategies, free zones and
infrastructural megaprojects. There are, however, clearly limitations to an approach
which is primarily regional in scale. Most significantly, this approach masks some of the
key factors which separate one Gulf State from the next. The sheer size of Saudi Arabia
in population, wealth and land area overshadowed many of the smaller countries. Bahrain
and Oman, the two Gulf States with the least amount of oil, are clearly distinguished
from the wealthiest countries of Kuwait, Qatar and the UAE.

By conducting more than half of the surveys with firms in the UAE, as well as all
of the interviews, this research strives to better appreciate the region’s national and sub-
national diversity. The UAE is a federation formed in 1971 and consisting of what were
previously seven individual Trucial States or Sheikhdoms, now termed Emirates: Abu
Dhabi, Ajmān, Dubai, Fujairah, Ras al-Khaimah, Sharjah, and Umm al-Quwain (Heard-
Bey, 1996). These Emirates may be categorized as three distinct economic groups to
represent three national and sub-national geographies of the Gulf’s diversification and
development experiences over the past 30 years: Abu Dhabi (more developed, oil-rich,
less diversified), Dubai (more developed, limited oil, more diversified) and the five
Northern Emirates (less developed, oil-poor, more diversified) (Abū al-‘Aynayn, 1996;
Since the UAE’s inception as a nation in 1971, the country and its Emirates have implemented a variety of diversification strategies, with different trajectories, motivations, goals and results. Building on earlier efforts and promoting new growth strategies, the second oil boom has solidified UAE’s position as the clear leader in Gulf diversification (Davidson, 2005). The UAE is an oil- and expatriate-dependent economy attempting to create skill-intensive knowledge and service-based development by relying on imports of highly-skilled expatriate labor.

Abu Dhabi is the primary source of the UAE’s oil wealth, and represents the classic petro-state. It has been the slowest to diversify in the UAE, but is currently pursuing petrochemical, real-estate and tourism development. Dubai’s diversification efforts were some of the earliest of any substance in the region, beginning in 1975 with the construction of Jebel Ali Port and a service and trade-based trajectory. Dubai represents a distinct trajectory in the system of world cities – the creation of a knowledge node completely reliant on foreign labor. Along with the vast numbers of low-skilled service sector workers in Dubai are highly-skilled foreign engineers, architects and planners. These highly-skilled migrants are explicitly facilitating Dubai’s world city aspirations through designing and building the urban infrastructure required for the Emirate’s service and knowledge aspirations (Ewers, 2007; Malecki and Ewers, 2007). The creation of this infrastructure is serving to attract MNCs and foreign universities but is, in turn, attracting their workers. This runs concomitant with Dubai’s explicit labor recruitment programs, using national oil-windfalls to attract highly skilled professionals. Dubai represents more of a test for world city ‘wannabees’ than are cities such as
Mumbai or Shanghai, which have massive populations and have achieved high foreign investment levels, as opposed to the lack of foreign investment in other mega-cities, including Lagos, Dhaka, Karachi, Jakarta, and Manila (Dogan, 2004; Gugler, 2004; Malecki and Ewers, 2007).

It has since deployed oil windfalls into infrastructural development in order to create a distinct regional and global corporate, trade and tourism-based service hub (Keivani et al., 2003; Reed, 2006). Lacking significant oil, the Northern Emirates have much lower per capita GDPs and largely rely on federal public spending; 80% of that spending is provided by Abu Dhabi and Dubai which together also account for 85% of the UAE’s GDP (EIU, 2006). While the Northern Emirates were earlier known for fishing and stone and concrete extraction, they have each focused on becoming major ports, free zones or tourist destinations. Data on average national expenditures and wealth distribution has masked the sub-national diversity within the UAE, promoting a perception that income and industrial development are distributed evenly amongst the Emirates. This is despite the wealth disparities between Abu Dhabi and Dubai, on the one hand, and the Northern Emirates on the other (Abū al-‘Aynayn, 1996). Whatever the variance amongst the Gulf nations or amongst the Emirates of the UAE, each has experienced highly-skilled expatriate in-migration (Faris, 1985).

Some UAE strategies (being imitated throughout the Gulf) are unprecedented among oil economies: to leap from pre-industrialized extraction to post-industrial service and knowledge-based development (Malecki and Ewers, 2007). Such a development trajectory, however, demands skilled service and knowledge workers, largely absent
among the local labor markets (Mahroum, 2001; Al-Kibsi et al., 2007). The variation in the economic and social geography across the Gulf region, as well as across the Emirates, represents an excellent opportunity to understand the nuances of Gulf development and to see new possibilities for the region’s future.

Data Collection and Analysis

This research examines the human capital dimensions of oil dependence and post-oil transition in the Arab Gulf States, from 1975 to 2008. More specifically, it studies the evolution of key institutions which govern human capital formation in the region. The impacts and outcomes of the oil-driven growth in the region provide an analytical context for the conditions under which oil abundance crowds out human capital, forestalling sustainable development. Case studies of key diversification strategies provide exemplars for the conditions under which oil abundance is converted to non-oil development capacity. The abstract notion of converting natural to human capital is empirically grounded through oil and non-oil economic development processes (policies, efforts, results) and the subsequent labor market outcomes (migration, employment, segmentation). The goal is to identify the institutional determinants of path dependence, structural change and sustainable development in resource-based economies. The study employs a mixed-methods approach based on secondary data, surveys and interviews. The survey and interview portions of this research involve human subjects. As required, these activities were reviewed by the Behavioral and Social Sciences Institutional Review Board (IRB) at The Ohio States University Office of Responsible Research Practices.
IRB approval was granted by expedited review on May 28, 2008, under protocol number 2008B0117 and protocol title “GCC-International Human Capital Survey.” Subsequent approval for continuing review of human subjects research was granted on April 16, 2009. Analysis of results was completed, and the IRB protocol closed, on April 16, 2010.

Secondary data. Firstly, national account, census and labor data encompassing all six Gulf States over four decades were collected. National account data included total gross domestic product and gross value added by sector (UNSD, 2009a, 2009b), foreign direct investment (UNCTAD, 2009), and public development expenditures (“MEED Projects,” 2008; World Bank, 2009). Sector-specific data were collected for the major industry groupings covered by the International Standard Industrial Classification (ISIC Rev. 3), and some industry groupings were combined to facilitate data analysis: Agriculture, forestry, hunting and fishing (ISIC Code A + B), Mining and quarrying (C), Manufacturing (D), Electricity, gas and water supply (E), Construction (F), Wholesale and retail trade, repair, restaurants and hotels (G + H), Transport, storage and communications (I), Financial intermediation, real estate, business services (J + K), Government services, public administration and defense, compulsory social security (L), and Education; health and social work; other community, social and personal services, private households (M + N + O) (UNSD, 2009c). Thus, ten aggregate sectors are analyzed from 1975 to 2007.

Census and labor data included foreign and local labor force totals, foreign and local employment by sector, educational status by foreign and local population, and general demographic characteristics. In order to create a time series of employment and
population data, it was necessary to compile multiple sources of data for each country, such as statistical yearbooks and abstracts, national censuses, and development plans. Government statistical organizations from which these data were collected, as well as data on diversification strategies, plans and policies include: i) Bahrain Central Informatics Organization, Centre for Studies and Research, Ministry of Labour and Social Affairs, and Monetary Agency; ii) Kuwait Ministry of Planning, Ministry of Social Affairs and Labour, and Public Authority for Civil Information; iii) Oman Central Bank, Ministry of Development, and Ministry of National Economy; iv) Qatar Central Statistical Office; v) Saudi Arabia Ministry of Economy and Planning, Central Department of Statistics, and Monetary Agency; vi) UAE Ministry of Economy and Planning, and Statistical Center of Dubai. When necessary, data were collected from relevant academic studies to complement official data sources.

After data collection was completed, these data were aggregated. Country data were combined to create a regional data set. Employment and industry data were each aggregated into three sectors: i) Oil and infrastructure (ISIC C + E + F), including oil, mining, utilities and construction; ii) Non-oil private sector (ISIC A + B + G + H + I + J + K) including agriculture and related sectors, manufacturing, trade and tourism, transport, storage and communications, finance and real estate; iii) Government and social services (ISIC L + M + N + O) including public administration, social, community and private services. Each of these three broad sector groupings was then analyzed in terms of contribution to gross domestic product, foreign and local employment, and public and private investment. Archival documents and other secondary data were studied
to identify the key diversification strategies which best reflect the region’s post-oil efforts over the past four decades. This included establishing time trends, and indentifying the role of foreign and local firms, investment and employment in each strategy.

The Gulf region was analyzed by these three sectors in five or ten year intervals for the period 1975-2005, plus the year 2007. These results were then disaggregated to examine variations in performance among individual, non-oil sectors in relation to diversification strategies (e.g. manufacturing, trade and tourism, transport, storage and communications, finance and real estate). Data from individual countries were analyzed to examine sub-regional variations in diversification efforts and results. Key projects and trajectories were identified as each relates to specific non-oil sub-sectors. The employment requirements of individual diversification strategies were analyzed as they relate to the Gulf’s local labor market offerings and foreign labor demand. These strategies were evaluated over time, as measured by three factors i) types and levels of foreign factors of production imported, including migration, investment and trade, ii) strategy-specific public investment, such as social and physical infrastructure expenditures, iii) employment distribution of foreign and local workers in each sector, and iv) value added to gross output in relation to overall GDP structure.

Surveys. A large-scale, web-based survey (following recommendations by Dillman, 2000) was conducted with foreign and local companies from all six Gulf States. The survey was delivered through the SurveyMonkey website, and participants could complete Arabic or English language versions. The Institute for the Study of Labor’s employment survey of international employment within European firms (Winkelmann,
2001) provided a template for the construction and wording of many of the survey’s questions. By collaborating with a Dubai-based, multinational consulting firm, access was granted to a proprietary database of human resource administrators at 1,945 companies in the region. Data included contact names, e-mail and physical addresses, phone numbers and company characteristics. A total of 300 companies responded to an email survey invitation and completed the survey, representing a 15.4% response rate. Survey participant locations covered four geographic groupings: i) Total Gulf region (n = 300); ii) UAE (n = 158); iii) Saudi Arabia (n = 70); and iv) Other, including Bahrain, Kuwait, Oman, Qatar (n = 72). Two types of companies were surveyed: i) Locally-owned public, private or mixed public-private firms (n = 169); and ii) Foreign affiliates of multinational companies or foreign-local joint ventures (n = 131).

The survey elicited information on foreign and local labor demands, including firm employment structure by national origin, educational level, and occupation. Firms were asked about their employment, recruitment and training practices and preferences in order to understand how and from where firms in the region acquire human capital. A number of questions also elicited general firm characteristics, such as branch and headquarter locations, foreign and local revenue structures, sector and year of establishment. The objective of these questions was to determine the factors which produce variation across types of companies, economic sectors, and locations. Combining secondary and survey data permitted an examination of the relationship between the human capital demands of diversifying sectors (skill requirements, occupational specialties, and hiring preferences) and the local labor market offerings (educational
attainment, occupational specialties, and employment preferences). Results were stratified by firm location, industry, type, nationality, and year established locally.

*Interviews.* Semi-structured key informant interviews, based on Schoenberger (1991), were conducted with 30 senior human resource administrators, representative of the larger survey samples. Interviews were conducted in Arabic or English as appropriate. Key informant interviews were conducted with each respondent until saturation was reached. The point of saturation is where no new themes or constructs can be identified and sufficient information is obtained to develop the survey. Detailed notes were written during the interview, including interviewer reflections and reactions, and this information was subsequently transcribed onto a Word document. The interviews were not audio-taped due to cultural sensitivities.

Utilizing open-ended questions, these interviews provided perspectives on the role of foreign companies, labor and knowledge in Gulf development. Interviews elicited important local (local firms) and foreign (MNCs) perceptions of the Gulf labor market, designed to better understand incentive structures for knowledge transfer and answer the how and why questions not addressed by secondary data and surveys. Survey and interview data were then analyzed together, in order to better understand the firm-level practices which produce and reproduce global and local labor market processes. This included: first, how hiring preferences and labor market perceptions relate to labor market outcomes, by occupation, education and nationality; second, how firms interpret and navigate national labor market policies and labor market offerings; and, third, how foreign participants operate within local and global markets.
In summary, this chapter has described the methodology of this study. It began with a conceptual framework, describing how the theories presented in the literature review are brought together in order to examine a set of empirical questions in a specific geographic context. Next, a geographic and historical overview of the study area was provided. The chapter then presented the types of data collected for this study, including data sources and collection techniques. The final section described the specific methods utilized to analyze these data and the steps through which this analysis was undertaken. The results are presented in the three empirical chapters which follow. Chapter Four relies entirely on secondary data to describe the evolution of the Gulf economies through their industrial structures, labor markets and institutions.
Tables and Figures

**Tables**

<table>
<thead>
<tr>
<th>Country</th>
<th>Bahrain</th>
<th>Kuwait</th>
<th>Oman</th>
<th>Qatar</th>
<th>Saudi</th>
<th>UAE</th>
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<td></td>
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<tr>
<td>Share of world oil/gas reserves</td>
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<td>9 / 0.9</td>
<td>1 / 0.6</td>
<td>1 / 14</td>
<td>22 / 4</td>
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<td>World rank oil reserves per capita</td>
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<td>1</td>
<td>12</td>
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<td>Oil exports % total exports</td>
<td>74</td>
<td>92</td>
<td>81</td>
<td>79</td>
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<td>Oil exports % of GDP</td>
<td>54</td>
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<td>45</td>
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<td>Oil revenue % revenue</td>
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<td>Oil revenue as % of GDP</td>
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<td>Arable land as % land area</td>
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<td>0.1</td>
<td>1.6</td>
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<td>Population (millions)</td>
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<td>2.6</td>
<td>2.7</td>
<td>0.8</td>
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<td>Pop'l growth rate 1960-2000</td>
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<td>Percent pop'l under 15 yrs</td>
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<td>23.5</td>
<td>32.7</td>
<td>16.5</td>
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<td>Urban population % total</td>
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<td>98</td>
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<td>95</td>
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<td><strong>EMPLOYMENT</strong></td>
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<td>Total labor force (millions)</td>
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<td>2.0</td>
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<td>.8</td>
<td>8.5</td>
<td>3.1</td>
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<td>Labor participation rate (% of total pop'l age 15+)</td>
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<td>77.2</td>
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<td>Employment to pop'l ratio, (ages 15-24, total %)</td>
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<td>28.7</td>
<td>37.2</td>
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<td>Age dependency ratio, young (% of working-age pop')</td>
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<td>50.6</td>
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<td>Foreign % total pop'l</td>
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<td>64</td>
<td>26</td>
<td>80</td>
<td>27</td>
<td>82</td>
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<td>Foreign % total labor force</td>
<td>71</td>
<td>84</td>
<td>49</td>
<td>93</td>
<td>51</td>
<td>90</td>
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Table 3.1: Key Characteristics of Gulf Countries (Source: Oil data from IMF, 2007; Demographic data from World Bank, 2009a; Migration data sources shown in Figure 4.2)
Competitiveness – via markets and investment

- What does it take to get from Point A to Point B?
- Are Point B activities competitive new sources of revenue?

Sustainability – via institutions and learning

- Do Point B activities address legacies from Point A?
- Are Point B activities sustainable to Point C?

Trajectories of development

Figure 3.2: Framework to Examine Gulf Development Trajectories
Chapter 4: Diversification and Structural Change in Oil Economies

This chapter examines how or whether the creation of non-oil sources of economic growth in the Arab Gulf States has addressed the lessons and legacies of oil-driven development. More specifically, this chapter focuses on the relationship between economic transition and institutional transition, between creating competitive new markets and creating sustainable economic development. The conceptual basis of this chapter is best represented by a set of basic empirical facts about the region’s economic and demographic structure, displayed in Table 4.1. The left-hand side of the table displays the region’s oil wealth as a source of economic power and wealth, but also as a source of economic dependence; oil is an exhaustible resource represents the dominant driver of the region’s fiscal revenue, exports, and industrial output. In this sense, finding new sources of economic growth is a high priority in light of the inevitability that oil reserves will diminish or that oil will be replaced as the world’s energy choice. From this perspective, a primary challenge for the region is to deploy the revenue provided by natural capital abundance towards the creation of competitive new sources of economic growth to replace oil.

The right-hand side of the table displays the region’s population and employment structure, which shed a different light on the challenge of economic development and the definition of economic transition. First, the Gulf faces young, fast-growing local
populations, which rely on oil revenue to provide high-wage public employment in addition to a bevy of other social entitlements. Second, the Gulf’s total labor force is dominated by foreign workers. While the public sector employs the region’s minority citizenry, the private sector is overwhelmingly comprised of foreign workers. The region’s estimated overall unemployment level, including both foreign and local workers, averages approximately 15%. Meanwhile, the unemployment rate is estimated upwards of 35% for nationals of Saudi Arabia, the region’s most populous country. When we look at these foreign and local employment dynamics in light of the region’s reliance on oil for economic growth, it is clear that sustainability requires a broader conceptualization. Economic diversification is required to create competitive new sources of revenue, but also to address the region’s labor market distortions – the institutional legacies of oil.

In this chapter, I argue that the ability to import foreign labor and knowledge while providing high-wage public employment to local citizens has reduced incentives to create local development capacity. These include public incentives, such as public employment provisions and social entitlement commitments. It also includes private incentives, such as local preferences for public employment and aversion to private sector, non-oil employment. Moreover, I argue that economic diversification efforts have been undertaken as to preserve these institutions. In fact, these institutions have been transplanted into new, non-oil sectors, thus calling into question the sustainability of region’s post-oil ambitions.
**The Gulf Development Experience**

*Oil-driven growth.* The Gulf States’ large oil reserves, massive foreign workforces and small (initial) local populations leave its governments with few models to follow to transform sudden oil wealth into human capital or diversification. No other countries in the world have experienced a faster accumulation of wealth or a quicker entrance into the capitalist global economy. The Gulf’s spectacular economic growth was a result of beneficial terms of trade in the oil sector. These terms were solidified with the 1973 OPEC embargo, an event which brought a 400% increase in fiscal revenue to the region over a single year (Henry and Springborg, 2001).

The “rentier state” has been the most commonly used theoretical framework to describe the Gulf experience and the outcomes of economic growth based on external rents from natural resources and foreign investments (Beblawi, 1987). During the 1970’s oil boom, the Gulf monarchies focused their efforts on expanding bureaucracies as a means of both creating an apparatus to control and expand oil production and as a way to distribute profits to the local populace. The monarchs of the Gulf have since been able to maintain their hold on power since obtaining the largest share of the world oil market through the allotment of key economic and social benefits from oil income to a minority national population (McKee et al., 1999). This allotment includes public employment, as well as educational entitlements, marriage and land grants, and public works contracts; oil rents even removed the need for taxation (Belbawi, 1987; Crystal, 1995). Unprecedented oil profits, along with foreign investment and development aid, allowed
these countries to build large military and public works projects, nationalize industry, and develop vast bureaucracies (Henry and Springborg, 2001).

Even with such large social and physical infrastructural expenditures, due to the small native populations, it was impossible to absorb all of the oil windfalls locally. As a result, large sums of money were directed to foreign equity markets, especially in the United States and Europe, and transferred abroad through remittances to foreign labor (Autfy, 1990; Chaudry, 1997). To speak to the latter of these points, the economies of the region began to depend on interest and dividends from overseas investments and assets purchased through oil profits to generate new forms of revenue, rather than investing in domestic, non-oil industries. In Kuwait, for instance, 50% of annual capital needs were accounted for with overseas investments in the mid-1980s, making it a “pure rentier state” (Autfy, 1995, Richards and Waterbury, 2008).

As Figure 4.1 shows, from the 1970s until today, the region’s aggregate GDP has been intractably linked to global oil prices, as represented by the cost of imported crude to the US. During the two oil price spikes, the region’s GDP has also spiked. During the oil bust which began in the early 1980s and lasted more than a decade, GDP also declined significantly. The large revenues generated by oil production mask the region’s diversification successes, but it is clear from this figure that oil revenue has remained the primary driver of Gulf economic growth. Despite of high levels of capital accumulation, without policies to make useful investments of oil rents, the region has suffered considerable demographic instability (Keller and Nabli, 2002). In fact, even into the 1990s the Gulf had some of the world’s youngest age structures, lowest female labor
force participation rates and highest rates of female illiteracy (Richards and Waterbury, 2008).

While creating a state apparatus designed around the absorption and distribution of oil revenues has permitted incredible wealth accumulation, these processes have also generated severe sectoral distortions in the region’s economies. As the region’s governments seek to create post-oil economies these distortions present two conflicting challenges. First, post-oil sources of revenue must be competitive with the oil sector in order to maintain expenditure commitments and preserve the legitimacy of Gulf governments. Second, in order to sustain these sources of revenue, economic diversification must correct the sectoral distortions produced by oil-driven development.

Migration. If oil revenue has financed the region’s economic growth over the past four decades, foreign workers have provided the labor and skill for this development. The flows of people and the control of those flows rest at the core of the Gulf embodiment of globalization, which has taken place through the migration of both skilled and unskilled workers to service the region’s energy-related and local development activities. Since the region emerged as a key global supplier of oil, there has come the need for a variety of types of workers for Gulf economic development (Birks and Sinclair, 1980). Indeed, economic development and labor importation have been highly-interrelated processes, as seen in Figure 4.2. This figure illustrates how the Gulf’s aggregated stocks of foreign and local labor have evolved with the region’s total GDP.

During the first oil boom, oil production and related construction stimulated two flows of international labor migration: i) highly-skilled labor as part of foreign MNCs
from developed countries providing knowledge and technology and, ii) unskilled
migrants from less developed countries providing labor for construction and service work
(Kapiszewski, 2001; Kelly, 1980). Foreign population was a structural imperative in the
Gulf because, for the small, oil-rich countries, ‘manpower (sic) availability is the single
most important constraint in economic development’ (Choucri, 1977, 422). The region’s
massive projects could not have been undertaken without labor migrants covering a wide
range of occupations and skill levels. Foreign companies and workforces provided the
Gulf with the required labor, knowledge and technology to build the region’s initial
physical and social infrastructure, and especially state industry (petroleum) infrastructure
(Kapiszewski, 2001).

Highly-skilled engineers, mainly from the USA and Western Europe, were
brought in to fill the more knowledge-intensive roles; rural, Islamic migrants from
Jordan, Egypt, Lebanon, and Algeria filled other labor needs (Birks and Sinclair, 1979;
Choucri, 1977). Foreign workers have since emerged as the primary and dominant labor
force, increasing in aggregate from just over one million in 1970, to nearly 9 million in
2007/8 – over 90% of the labor force in some Gulf States. Regardless of diversification
success or failure, it is clear from this figure that, like oil, foreign labor is a key factor of
production in the region. Levels of foreign labor declined in response to the oil bust of
the 1980s, but a second oil boom stimulated new migration flows to the region.

Local population and employment dynamics. Demographic trends represent both a
rationale for, and an impetus to, diversification in the region (Askari, 2006; Cordesman,
2003; Looney, 1994). The import of foreign labor and knowledge resulted in rapid
economic growth, this came at a cost. Gulf nationals have tolerated large numbers of expatriates only because of explicit social contracts from governments, based on funds that will diminish if the revenue from oil declines (Anderson, 1987). Indeed, in order to perpetuate the support of the population in the context of some of the highest population growth rates in the world, the Gulf States have had to attempt to maintain the expenditure commitments of the 1970s (Aauty and Gelb, 2001). This is not a sustainable pattern, however. Exploding youth fertility rates and high unemployment among nationals have provided fuel to calls for lessening foreign labor flows (Winckler, 2005). More than 60% of the GCC population is now under 25 years of age, and over 40% is under 15. In all of the GCC countries, the national workforce will double by 2020 (Kapiszewski, 2001).

To solve the conundrum of an oil-based, mono-resource economy with heavy dependence on foreign labor and skill, the Gulf countries have instituted labor-enhancement programs aimed at nationals as well as regulations on employment of expatriates. These “indigenization programs” are designed to steadily substitute the foreign population in technical and production sectors with national citizens (Yousef, 2004). Much of the programs’ content has been more rhetoric than action, but the goal is clear: to localize industries by placing requirements on firms as to the numbers of national workers, especially in knowledge-intensive or managerial positions (World Bank, 2004). The result is intended to be a fully employed national workforce capable of sustaining diversified economies that can compete in the global market. It is not known, however, whether these programs will create a productive and educated population,
diminishing reliance on foreign technology, and ending expectations of past social contracts (Yousef, 2004).

**Diversification Strategies and Projects**

How to invest oil windfalls to create new, more sustainable economies has been a consistent challenge for the Gulf governments. During the 1970s, the region invested in massive infrastructural projects designed to increase capacity for oil production, modernize the economies, and raise standards of living as rapidly as possible (Fasano and Goyal, 2004). Since this time they have made major investments to diversify their economies beyond oil, adapting these infrastructure-led development strategies in order to generate non-oil growth. Indeed, from Aramco’s birth in 1933, to the oil urbanization of the 1970s, to the transformation of Dubai into a global city, infrastructure-led development projects have represented key strategies for economic growth and development in the Gulf (Lawless and Seccombe, 1993; Melamid, 1980; Sell, 2008).

The first oil boom witnessed two key types of post-oil development projects, and which have remained the models today. The first of these, resource-based industrialization, represents a sensible strategy for an oil-rich and labor-deficient economy. Petrochemical, plastic and aluminum complexes are capital- and resource-intensive, but require few workers (Auty, 1988). Prominent early examples of these include Jubail and Yanbu in Saudi Arabia (1975), Saudi Arabia Basic Industries Corporation (1977), Dubai Aluminum (1975), and Bahrain Aluminum and Steel (1985)

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7 Much of this section is taken from Ewers and Malecki (Forthcoming b)
(Fasano, 2003). The logic behind this move in the region is to take advantage of cheap oil inputs and large capital stocks to build non-labor intensive industries. Because such projects relied heavily on oil as an input, they did not protect the region’s economies from the volatility of global commodity markets. As oil prices declined, so did the prices of petrochemicals, thus calling into question the rationale for oil-based industrialization as a sensible post-oil strategy (Auty, 1988). The second set of projects includes service-based activities. Prominent early examples include Bahrain as an offshore banking center (1975), and Dubai’s Jebel Ali Port (1975) and Free Zone (1985) (Fasano, 2003). Dubai, a regional trade hub since a century prior, had decided to use oil windfalls to reclaim this position. Bahrain, traditionally a pearling economy, built on its trade history and its location as gateway to Saudi Arabia to become a hub of regional finance and international Islamic banking.

Despite these exceptional successes, key megaprojects had not altered more fundamental distortions in the region’s economies – distortions resulting from the rapid, oil-based development of the 1970s. The region’s emphasis on infrastructure-led development as a means to transition beyond oil, however, left its governments in dire straits as global oil prices crashed in the mid-1980s. While Middle East construction projects represented an incredible 42% of the global construction market in 1982, this percentage dwindled to 18% in 1987 (Strassman and Wells, 1988). The region’s oil windfalls from the first oil boom are largely viewed as having been wasted. In the mid-1990s, as the oil market began to look more optimistic, the region’s diversification efforts were provided with new fuel.
With oil windfalls from a second oil boom (1998-2008), the region has invested in variations on the most successful of the 1970’s resource-based industrialization and service and knowledge-based strategies, adapted for a 21st century global economy. Most significantly, the Gulf States have deployed their oil wealth into massive new development projects to take advantage of this second opportunity for a post-oil transition (James, 2008; Martins, Lewin, and Phillips, 2008). The region’s construction frenzy is reflected in data on construction projects (“MEED Projects,” 2008). By 2005, construction projects in the Arab Gulf States totaled $400 billion. By 2008 this number reached $1.9 trillion. The value of construction projects in the Arab Gulf States even dwarfs the value of “reconstruction” in Iraq ($66 billion). As we look to the future, the Gulf’s massive infrastructure projects represent more than merely construction activity. Instead, these megaprojects embody the physical manifestation of the region’s non-oil strategies. If these strategies work the global economic landscape will be changed in previously unimagined ways. The region will become the home to major trade and transportation hubs connecting Asia with Europe and North America. It will become a major destination for multinationals in a broad range of industries seeking to serve the markets of the more populous countries of the Middle East and South Asia.

First, the region has increasingly invested in downstream, resource-based industrialization projects. Petrochemical, resource-based industrialization complexes were the most common diversification strategy undertaken during the 1970’s oil boom. In fact, the petrochemical cities of Jubail and Yanbu in Saudi Arabia represented the largest industrial cities in the world at their conception in the late-1970s. Their relative success
has provided the basis for the country’s current project: the $500 billion mega-economic cities (Table 4.2). While China used its abundant resources of inexpensive labor to become a global industrial superpower, Saudi Arabia is leveraging its own most abundant resource – oil – to become an industrial superpower in its own right (King, 2007). The new economic cities each have a clear sectoral focus but a common goal: to generate over a million jobs, produce almost a third of total GDP growth, be home to over 4 million residents, and become a top-ten global investment destination – all by 2020 (SAGIA, 2008).

Second, and inspired jointly by the successes of Dubai’s Jebel Ali Port and Bahrain’s offshore banking center, the region’s countries have engaged in an increasing number of service and knowledge-based development strategies (Keivani et al., 2003; Pacione, 2005). Dubai’s Jebel Ali port, constructed in the mid-1970s and transformed into Jebel Ali Free Zone in the mid-1980s, is the world’s largest human-made harbor and is soon to be home to the world’s largest airport. Jebel Ali represents the model for the UAE’s cluster-driven development projects today, from DuBiotech to Knowledge Village. This evolution is best reflected in the proliferation of special economic zones and sector-specific industrial cities in Dubai, as seen in Table 4.3 (Christiansen and Bohmer, 2005; Ferretti and Parmentola, 2007). What has been the result? The next section analyzes the composition of the region’s industrial output to answer this question.
Industrial Diversification

When Gulf governments tout diversification successes, and when academics analyze Gulf economies, they most often characterize the region’s economic structure as comprised of an oil sector and a non-oil sector. Public sector activities outside of the oil sector are considered “non-oil.” This practice fails to take into account the major role of the region’s public sector in driving all facets of these economies. Government bureaucracies, however, are not a viable source of sustainable development, even if some ministries are, in fact, “non-oil.” The second most common characterization is that of public and private sector, which includes a number of sectors which owe their existence to oil booms. For instance, the oil-fueled construction activity in the region is merely the physical manifestation of oil windfalls, not a sustainable economic base.

Accordingly, for the purpose of this analysis, the Gulf economies are described as three distinct economic sectors. The oil and infrastructure sector is responsible for the majority of the Gulf’s economic output and inward foreign investment. It is also a key destination for the resulting oil windfalls, which have been deployed into massive infrastructural projects since the first oil boom. While some local workers are employed in this sector, it is largely dominated by foreign workers, even in state oil companies. The social and government services sector, most importantly, represents the Gulf’s bureaucracies, the primary source of employment for the local populations. These bureaucracies manage oil production, foreign investment, and in-flows of foreign labor. They are also responsible for distributing and deploying oil wealth. Also included in this sector are social, community and private services, best characterized by the vast numbers
of household servants employed by local Gulf families. Lastly, the non-oil private sector is indicative of the region’s diversification efforts, including finance and real estate, manufacturing, wholesale and retail trade and tourism, and transport and logistics (storage and communications). While the vast majority of Gulf citizens are employed in government services, the private sector is dominated by foreign workers. In order to examine how the region’s economies and labor markets have evolved over the past four decades we must follow the trajectories of these three sectors.

Based on this three sector framework, Figure 4.3 presents the aggregate structure of the region’s economies, from 1975 to 2007. The chart on the left provides the value added of each sector to GDP. The output of each sector is presented in constant (1990) US dollars. This is the most appropriate metric to examine how an industry performs over time because it controls for inflation, in this case reflecting 1990 oil prices (Yuskavage and Fahim-Nader, 2005). The chart on the right illustrates the contribution of each sector as a percentage of GDP. The percentage composition is presented in current dollars in order to account for the actual value of commodities in a given year. From these two charts, it is clear that the region has made significant progress in creating new sources of economic growth, as measured by the revenue generated; this is particularly true since 1998 with the onset of the second oil boom. Even in light of the record oil prices which accompanied this oil boom, reflected in current prices, we can still see that new, non-oil industries have become increasingly important sources of economic growth. Furthermore, the social and government services sector has seen modest growth over time (left), but has become less important as a proportion of GDP (right).
What industries are driving the region’s non-oil growth? Figure 4.4 displays the composition and contribution of the Gulf’s non-oil sector over time. It is not surprising that finance and real estate (including business services) has contributed the most value-added to the region’s non-oil output. Most significantly, the industries which comprise this sector provide intermediary channels to invest oil wealth, as well as public and private investment. Manufacturing reflects the region’s massive fixed capital investments since the 1970s in energy- and capital-intensive industries, such as aluminum, petrochemicals and plastics. Trade and tourism includes wholesale and retail trade, restaurants and hotels. From the age of the frankincense trade, to the Mongol Silk Road, to the oil era, the Arabian Peninsula economies have been involved in trade. This sector reemerged with the second oil boom, as evidenced by the proliferation of shopping malls and tourist hubs in Dubai and its counterparts in the region.

Each of these sectors has clear connections to the oil sector, whether as an investment channel (finance and real estate), as an industrial input (resource-based manufacturing), or as an import and export linkage (trade). This is true as well with the final key non-oil industry – transport and logistics (including storage and communications). As the world’s leading oil exporters, much of the region’s infrastructure spending in the 1970s went to creating internal road networks, airports, human-made harbors, sea ports, and dry docks. By using oil wealth since to import and re-export products from the Indian Subcontinent, the region has followed Singapore’s lead. More significantly, the Gulf States have developed large free zones or export processing zones around their seaborne trade and transportation infrastructure. Dubai’s
Jebel Ali Port (1975) and Free Zone (1985) represented the first iteration of this strategy which has since been imitated by all of the Gulf States.

_Employment Diversification_

Figure 4.5 shows how changes in the composition of gross economic output (left) relate to changes in the region’s employment structure (right). It appears that the region’s employment structure has evolved differently than its economic structure. Some of this is to be expected, of course, as different industries have different employment requirements and multipliers. Social and government services have declined in contribution to gross value added, but increased in contribution to total employment. Oil and infrastructure, characterized by increasingly capital intensive industries, has declined as a source of employment, but spiked as a proportion of GDP with the second oil boom. Employment in non-oil industries declined from 1975 to 1985. This was most likely because of the number of foreign workers who left with the oil bust, but also because local Gulf citizens were leaving (or deciding not to enter) native industries (e.g. fishing, herding, and trade) for the government sector. From 1985 to 1995, the contribution of non-oil industries to total employment changed relatively little, but modestly expanded from 1995 to 2007.

From the previous figures, it is evident the Gulf States have made significant headway in creating non-oil industries over the past four decades. The region’s total employment structure followed a different trajectory, but one which still shows a decreasing dependence on the oil and infrastructure sector over the study period. However, the region’s labor markets have also evolved differently from most other
resource-based economies. Theories to explain the natural resource curse purport that the organization of production in these economies develops around oil extraction and export, often without generating forwards or backwards linkages to other industries (Gunton, 2003b). Entrepreneurship, investment and employment also concentrate in the resource sector, as profits and wages are offered at much higher rates than elsewhere. Indeed, production and public and private investment in the Gulf have followed this general model. As such, one would assume that the region’s local employment base would also be concentrated in the oil sector. Instead, we see from Figure 4.6 that the oil and infrastructure sector is not a significant source of local employment. Levels of employment have increased in this sector since 1975, but these have primarily been foreign workers. Non-oil labor has been almost entirely provided by foreign workers, in numbers which have increased significantly over time. Instead of being drawn to oil and infrastructure or the non-oil private sector, local workers remain almost entirely dependent on the public sector for employment. While some of these positions may be located in ministries which handle oil production, the majority are located in general civil service jobs found across the region’s labyrinth-like bureaucracies.

In the Gulf, the evolution and structure of social and sectoral divisions of labor are somewhat different from those described in most other labor process and labor market segmentation studies. Instead of there simply being skilled and unskilled social groups or areas with social and economic power and those without, there are distinct divisions between public and private sector, between national and expatriate, and between male

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8 This discussion taken from Malecki and Ewers (2007)
and female (Rodenbeck, 2002). Gulf labor market distortions, and particularly the
distinction between citizen and expatriate, are legacies of oil-based development,
reflected in the disjuncture between the labor processes of oil and of diversified
development.

The topic of labor market segmentation, characterized by widening inequality,
marked segregation by ethnic group, and social exclusion, takes on new forms in the
Middle East. In the Gulf, the segmentation of the labor force has sharper divisions from
elsewhere in the world as a result of the necessity to import labor. Nearly all
characterizations of social polarization from other empirical contexts have been
dichotomous, distinguishing between natives and immigrants, or between an ethnic
majority and a collective minority. In the Middle East, and perhaps more widely, there is
a trichotomous social division apparent. Instead of there simply being skilled and
unskilled social groups or areas with social and economic power and those without, there
are distinct divisions between public and private sector, between national and expatriate,
and between male and female. Gulf labor markets are comprised of, first, the minority
local citizenry, a second group, skilled westerners, and a third of low-skilled – primarily
South Asian – workers. Across this trichotomous segmentation is the division between
private and public sector work along foreign and local lines.

The indigenous Arab population sits at the top of the social division of labor,
holding primarily public sector positions. The presence of public employment offering
wages twice that of similar private sector positions created a national preference for
government careers in the Gulf, with technical or production-related occupations
identified as “migrant work” (Looney, 1994). The majority of the native population thus engaged in rent-seeking or rent-distributing occupations, rather than in the production of rent (Beblawi, 1989). In Kuwait, for example, over 93% of the nationals in the labor force are government employees, whereas 98% of the expatriates in the labor force work in the private sector (Rodenbeck, 2002).

Conversely, local and foreign private sector companies generated their own preferences for skilled foreign rather than local labor, due to lack of skill and education, but also because of the need to compete with high salaries and fringe benefits offered by the public sector (Muysken and Nour, 2006). Levels of foreign labor in the social and government service sector have also increased, primarily employed in low-wage, low-skill domestic service positions. A second social division – one intimately linked to the development goals of the Gulf States – is the degree to which the local population must be supplemented with skilled workers from elsewhere. The Gulf’s oil wealth has allowed it to pay foreign firms and workers unmatchable wages in exchange for building their highly-specialized physical and service infrastructure. A third social division is that of low-skilled workers. Indeed, Gulf labor market studies have focused on the large numbers of low-skilled oil field, construction and service workers, whose dominant majorities over local populations make their presence a politically sensitive issue (Girgis, 2000; Winckler, 2005).

Entrenched patterns of international migration and local employment in the region have most prominently generated skill mismatches between the demands of diversified economic development and local labor market offerings. Public sector employment
expansion served to absorb these mismatches, but the resulting labor market distortions have left the region without the human capital base necessary to create or sustain a diversified economy (Looney, 1994). Figure 4.7 (left) summarizes how the region’s industry and employment structures have changed over the last four decades, as presented in average annual growth rates. In general, the Gulf has generated increasing levels of non-oil revenue over the past four decades, but less progress has been made in regards to the region’s other forms of dependency: first, the public sector as a local employment generator and wealth distributor and, second, foreign labor as a requirement for oil and non-oil economic growth. Figure 4.7 (right) shows the current status of the region’s key non oil sectors as of 2007. From this chart we can see that the Gulf’s economic transition has been expatriate fueled.

There is, however a great deal of geographic and demographic diversity in the region and these data are aggregated. Most significantly, the size of Saudi Arabia’s oil reserves, total economy, and labor force tends to mask some of the Gulf’s sub-regional variations. Figure 4.8 shows key non-oil private sectors as represented by their percentage contribution to total GDP for each of the Gulf States. These same industries are displayed from a different perspective in Figure 4.9, which shows local citizens as a proportion of total employment for each sector in 2007/8. On a whole, levels of foreign labor have increased significantly in each country since the first oil boom. However, over this period, some countries have performed better than others at reducing this dependence. The two countries with the smallest oil reserves in the Gulf – Bahrain and Oman – were more successful in developing local capacity in non-oil industries and
creating local, private sector employment over the past four decades than any other
countries in the region. Saudi Arabia, the largest and most populous of the Gulf countries,
was largely viewed as having squandered its windfalls from the first oil boom. However,
it has also experienced the most improvement during the last decade’s oil boom. Qatar
and UAE, two of the richest but least populous Gulf States, experienced the most
spectacular and dynamic economic growth of the past decade, but have made the least
improvements in the creation of local employment. Foreign workers currently comprise
over 90% of the labor force in these two countries.

From Figure 4.9, it is apparent that local development capacity and local
employment content outside of the public sector are most prominently found in finance
and real estate and transportation and logistics. Manufacturing has emerged as an
important source of non-oil revenue, but energy intensive industries have low overall
employment multipliers. The trade and tourism sector is characterized by high levels of
employment, but primarily in low-skilled positions. It is clear from this chart that these
jobs have been filled by migrant workers.

Conclusion

In conclusion, economic diversification has not remedied the labor market and
human capital legacies of oil. Diversification strategies have made headway in
establishing post-oil sources of growth, but they have added a new demand for
expatriates to fill labor and knowledge gaps in non-oil sectors. Indeed, the Gulf’s
diversification success has been an expatriate-fueled transition. The region’s strategies
represent three aspects of the role of foreign labor in the transition beyond oil: first, the occupational mix required for service and knowledge-based economies; second, the continuing and indeed heightened demand for highly skilled expatriates; and third, the emergence of policies to reduce the demand for expatriate labor and to create a skilled native labor force (Malecki and Ewers, 2007). Overall, across the region, little progress has been made to close the gaps between the demands of diversified economic development and the local labor market offerings. Moreover, economic diversification has exacerbated the region’s labor market distortions rather than remedying these distortions. Gulf labor market distortions, and particularly the distinction between citizen and expatriate, are legacies of oil-based development, reflected in the disjuncture between the labor processes of oil and of diversified development.

Porter (2003) sheds some light on the prevailing institutional structures which challenge the creation of a competitive, non-oil business environment in the region.9 Positive features are identified almost entirely based on capital, energy and infrastructure, including: strong financial incentives for foreign investors, strategic location, high quality physical infrastructure, low energy costs, an abundance of free zones, and rising educational levels in the domestic population. The much more expansive list of negative attributes of the Gulf business environment is shown in Table 4.4. The generally favorable factor or input conditions are far outweighed by negative structural and societal features. It should be noted that Porter highlights the view that companies, not governments, are the central actors in an economy. The government’s role is to create the

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9 This discussion taken from Ewers and Malecki (Forthcoming a)
enabling conditions for growth and development (Porter, 2003). In this regard, the Gulf still has few domestic companies of an international scale, particularly outside of oil. The World Bank’s (2009b) *Doing Business* index further illustrates the region’s successes and shortcomings. Overall, the Gulf States rank between 13 and 65 out of 183, with Saudi Arabia far ahead of the rest. Yet, if we look at the component of “enforcing contracts,” the Gulf slips to between 95 and 140, with Saudi Arabia in last place. Some hints for this showing are provided in Table 4.5, in which it is clear that problems concerning the quality of labor and restrictions on hiring are perceived as key problems.

To return to the theoretical framework of natural resources-based economic development, it is clear from the above results that economic transition is not always accompanied by institutional transformation. While oil wealth has provided the Gulf economies with the capital to generate competitive non-oil growth, the larger challenge is one of sustainability: being able to reproduce the labor force in non-oil industries locally. The ability to import labor and knowledge while providing high-wage public employment to citizens has reduced incentives to develop the indigenous skills and competencies to create and sustain a diversified economy. While this chapter focused on secondary data analysis, each of the two subsequent chapters utilizes combinations of survey and interview data. Chapter Five examines how the oil-generated labor market distortions presented above are produced and reproduced outside of the oil sector, among key non-oil firms in the region’s private sector.
Tables and Figures

Tables

<table>
<thead>
<tr>
<th>Oil &amp; Diversification</th>
<th>Population &amp; Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abundance</strong></td>
<td><strong>Demographics</strong></td>
</tr>
<tr>
<td>• 41% of world oil reserves</td>
<td>• 34% of population under 15 yrs</td>
</tr>
<tr>
<td>• 23% of world gas reserves</td>
<td>• 6% annual growth rate 1960-2000</td>
</tr>
<tr>
<td>• Rank #1, #2 &amp; #5 in daily exports</td>
<td>• 38 million in ‘07; 51 million in ‘25</td>
</tr>
<tr>
<td>• Rank #1, #2 &amp; #3 in oil per capita</td>
<td>• 39% non-citizens in population</td>
</tr>
<tr>
<td><strong>Dependence</strong></td>
<td><strong>Labor force</strong></td>
</tr>
<tr>
<td>• Oil exports 76% of total exports</td>
<td>• 65% non-citizens in labor force</td>
</tr>
<tr>
<td>• Oil exports 44% of GDP</td>
<td>• 15% unemployment total workers</td>
</tr>
<tr>
<td>• Oil revenue 74% of fiscal revenue</td>
<td>• 35% unemployment citizens age 16-24</td>
</tr>
<tr>
<td>• Oil revenue 31% of GDP</td>
<td>• Expat private sector/ local public</td>
</tr>
</tbody>
</table>

Table 4.1: The Gulf Economic and Demographic Conundrum (Sources: see Table 3.1)
### Table 4.2: The Saudi Economic Cities (Sources: Al-Mansour, 2007; Martins et al., 2008; SAGIA, 2008a; SUSRIS, 2007)

<table>
<thead>
<tr>
<th>Name</th>
<th>Size Mn Sq Mtr</th>
<th>Cost Est. US$</th>
<th>Pop’n / Empl’t Est.</th>
<th>Components</th>
<th>Industrial Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jizan Economic City</td>
<td>100</td>
<td>$30 bn</td>
<td>500,000/250,000</td>
<td>Industrial park, agriculture export and distribution, business and cultural center, port, health/education areas</td>
<td>Energy- and labor-intensive industries</td>
</tr>
<tr>
<td>King Abdullah Economic City</td>
<td>168</td>
<td>$27 bn</td>
<td>2,000,000/1,000,000</td>
<td>Port, financial island, resorts, industrial district, education zone, residential area</td>
<td>Transport/logistics, light indust.,</td>
</tr>
<tr>
<td>Medina Knowledge City</td>
<td>4.8</td>
<td>$25 bn</td>
<td>50,000/20,000</td>
<td>Islamic education theme park, health/ biotech ctr., high tech park, Islamic civilization research ctr.</td>
<td>Knowledge/technology: IT, telecom</td>
</tr>
<tr>
<td>Prince Abdulaziz Bin Mosaed Economic City</td>
<td>150</td>
<td>$30 bn</td>
<td>300,000/55,000</td>
<td>Logistics and transport, petrochemical, agribusiness, mining and business centers, international airport, dry port and entertainment zone</td>
<td>Transport/logistics, agribusiness, minerals, construction</td>
</tr>
</tbody>
</table>

Recently announced: Ras Al-Zour Resource City in the Eastern Province, focusing on energy and minerals, Sudair Industrial City in Qassini, focusing on telecommunications and electronics, and Tabuk Economic City in Tabuk, whose specialization is not yet announced.

Table 4.2: The Saudi Economic Cities (Sources: Al-Mansour, 2007; Martins et al., 2008; SAGIA, 2008a; SUSRIS, 2007)

### Table 4.3: Key Special Economic Zones in Dubai. (Sources: Christiansen and Bohmer, 2005; Tahir, 1998; Global Resources, 2008; UNIDO, 2008)

<table>
<thead>
<tr>
<th>Name</th>
<th>Zone Type</th>
<th>Est.</th>
<th>Sq Km</th>
<th>Main Economic Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jebel Ali Free Zone</td>
<td>Free</td>
<td>1985</td>
<td>100</td>
<td>Trade activities, processing, manufacturing, packaging and assembly activities, storage</td>
</tr>
<tr>
<td>Dubai Airport Free Zone</td>
<td>Free</td>
<td>1996</td>
<td>12</td>
<td>Manufacturing, processing &amp; assembly activities, trade activities, selected services</td>
</tr>
<tr>
<td>Dubai Internet City</td>
<td>Industry</td>
<td>2000</td>
<td>4</td>
<td>IT Support, Software development, Web-based marketing</td>
</tr>
<tr>
<td>Dubai Technology Park</td>
<td>Industry</td>
<td>2003</td>
<td>3</td>
<td>Advanced Engineering (material science), Agro-Food, Biotech (pharmaceuticals), Environment (desalination), oil</td>
</tr>
<tr>
<td>Knowledge Village</td>
<td>Industry</td>
<td>2003</td>
<td>2.1</td>
<td>Education, training and research</td>
</tr>
<tr>
<td>Dubai Healthcare City</td>
<td>Industry</td>
<td>2003</td>
<td>2.1</td>
<td>Healthcare</td>
</tr>
<tr>
<td>Dubai Industrial City</td>
<td>Industry</td>
<td>2004</td>
<td>52</td>
<td>Machinery &amp; Mechanical equipment, Base Metals, Chemicals, Food, Beverage &amp; Mineral Products</td>
</tr>
<tr>
<td>Dubai Int'l Financial Center</td>
<td>Industry</td>
<td>2004</td>
<td>.44</td>
<td>Banking; Capital Markets; Asset Management and Fund Registration; Insurance &amp; Re-insurance; Islamic Finance</td>
</tr>
<tr>
<td>DuBiotech</td>
<td>Industry</td>
<td>2006</td>
<td>2.3</td>
<td>Agro-Food, Biotech, Environment, Health Care, R&amp;D</td>
</tr>
<tr>
<td>Dubai Silicon Oasis</td>
<td>Industry</td>
<td>2007</td>
<td>7</td>
<td>Information technology, electronic innovation, R&amp;D</td>
</tr>
</tbody>
</table>

Table 4.3: Key Special Economic Zones in Dubai. (Sources: Christiansen and Bohmer, 2005; Tahir, 1998; Global Resources, 2008; UNIDO, 2008)
Table 4.4: Negative Features of the Gulf Business Environment (Source: Porter, 2003)

<table>
<thead>
<tr>
<th>Institutions and governance</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Heavy government involvement limits private initiative</td>
<td>Incentive structure not tied strictly to merit and productivity</td>
<td>Economies sheltered from competition</td>
<td>Free zones deter positive impacts to overall economy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Limits on foreign ownership</td>
<td>Free zones focused on real estate; not true clusters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weak governance; lagging &amp; restrictive legal system</td>
<td>Frequent conflicts of interest between gov’t and business</td>
</tr>
<tr>
<td>Knowledge and employment</td>
<td>Low level of R&amp;D, science and innovative capacity</td>
<td>Skilled citizens heavily employed in public sector</td>
<td>Dependence on highly-skilled foreign specialists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of education for low-skill foreign workers</td>
<td>Lack of first-rate public schools and universities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poor availability of data</td>
<td></td>
</tr>
<tr>
<td>Supply and demand structure</td>
<td>Sophisticated personal demand served by foreign companies</td>
<td>Lack of specialized suppliers and service providers</td>
<td>Few local exporting companies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Financial markets remain inefficient</td>
<td>Weak clusters in the non-oil sectors of the economy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low integration between FDI and local industry</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4: Negative Features of the Gulf Business Environment (Source: Porter, 2003)

<table>
<thead>
<tr>
<th>Country</th>
<th>Problem</th>
<th>Problem</th>
<th>Problem</th>
<th>Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>Poor work ethic in national labor force</td>
<td>Restrictive labor regulations</td>
<td>Inadequately educated workforce</td>
<td>Inefficient bureaucracy</td>
</tr>
<tr>
<td>Kuwait</td>
<td>Inefficient bureaucracy</td>
<td>Inadequately educated workforce</td>
<td>Political instability</td>
<td>Corruption</td>
</tr>
<tr>
<td>Oman</td>
<td>Restrictive labor regulations</td>
<td>Access to financing</td>
<td>Inadequately educated workforce</td>
<td>Poor work ethic in national labor force</td>
</tr>
<tr>
<td>Qatar</td>
<td>Inflation</td>
<td>Restrictive labor regulations</td>
<td>Inadequate supply of infrastructure</td>
<td>Inadequately educated workforce</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>Inefficient bureaucracy</td>
<td>Inadequately educated workforce</td>
<td>Restrictive labor regulations</td>
<td>Inadequate supply of infrastructure</td>
</tr>
<tr>
<td>UAE</td>
<td>Inflation</td>
<td>Inadequately educated workforce</td>
<td>Restrictive labor regulations</td>
<td>Poor work ethic in national labor force</td>
</tr>
</tbody>
</table>

Table 4.5: Most Problematic Factors for Doing Business (Source: IMD, 2007)
Figures

Figure 4.1: Crude Oil Prices and Gulf GDP, 1970-2008


Sources: Oil prices from US EIA (2009). All GDP and value added by industry data presented in this and subsequent figures are derived from the United Nations Statistics Division Estimates of the Main Aggregates (UNSD, 2009a) and National Accounts Official Country Data (UNSD, 2009b). Data from each of these sources are aggregated from individual country data.
Figure 4.2: Gulf Labor Force and GDP, 1975-2007/8

All foreign and local labor force data presented in this and subsequent figures are aggregated from individual country data.

Data sources include the following: Bahrain: Central Informatics Organization; Centre for Studies and Research; Ministry of Labour and Social Affairs; Monetary Agency. Kuwait: Ministry of Planning; Ministry of Social Affairs and Labour; Public Authority for Civil Information. Qatar: Central Statistical Office. Oman: Central Bank of Oman; Oman Ministry of Development; Ministry of National Economy. Saudi Arabia: Ministry of Economy and Planning; Central Department of Statistics; Monetary Agency. United Arab Emirates: Ministry of Economy and Planning; Statistical Center of Dubai.

Supplementary data sources include Birks and Sinclair, 1970; 1980.
Figure 4.3: Structure of Total GDP by Value Added in Constant (1990) US Billions (Left) and by Percentage Composition in Current US Billions (Right), 1975-2007 (Source: see Figure 4.1)

Figure 4.4: Structure of Non-Oil Private Sector GDP by Value Added in Constant (1990) US Billions (Left) and by Percentage Composition of Total GDP in Current Prices (Right), 1975-2007 (Source: see Figure 4.1)
Figure 4.5: Structure of GDP (calculated from current prices) and Total Employment, 1975-2007/8 (Source: see Figure 4.1 and 4.2)

Figure 4.6: Local and Foreign Employment by Sector, 1975-2007/8 (Source: see Figure 4.2)
Figure 4.7: (Left) Annual Growth Rate of GDP, Local and Foreign Employment, 1975-2007, and (Right) Non-Oil Sectors as Percentage of Expatriate Employees, Total GDP and Non-Oil GDP, 2007 (Source: see Figure 4.1 and 4.2)

Figure 4.8: Percent Value Added to GDP by Key Non-Oil Sectors, 2008 (Source: see Figure 4.1)
Figure 4.9: Percent Local Citizens of Total Labor in Non-Oil Sectors, 2007/8 (Source: see Figure 4.2)
Chapter 5: Firms as Sites of Local and Global Labor Market Processes

The previous chapter discussed the labor market outcomes of oil-driven development in the Gulf States, and described how these outcomes have evolved, as the region diversified its economies. In sum, the chapter concluded that while the region has succeeded in creating competitive new sources of economic growth, the real challenge is sustainability, namely, reproducing the labor force in new sectors locally. Most significantly, results from the secondary data show that economic diversification created a new demand for foreign labor, but that the local populations remain employed mostly in public sector positions.

This chapter shifts the empirical focus from these large, national-level development efforts and outcomes to firm and level labor market processes. Two questions are explored: First, why has the creation of non-oil industries exacerbated the region’s labor market distortions? Second, how are these entrenched patterns of international migration and local employment, which are described as products of oil-driven development in the previous chapter, reproduced outside the realm of the oil sector? The chapter seeks to answer these questions by examining foreign and local firms that comprise the region’s non-oil sector. The analysis is accomplished by presenting results from a large-scale employment and human capital survey of 300 foreign and local
non-oil firms throughout the region and key informant interviews conducted with senior human resource administrators at 30 non-oil firms in Dubai and Abu Dhabi, UAE.

The chapter is organized as follows. First, survey data are presented to describe precisely how the region’s labor market dynamics are represented in non-oil private sector firms. These data are derived from responses to survey questions that elicited information on firm workforce composition by both occupation and nationality, which are analyzed. Survey results from the full survey sample are examined, but the results are also disaggregated by foreign and local company ownership, industry and location. By comparing the composition of firm workforces and then analyzing how these results vary across key identifiers, the goal is to identify the key drivers of international migration and local employment dynamics in the Gulf. The patterns revealed in these survey results are described in the words of senior human resource professionals at 30 non-oil companies in the region. Taken together, the survey and the interview data reveal patterns of workforce internationalization and localization, which in turn yield a unique insight into how the Gulf States have achieved their diversification success.

Second, survey results from survey questions regarding firm hiring and recruitment practices and preferences are presented and analyzed. The goal of this section is to understand how the region’s labor market dynamics are produced and then reproduced within non-oil private sector firms. As with the first section of this chapter, interview data are presented to answer the “how” and “why” questions not answerable by the quantitative survey, and also understand how those individuals who make hiring decisions in key non-oil sectors view the dynamics of the region’s labor market.
Surveys were conducted with senior human resource (HR) professionals at each firm in the sample. The strategy in selecting this particular group to complete surveys was that individuals in this occupation were most likely to have the necessary information on their firm’s general business operations, workforce characteristics and composition, hiring and recruitment practices, and broader employment strategies. HR professionals are the ideal occupational group to target to gain this information.

Results from the survey of these firms shed an interesting light on the foreign and local companies and workforces that have made the non-oil success in the Gulf possible. Table 5.1 displays certain key characteristics of the 170 local and 130 foreign firms that participated in the survey. On the whole, the composition of this sample reflects the region’s diversification efforts by representing the key sectors of trade, transportation and communications, finance and real estate, engineering and construction, and resource-based manufacturing. From their levels of internationalization (percentage of foreign revenue, percentage of foreign ownership, and international research and development affiliations), we see that the region’s multinational corporation (MNC) affiliates are highly internationalized, while local firms are seen as “internationalizing.” The median year of establishment for both foreign and local companies is 1997, a date that implies that, overall, both groups are products of the recent oil boom.

Local firms have significantly larger workforces than do MNCs and joint ventures. While some foreign firms may be “brass plates” rather than true subsidiaries, a mean workforce of 664 is a sizable number. From the percentage of university graduates
and the percentage of employees in positions that require a university degree (managers, professionals, and technicians), we can see that both group occupational structures and the workforces are knowledge intensive. For instance, the Institute for the Study of Labor (IZA) completed an international employment survey of European firms and reported an average of 29% university graduates in the workforces across their firm survey sample (Winkelman, 2001). However, the firms that participated in that survey had overall larger workforces. While both foreign and local companies do have significant numbers of knowledge workers in their labor forces, the presence of foreign knowledge in the region is not simply a foreign investment-driven process. On the contrary, the mean percentage of expatriates is 77% for local firms – only 8% less than their foreign counterparts.

Figure 5.1 presents the aggregate composition of these firms’ workforces, by occupational structure and national origin. This figure shows the composition for total workers at these firms (in all occupations, skilled and unskilled), as well as for those in positions that require a university degree – managers and executives, professionals and specialists, and technicians and associate specialists. These results are aggregated for the total survey sample. The local Gulf workforce at these firms is distributed over a slightly bifurcated employment structure – somewhat more likely to be employed either as managers or in positions that do not require university degrees than in professional or technical positions. “Local” Gulf nationalities only include Gulf citizens from the country in which the surveyed firm was located. “Other” Gulf nationalities do include those employees from any of the other five Gulf Cooperation Council (GCC) countries. Employees from these other “non-Gulf” Middle East countries, such as Egypt, Syria, or
Turkey, represent a major component of workforces and knowledge bases of the sample companies. This group is evenly distributed across all job categories, except technicians. North America and European employees are most likely to be employed in managerial and executive positions (18%), but still only comprise 11% of the total workforces, 12% of professionals and 6% of technicians. In contrast, employees from South Asia and other Asia countries are overrepresented in the total workforces (combined being 41%) and the technician category (combined being 44%), compared to the managerial category (combined being 21%).

By disaggregating the individual types of firms to examine the distribution of total workers by nationality more closely, it becomes clear that firm type is a major determinant of workforce internationalization and localization. This specific disaggregation is displayed in Figure 5.2. Unlike the previous visual, local Gulf workers are combined with those from other Gulf countries to create a single category – GCC. First, the combined contribution of local and “other” Gulf workers is quite different within the four types of firms. Mixed firms, which are at least partially owned by local governments, have the highest levels of local employment content. Based on the overall role of the public sector as a local employment generator, this pattern is not surprising. Mixed, publically- and privately-owned, firms surveyed included a number of large real estate, education, health, telecommunications, and public investment corporations. The fact that mixed firms have the smallest internationalized workforces can be partially explained by the highly localized nature of their business activities.
Conversely, the more highly international business activities of MNCs provide an explanation for why these firms have the most internationalized workforces. It is expected that MNC affiliates would have the least percentage of contribution from Gulf workers since foreign investment (without a joint venture contract) rarely stipulates local employment content as a condition of entry to Gulf markets. While joint ventures in the UAE, Kuwait, and Qatar rarely have local employment content stipulations as part of the cooperative agreement between foreign and local firm partners, those same ventures in the other Gulf States do. Usually in the form of hiring and training benchmarks, these types of agreements have clearly succeeded in their goal of generating local jobs and development capacity. The positive impact of such agreements is reflected in the fact that joint ventures have 5% more local employment content than do local private firms.

Some interesting features of the Gulf’s labor markets become visible if we examine this same set of patterns (nationality of workers by occupation), but then distinguish between local firms (Figure 5.3) and foreign firms (Figure 5.4). The occupational distribution of local Gulf workers varies significantly between the two firm types. Local Gulf citizens contribute a greater percentage of each occupation in foreign versus local firms. For instance, the percentage of Gulf managers and executives in local firms is nearly the same as their percentage in the total workforce. In foreign firms, on the other hand, Gulf citizens are less represented in the managerial category, but do have a significantly greater representation in the total workforce. This finding could mean that Gulf citizens are employed in either entry level or unskilled positions at these firms.
If we ignore the variations among Gulf employment contribution between firm types, we then can see remarkable similarities in the occupational composition between the firms for all other nationalities. While foreign firms have more international workforces; however, the overall occupational structure for other nationalities remains the same between foreign and local firms. Indeed, the patterns of occupation by nationality seen in local firms are largely shared by their foreign counterparts, but represented in an amplified and exaggerated fashion. North American and European workers, for instance, have the same occupational structure for each firm type; the difference is that their percentage contribution is significantly greater in foreign firms. The same patterns hold true for nearly every category for nationality and occupation.

The most significant patterns emerge when origins and occupations are displayed by firm sector (Figure 5.5) and firm location (Figure 5.6). Each of these visuals displays total firm employment across all occupations. The results contradict the secondary data presented in the previous chapter in some ways and yet complement it in others. In terms of worker nationality by sector, as displayed in Figure 5.5, Asian workers are the primary and dominant nationality in all sectors except for two. In the more skill-intensive finance and real estate sector, Gulf citizens have established a solid share of employment. In social and personal services, health and education firms (which represent the majority of firms in this sector), the firms have equally attracted skilled individuals from the Gulf, other Middle East countries, and the West; this sector represents the largest percentage contribution for Westerners, although it also is comprised of a smaller and more highly-skilled set of employees. After the financial sector, Gulf citizens are most heavily
represented in resource-based industries; and this sector most closely relates to the oil sector.

The results for the composition of workforces by firm location, displayed in Figure 5.6, match the secondary data presented in the previous chapter nicely. As discussed in Chapter 4, Bahrain and Oman have established the highest degree/level of local content in both foreign and local companies. These are the two Gulf countries with the least oil and the smallest populations, but the most employment pressure. The two have also achieved the most local employment content. The fact that firms in these countries have the lowest percentages of Asian workers is a testament to the fact that, unlike other Gulf countries, local citizens in these countries will often take lower-wage jobs, taxi drivers for instance. These are jobs Asian workers would certainly dominate in places like the UAE, Kuwait, or Qatar.

Abu Dhabi and Dubai experienced the region’s most spectacular infrastructural transformation over the last decade’s oil boom. They also have the most international workforces overall, but the lowest level of local content. It should be noted as well that approximately 4% of the GCC employment category is non-Emirati workers from other Gulf countries. One surprising observation is that while firms located in Dubai had the most internationalized foreign revenue sources of all firms, firms from Abu Dhabi had the least internationalized revenue base. Yet, each presents almost the same employment structure by occupation. Saudi Arabia has the most oil, the largest population, but also the most local employment pressure. During the recent oil boom, however, Saudi Arabia was significantly more conservative in its construction spending and international investment.
portfolio. This cautious approach paid off, as the region’s other major sovereign wealth funds in Abu Dhabi, Kuwait, and Qatar realized nearly 30% losses with the 1998 oil bust.

Senior HR professionals were also targeted for the interview portion of this research. Interviews were solicited with 30 individuals who were representative of both the survey sample and the Gulf’s diversification strategies. First, HR professionals are responsible for making hiring decisions at these firms. As a result, they play a key role in producing and reproducing the private sector employment patterns described in the survey results. Second, these individuals have in-depth experience with navigating Gulf employment regulations and can provide a first-hand perspective on Gulf labor market dynamics. The overarching goal of these interviews was to answer the “how” and “why” questions not captured by quantitative surveys. The timing of this research provided the opportunity to use these interviews as a tool to elaborate on the employment dynamics revealed in the survey results. The survey research was completed in February 2009. Preliminary analysis was undertaken in March 2009. Interviews were then conducted at firms in April through June 2009. As a result of this timing, interviewees were asked to elaborate on some of the survey’s findings.

Each interviewee was asked which forces drive the Gulf labor market, thereby producing the patterns of employment by nationality and occupation that were described above. The following discussion examines the key themes that emerged across the interview sample in response to this question.

Market relationships. First, a number of interviewees responded by characterizing Gulf employment dynamics as occurring through a market-based exchange relationship
between employers, workers and the government. An interviewee at a consulting firm in Dubai, for instance, compared the Gulf labor market to the New York Stock Exchange:

“It is a place where transactions take place between employers, who are the buyers, and workers, who are the sellers. It is not an entirely free market because everyone, buyers and sellers, have to follow the rules in order to benefit. The person who owns the place is the one who sets the rules. In this case the Gulf government sets the labor market rules and determines the employer-employee relationship.”

The theme described here and represented by similar responses from other interviewees, is that labor market patterns are outcomes of individual actors seeking to benefit themselves. Firms need high- and low-skill labor to operate their businesses and generate profit. This labor and knowledge level cannot be found among the local population, so it must be sourced internationally. Foreign workers seek profit as well and come to the region to seek salaries not available in their home countries. The Gulf governments serve to facilitate and regulate that relationship between foreign workers and firms. The Gulf States need foreign companies and their workers to generate general economic growth and attain their broader development goals. They are responsible for attracting foreign participants, regulating the conditions of their entry into the region, and ensuring there is the desired local impact. The labor market is an outcome of each participant getting what it wants, that is, profit. If this scenario is the case, and markets are operating effectively, why then have the labor markets remained distorted? Some interviewees argued that it is precisely because markets are operating effectively that labor markets became distorted. One interviewee, a Saudi Arabian national, responded,

“The private sector is reluctant to employ nationals because they want low costs, high productivity, obedience, and adaptability. The employer sees employing nationals as meaning low productivity and low quality, and the local employee
sees private sector salaries and working conditions as not as attractive compared with the public sector.”

In other words, it is because each actor makes employment and hiring decisions in their best interest that foreign and local labor markets do continually reproduce.

*Role of the public sector.* The majority of interviewees identified the Gulf governments as the primary force in reproducing the region’s labor market distortions. This was the second theme identified in these interviews. Because these governments provide above-market wages, these respondents argued that the region’s labor markets cannot operate on a truly competitive basis. As a Malaysian HR manager at a large Dubai financial firm stated,

“The problem in the UAE in regard to the local workforce is that market distortions prevent there being a competitive employment environment. Emiratis don’t want long hours, and they don’t need to accept them. There is no competition among locals for private sector jobs because the public sector provides them with better paying jobs without competition. Additionally, MNCs don’t want to fulfill the expectations of Emiratis, and high-skilled expats at these companies don’t have time for that distraction either.”

In this sense, foreign workers, local citizens, employers, and the government each get their desired employment outcome, but two distinct labor market environments are also created. There is a competitive private sector labor market where firms make hiring decisions by weighing such factors as skill, productivity, and cost. External to this labor market is a distorted public sector labor market where the public sector offers wages above those offered in the private sector and offers citizens employment simply as a result of their birthright.

The presence of an alternative labor market, especially reserved for citizens, was seen as widely to blame among the interviewees for the weak presence of Gulf citizens in
the private sector. This more sophisticated argument was expected to be revealed during the interviews. The researcher suspected that HR administrators at MNCs, in particular, would make more simplistic, cultural arguments regarding Gulf citizens themselves and their work effort. The arguments had been heard before from expatriates in the region during the pre-dissertation fieldwork. Instead, these HR professionals had a much deeper understanding of the consequences of government employment and wealth distribution decision-making. This sentiment was summed up by the comments of an HR manager at a multinational engineering firm in Abu Dhabi:

“The structural challenge in the UAE is to ensure that the UAE graduate has motivation to seek out the private sector. I am the first one to want to train these people, but this country’s own structural problems prevent this from happening. There is not the desire or the interest.”

While this individual references the employment preferences and aspirations of Gulf citizens, those notions are framed by him as a broader, structural issue. Indeed, almost two-thirds of the respondents blamed the provision of public employment as a social entitlement for weakening local human resource capacity in the region. Some interviewees even suggested that when there is low availability of public sector jobs, citizens would rather wait years for such jobs to emerge rather than enter the private sector market. The blame, however, was placed squarely with the government rather than with the citizens.

Supply-driven processes. A third theme identified from the interview transcripts was that Gulf labor market processes are produced from outside the region in migrant sending countries, such as Afghanistan, Bangladesh, Pakistan and Sri Lanka. According to some of the interviewees, to understand how and why the Gulf labor markets function,
one must look at which factors initially prompt workers to leave their home countries and migrate to the region. In this regard, interviewees identified foreign workers as active rather than passive participants in producing Gulf labor market outcomes. Foreign workers make their migration decisions based on personal benefits, including employment opportunities, pay, and quality of life. For both skilled and unskilled workers, financial compensation that compares favorably to one’s home country is the dominant factor in their decision to migrate to the Gulf:

“Expats in the Gulf are chasing the dollar. If they find someone willing to pay more, they leave. There is a lot of turnover in the region, particularly among skilled Asians, and less so among skilled Westerners. Indians still have it better here with the tax benefits, but the exchange rate is driving many to head back.”

For some low-skilled workers, job availability is an important factor in migrating to the Gulf. However, it is difficult to believe that job availability alone would be enough to motivate anyone to work in the kind of conditions experienced by an Indian day laborer or nanny, for example. Instead, it is the ability to make wages beyond what could be made in the home country and be able to send that extra money home that is the more powerful motivation.

With regard to skilled labor in particular, some interviewees characterized the international recruitment practices of firms in the region as part of a broader trend of firms’ competing for talent on a global basis. Being able to offer workers high wages and no taxes, as well as a high level of amenities, firms in the Gulf are competing very well:

“Recruitment is more global now and companies everywhere are increasingly recruiting internationally. The US has been less appealing for expats since 9/11 and Australia and Great Britain are more appealing. Nowhere else offers the pay and quality of life that the UAE does. It’s a lot easier to recruit skilled workers
here than in Canada. The idea of being an expat in the Gulf is very appealing. The pay and quality of life are both higher than in Canada, where taxes are high.”

While pay and quality of life may represent the most important driver of skilled Western in-migration, four different participants did point to a more complicated set of determinants at least for skilled Indian migration:

“The first reason for a skilled Indian professional to work here is to get experience with an MNC that one cannot get in India. People want to be able to say “I worked for MNC X” or “I worked for a big North American company” on their CV; this entry can really change the equation for their future career possibilities.”

Indeed, competition for work at MNCs in India is high. The local employment base is larger and better qualified than in the Gulf and competition is fierce for employment at prestigious international firms there. The concentration of multinational firms in the nearby Gulf States represents a powerful career opportunity for highly qualified Indians that would not be available to them in their home country.

_Necessity and dependency_. Foreign labor demand is a necessity for economic growth in the Gulf, a fact agreed upon by the overwhelming majority of interviewees in one way or another. For instance, an interviewee at a consulting firm in Abu Dhabi commented, “The economic wheel in the Gulf cannot spin without expats. It is certainly spinning, but the problem is that economic progress is tied to foreign workers.” A number of questions were raised among interviewees about the sustainability of the region’s dependence on foreign labor. There was not such wide agreement, however, on why exactly this reliance is problematic for the region. Some interviewees indicated that the region’s governments were deeply concerned about the dominance of South Asian
workers in the employment mix. One participant contrasted the role of Mexican labor
migrants in the United States with that of Indians in the United Arab Emirates:

“With Mexicans in the US, the labor market absorbs their economic and
demographic impact. The demographics are the other way in the Gulf. In the
UAE, there are 1.2 million locals with citizenship and 3.3 million foreigners with
temporary residency. Of the foreign population, 1.5 million are Indians. The
governments see the dominance of one nationality as a political threat, so the real
focus is on diversifying the foreign labor force composition. The UAE has only
three options. They could cut down on foreign labor levels and thus slow growth.
They could keep growth high, but try to manage foreign labor levels. Lastly, they
could just get out of the race. Dubai chose number two. Managing foreign labor
levels has meant, not reducing those levels, but attracting more Chinese,
Bangladeshi, and Sri Lankan workers, and fewer Indian workers.”

According to this individual, diversifying the mix of nationalities is more of a priority for
the Gulf governments than is reducing the presence of foreign labor in the region.

While two interviewees pointed to South Asian workers as a political issue for the
Gulf governments, three others argued that a more pressing concern is having the Gulf’s
development goals so fundamentally tied to the Indian workers. In this sense, Gulf
governments should be more concerned that the region is becoming less attractive to
Indian workers; for instance, an Indian national at a Dubai-based trade firm stated,

“India began competing for and taking away jobs from the Gulf in around 2005.
This was a new phenomenon. Indian companies began recruiting Indians back to
India from the UAE. Job security has significantly improved in India and has been
better since the recession started. The cost of living is higher in the UAE
compared with the past, so less money can be sent back home. On recruitment
missions to India, I used to have lines of people waiting for interviews. On my
most recent trip, I had to wait for people to come for interviews.”

Most significantly, this quote is representative of a broader theme that emerged during
the research interviews regarding the problematic role of foreign labor in the Gulf. One
compared the Gulf’s situation to that of Singapore, another key destination for foreign workers and also an explicit role model for Dubai’s diversification strategy:

“The former Prime Minister of Singapore once said that if Singapore is a Christmas Tree, the expats are, and should remain, the ornaments. In the Gulf, the expats are the tree. There are estimated to be 30-40,000 locals unemployed in the UAE alone, while expats continue to pour in.”

This interviewee’s analogy points to the fact that foreign workers represent a foundational structure in the region. The problem of course is that this foundation is temporary because foreign workers cannot obtain citizenship.

Attracting foreign labor and knowledge as a development strategy. What do foreign workers and their knowledge represent for the region’s post-oil aspirations? This theme is the final one identified here. From the interview results presented above, the role of foreign workers in the region has been that of a necessary production input or a problematic dependency. Indeed, the entire interview sample agreed that the Gulf requires foreign labor and knowledge for its own economic growth. More than a current requirement or predicament, however, some individuals argued that retaining a large foreign population is part of the region’s strategy for a future after oil. An HR manager from a trade firm in Jebel Ali Port, for example, argued that the mere presence of foreign workers generates non-oil revenue for the region:

“Expatriates with high incomes provide economies of scale for the UAE, which needs a big range of services to create a new economy for the UAE for after the oil runs out. You cannot create that demand locally with such small populations. Instead, you need to create new sources of demand, both internal and external.”

From these comments, one can see that creating a temporary home for expatriates is in itself a post-oil strategy. According to another interviewee, expatriate labor represents an
input and an output of the region’s infrastructure-led development which taken together creates a number of beneficial multipliers:

“Building infrastructure requires a certain breed of labor – people that want to make money and then leave. Dubai asked, “Why would an American want to go back to the States?” They then decided to try and mimic California here. They are not simply looking for international companies to come. They are thinking of supporting companies and SMEs [small and medium enterprises] who will accompany foreign investment. They are thinking of Western entrepreneurs, but also entrepreneurs who do not have a place to invest or work, such as Palestinians, Syrians, and Lebanese. The new populations are here to stay.”

From these comments, one can see that creating a global magnet for foreign labor and knowledge is Dubai’s ultimate post-oil ambition. While the sustainability of such a strategy may be in question, it is clear that the region has learned how to attract and manage foreign labor, knowledge, and investment for their benefit.

**Labor Market Reproduction: Methods, Practices and Preferences**

This research now probes the specific practices of hiring and recruitment employed by non-oil private sector firms in the Gulf in greater detail. The previous section discussed patterns of workforce internationalization and localization among foreign and local non-oil firms in the Gulf States. Most generally, the results from that previous section show that, while foreign firms are more internationalized in their business activities and workforces, the workforces of all firms remain dominated by foreign workers, regardless of occupation. By disaggregating this data, the results discussed indicate that firms recruit certain nationalities to fill particular occupations according to skill level, firm type, and industry. Two questions arise from the previous discussion of precisely how workers are distributed by nationality and occupation across
different types of firms. First, how do firms reproduce their workforces and what are the determinants of foreign in-migration for both skilled and unskilled migrants? Secondly, how are the entrenched patterns of occupational distribution by nationality reproduced, and why is there such little difference between foreign and local firms in how these patterns appear?

To better understand how firm preferences and recruitment methods produce the patterns of labor market segmentation, firms were asked two similar questions: The first question asked was “When recruiting for positions which require at least a university degree, for which occupations does your firm ‘almost always’ search locally (within the Gulf States)? The second question was structured exactly the same except for asking about occupations where the firm searched internationally (outside of the Gulf States). These questions had two goals:

First, to determine which occupations in non-oil industries have the Gulf States been able to develop local human capital capacity? This question was designed to ascertain which occupations could be filled locally or which occupations required recruitment outside of the Gulf region. If the human capital required by certain occupations and sectors is available locally, it would follow then that firms would be able to source this knowledge and manpower locally. If sector- and occupation-specific human capital is not available in the region, these occupations would be more likely to be recruited outside the region. Second, in terms of the social construction of work, which occupations have been designated as “migrant work” or “expat jobs,” and which jobs have local citizens deemed to be potential alternatives to public sector employment?
The responses to each question (multiple occupations were allowed) are displayed in Figure 5.7. The results both challenge some of the conclusions about employment distribution by skill and nationality and raise a new set of questions about the determinants of foreign in-migration and local employment in the Gulf. First, we know from earlier figures that all firms in the survey sample, whether foreign affiliates or locally owned firms, have predominately foreign workforces. This circumstance is even more likely to be true for higher-skilled positions. Yet, this figure would indicate that we should see a more equal distribution of foreigners and locals in these positions. If “almost always recruit locally” means recruiting Gulf citizens, then local workers would comprise closer to half the numbers that display workforce distribution by occupation and nationality. While survey respondents are more likely to search internationally than locally for executives, skilled professionals, and engineers and scientists, they are almost as likely to recruit these same occupations locally.

Moreover, 25% of the firms reported that they almost always recruit IT workers internationally, of which 40% almost always recruit locally for this occupation. Second, because lower-skilled positions are ones for which firms rarely search internationally, we would expect to have observed lower proportions of migrant workers (and higher proportions of local workers) in these positions. Yet, we know from earlier figures that low-skilled Asian workers, in particular, dominate the workforces of these firms. The local recruitment of sales and clerical workers could be explained by the fact that these occupations are more likely to require local language ability, but less likely to require specialized skills or international work experience.
One potentially powerful explanation for these patterns can be found by examining the main methods of recruitment utilized by these firms. First, and most significantly, Figure 5.8 highlights the overwhelming importance of external recruitment agencies in reproducing the region’s employment dynamics. Previous studies have documented the importance of recruitment agencies in facilitating and directing labor migration to the Gulf States. From this visual (Fig. 5.8), it is clear then that recruitment agencies also facilitate and direct skilled migration. Indeed, by considering these facts all together, it is clear that labor recruitment firms are key drivers in reproducing the overall Gulf labor market. Second, the services provided by recruitment agencies are equally important for hiring and employment at both foreign and local companies. This presents another explanation as to why both foreign and local companies report similar distributions of foreign workers by nationality and occupation, but differing patterns of local workers by occupation.

By examining Figure 5.8 (methods of recruitment) in conjunction with Figure 5.9 (primary sources of new hires), we can better understand some the contradictions observed between the employment compositions of these firms by nationality and occupation and their recruitment methods and preferences. First, research on highly-skilled labor mobility in the global economy emphasizes migration through multinational enterprises as the main determinant of mobility. From Figure 5.8, it is clear that skilled in-migration is not merely a by-product of foreign investment. “Placement from foreign headquarters” is in fact one of the least important methods of recruitment. Moreover, if foreign direct investment was a key determinant, we would have observed a much lower
proportions of foreign knowledge workers at locally owned firms in the occupational distribution figures discussed above. Figure 5.9 reaffirms this observation, as “international branches of your company” is one of the least important sources of employment for skilled workers. In the Gulf, therefore, highly skilled foreign migration and employment is not primarily a by-product of foreign investment.

This point raises a few important questions in light of the survey workforce data presented. Where are foreign knowledge workers coming from, if not from other international firms or foreign branches of their Gulf employer? Moreover, why it is that firms reported recruiting locally for knowledge workers almost as much as internationally, even though the composition of these workers remained largely foreign? According to the statistics offered in Figure 5.9, “other companies within the Gulf” represent the “primary source of new hires for positions that require a university degree.” More specifically, foreign workers are not only being imported from overseas for short periods; but they are remaining in the Gulf, taking employment at multiple firms. Figure 8 provides some clarification as to how this process is happening. Informal employee networks and ads in local publications are the most significant method of recruitment after recruitment agencies. Indeed, foreign labor and knowledge is remaining in the Gulf and competed for by both foreign and local companies.

Recruitment methods and hiring preferences. As hoped, interview respondents provided significant insight into the role of private sector recruitment and hiring practices in driving Gulf labor market dynamics. A number of interviewees, from both foreign and local firms, had clear ideas for matching nationalities with occupations:
“We look for Arab nationals from outside of the Gulf as operations managers. The top manager of an establishment over Arabs will be an Indian. Skilled positions will be a Westerner or sometimes an Indian. Semi-skilled workers will be Indians and unskilled workers will be from Nepal, Sri Lanka, or Bangladesh.”

For interviewees at firms with larger workforces and particularly those firms with a greater need for unskilled workers, the social construction of work have had little to do with the practice of matching nationalities to occupations. Instead this practice was a function of the available labor pools or knowledge bases are located and how they are accessed by firms. In this regard, recruitment agencies were frequently mentioned as significant intermediaries between the Gulf labor demand and the foreign labor supply, both skilled and unskilled:

“The main actors which drive employment in the UAE are the agents located in the migrant home countries. We have our HR manager contact the agent who puts ads in local papers saying “client available in town.” We travel to the country to conduct interviews. For key positions, we use head hunter firms as agents.”

Recruitment agencies know where to find available pools of both low- and high-skilled labor, and these locations are targeted for recruitment activities. Even for firms that use recruitment agents in the sending countries, however, interviewees indicated that they personally travel to key migrant -sending countries to make final hiring decisions. Accordingly, Gulf employment processes are, at least in part, outcomes of international labor market supply and demand forces.

On this same theme of supply and demand, interviewees at multinational firms were more likely to relate the composition of their workforce to the location of their international branches. As one interviewee at a Japanese industrial conglomerate stated,

“The upper management is from Japan, but they are only here to manage projects. Skilled workers come from Malaysia or Singapore where we have two big offices.
Semi-skilled workers are recruited from the Philippines and India. I travel to all of these countries regularly for recruitment, first placing ads in local papers and then setting up interviews.”

For multinationals firms, the parent headquarters already had in place an international recruitment infrastructure to staff their global operations. As a result, workforces at these firms would often include nationalities that were underrepresented in the overall Gulf labor market. For the workforce at the Japanese firm referenced above, this staff included workers from Malaysia and Singapore; these nationalities represented only a small minority at most firms surveyed.

*Pay by passport.* Staying on the theme of private sector hiring practices, six interviewees regarded the practice of matching occupations with nationalities as simply an accepted feature of the Gulf business landscape. More specifically, the prevailing wage structure in the region is based on nationality, for better or for worse. An interviewee at a multinational human resource consultancy stated,

“Firms pay expatriates according to passport: there are two pay scales for Western and non-Western employment lines. Many companies will have Western engineers with little experience that get paid more than a non-Western engineer with 10 years of experience.”

Wage structures and employment preferences are realities of the Gulf business environment, which serve to produce a set of given outcomes. This pay-by-passport mentality has influenced global migration trends for skilled South Asians according to an interviewee from a Dubai-based trade firm:

“Many South Asians come to work in UAE, so they can apply for a Western Visa from the UAE, which is much easier than doing so from India. Sometimes employees will begin in the UAE, get a Canadian visa, work in Canada for a few years and then come back to the UAE on a Canadian pay scale.”
Western employees are the most highly-regarded, and firms are willing to pay a premium for their services. A Western passport may not be enough, however, according to this same individual, as “Some companies say that a Canadian visa means Canadian pay, but others will say that Canadian pay is only for white Canadians.” For construction and engineering firms seeking to participate in major infrastructural projects, in particular, ensuring Western employee content is necessary for winning contract bids and satisfying client demands. According to an interviewee from one such firm, “Our clients want a Westener in the highest skilled or most senior positions; they want to see a Western name.” The preference for “white” Westerners with “Western” names in skilled positions has been problematic for firms seeking to lower their cost structures. This trend has, according to another interviewee, made North Americans and Europeans less attractive hires: “Brits and Americans have been getting replaced by South Africans oftentimes because they look like Westerners, but are not as expensive.”

*Sectoral variations in foreign and local employment.* Firms prefer Western workers for highly-skilled or senior positions despite the high salaries they command, and firms also prefer Indian nationals for low-skilled labor positions because they work harder for less. This is especially true in the construction sector in the UAE, a country which was, according to a Dubai-based human resource consultant, “built on First World engineering and Third World labor.” However, firms in this sector are not willing to pay Western salaries to Gulf citizens who cannot provide Western skills or Indian work effort. According to an Emirati national who handles overseas human resources for one of the largest construction firms in the region:
“The UAE construction industry is competitive because of the levels of productivity it achieves. Yet, nationals would prefer one shift rather than two shifts, short days rather than 12-hour days, and 5-day work weeks rather than 6-day weeks. Yet, this is how the construction industry operates. On top of everything else, nationals want higher than industry-average salaries.”

If working conditions and wage offerings drive UAE nationals away from the construction sectors, these same factors attract UAE nationals to the banking sector. This aspect was agreed upon by interviewees at four of the six large financial firms that participated in this study. One of these interviewees, a UAE citizen, argued that

“Banking and insurance are a special and present real alternative to oil for the UAE. Oil cannot create enough jobs, so banking is one way for Emirates to fill this need. After oil and the public sector, banking provides the highest private sector pay in the Gulf. It has increasingly become an alternative to the public sector in prestige.”

One of the dissenting opinions on this topic, however, also came from an Emirati citizen. He disagreed on the attractiveness of banking compared to the public sector:

“The government remains the most prestigious form of employment for a national. The entry level salary for nationals in the government is US $13,000 per month versus US $7000 in the best banks. Banks have performance targets, and nationals could get fired; this would not happen in the public sector. Nationals feel entitled to salary and position – expat managers have a problem with that.”

Regardless of whether Gulf nationals are attracted to the banking sector or whether they can be competitive in this sector, government policies across the region mandate local content in banking. In the UAE banking sector, this policy means progressively increasing the number of citizens employed by 4% annually. Private and public incentives for employment, such as those found in banking, provide the topic for the next theme identified from the interview transcripts.
Private and public employment incentives. Since the oil bust of the mid-1980s, each of the Gulf States has enacted programs to ensure local employment content in sectors viewed as potential post-oil economic bases. As discussed above, the financial sector has received the most policy attention and also disregard. If the goal of such policies is to ensure local employment content, labor nationalization and banking has been a success. Labor nationalization policies, however, have not been well received at all banks in the region. Most significantly, for HR administrators from outside of the region, affirmative action has hindered their firm’s workforce development strategies and business competitiveness:

“Banks need to increase the number of nationals they employ by 4% progressively every year. Theoretically, you could end up with 100% nationals. The problem is that there is no correlation in UAE banking between getting the right people and filling the quota. The available pool of Emirati hires in the UAE is around 300,000 to 400,000, and many of these want to work in the public sector. So, there are 50 banks competing for 100,000 to 150,000 Emiratis, three-quarters of which do not match the job requirements.”

For this Malaysian HR manager, in order to be competitive, a firm is required to be selective in its hiring practices, keeping the quantity of workers low, but the quality high. These requirements cannot be met if the firm is forced to limit its potential applicant pool and select from an alternative pool that may not meet the necessary criteria. The local employment mandate found in banking has created worries among non-financial firms, according to another participant: “Businesses and foreign workers are each frightened that one day either Emiratis will take over the jobs or the firm will be required by law to hire more Emiratis.” These comments raise some important questions about how attractive this region can really be to multinational companies and what it is that attracts
MNCs to the region in the first place. What if all foreign companies, even outside banking, were required to proportionally increase the number of citizens on their staff? This question leads us to ask what incentive there is for nonfinancial firms to hire local workers at all. The majority of interviewees at such firms stated that there is really only one such incentive:

“Outside of finance, most companies hire Emiratis just to hire Emiratis. The only incentive to hire a national is to get a lower fee structures for visas. If you have over 100 employees, and you make sure 2% are locals, then you pay less for visas and get faster visa processing for your expats. In the financial sector, the process is more coercive – you need to meet your quota or face the consequences.”

Indeed, the motivation for having some local employment content in your firm is, in fact, to facilitate the importation of more foreign workers. The broader theme captured by these comments and reiterated by others is that there seems to be very little incentive for firms outside of finance to interact with the local labor force or for local workers to interact with foreign workers in the non-oil private sector.

On the other hand, the respondents identified a number of official policies that served to integrate the region into the global economy and attract foreign participants to the region. For instance, of the 300 firms that responded to the survey, 39% of foreign companies and 22% of local companies are located in special economic zones. These geographically-bounded spaces provide a regulatory environment that then promotes a dynamic private sector environment while protecting the local public sector and the national governments. Firms are attracted to these zones through subsidies, but also by a lack of local regulation on ownership, business operations, and hiring. While the result is a highly-competitive business environment for firms and a revenue generating instrument
for Gulf governments, these spaces also create a number of unanticipated side effects. Most significantly, they retrench the physical and social divisions between foreign workers and the local population, thereby preventing the potential transfer of knowledge. Foreign knowledge transfer and local absorption is the topic of the next chapter.

Conclusion

The development of competitive non-oil sectors in the Gulf has stimulated a new demand for foreign labor in the form of both high- and low-skill migrants. Infrastructural development, foreign investment, and labor migration were socio-spatial outcomes and reflections of the 1970’s Gulf oil-based trajectories, and a means for the Gulf to deploy its oil revenue to create economic growth. In the same way, the building frenzy that accompanied the recent oil boom is indicative of the region’s principal non-oil diversification strategies, namely, the construction of property and physical infrastructure and the importation of a new and different set of skilled human capital to create service and knowledge-based economies. Just as foreign companies and their workers were imported to fill specific skill gaps and increase production capacity in the oil sectors, the same has occurred in non-oil sectors as part of the region’s many and varied diversification strategies. New economic activities indeed require new and different industrial cultures, skill sets, occupational specialties, and technologies.

Despite intensified diversification efforts, however, the cycle of reliance on foreign labor and knowledge continues, as the creation of new industries stimulates new inflows of expatriate labor in associated sectors. The large numbers of low-skill, low
wage jobs produced by the trade and tourism sector are unlikely to be future sources of employment for the region. The availability of a vast supply of cheap labor from the Indian subcontinent that is willing to work long hours means that there is little likelihood of a reduction in their presence (Girgis, 2000). Similarly, the emergence of the high-skill, high-effort jobs that are required to compete in the global financial industry or create research and development activities runs contrary to the Gulf’s past wage-effort profiles, which are based on entitlement rather than on industriousness or ambition. Accordingly, the result could be greater inequality and unemployment among the Gulf nationals (Leamer, 1999).

In stark contrast to the Gulf’s demographic and labor dilemmas, service and knowledge economies must serve as global-urban magnets for international capital and highly skilled labor. Managerial level operations and producer services require and need to attract skilled employees (Castells, 2000; Gershuny, 2005). In the Gulf then, policies to control migration are likely to see only partial success, and foreign workers will thus continue to be prominent in the social and economic dynamics of this region.
Tables and Figures

Tables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Local firms (n = 170)</th>
<th>MNCs / Joint Ventures (n = 130)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Sectors*</td>
<td>Trade, transport, comm: 28%</td>
<td>Resource-based industry: 25%</td>
</tr>
<tr>
<td></td>
<td>Finance, real estate: 27%</td>
<td>Engin./ construction: 23%</td>
</tr>
<tr>
<td></td>
<td>Engin./ construction: 16%</td>
<td>Trade, transport, comm: 18%</td>
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<tr>
<td></td>
<td>Resource-based industry: 12%</td>
<td>Finance, real estate: 17%</td>
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<tr>
<td>Ownership</td>
<td>---</td>
<td>EU 37%; US-CAN 19%; ME 12%</td>
</tr>
<tr>
<td>Foreign revenue/total*</td>
<td>17% of firms &gt; 50% revenue</td>
<td>40% of firms &gt; 50% revenue</td>
</tr>
<tr>
<td>Top intl revenue sources*</td>
<td>EU 17%; ME 12%; S-ASIA 11%</td>
<td>EU 34%; ME 20%; US-CAN 19%</td>
</tr>
<tr>
<td>Top intl branch locations*</td>
<td>EU 10%; S-ASIA 10%; US-CA 7%</td>
<td>EU 52%; S-ASIA 43%; US-CAN 45%</td>
</tr>
<tr>
<td>Int'l R&amp;D affiliations*</td>
<td>32% of firms</td>
<td>62% of firms</td>
</tr>
<tr>
<td>Number of employees**</td>
<td>Mean = 1321; Median = 375</td>
<td>Mean = 664; Median = 175</td>
</tr>
<tr>
<td>Year established locally</td>
<td>Median = 1997</td>
<td>Median = 1997</td>
</tr>
<tr>
<td>Pct. university grads</td>
<td>Mean = 53%</td>
<td>Mean = 58%</td>
</tr>
<tr>
<td>Pct. foreign employees**</td>
<td>Mean = 77%</td>
<td>Mean = 85%</td>
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<td>Workforce pct. managers</td>
<td>Mean = 13%</td>
<td>Mean = 15%</td>
</tr>
<tr>
<td>Workforce pct. professionals</td>
<td>Mean = 28%</td>
<td>Mean = 31%</td>
</tr>
<tr>
<td>Workforce pct. technicians</td>
<td>Mean = 18%</td>
<td>Mean = 22%</td>
</tr>
</tbody>
</table>

Table 5.1: Key Characteristics of Firms in Survey\(^{10}\)
*Chi-square significant at 0.05 **T-test significant at 0.05 (Source: Author’s survey)

\(^{10}\) The number of employees reported by local companies is significantly larger than that reported by MNCs and joint ventures. It should be noted, however, that local and foreign firm survey populations each share remarkably similar distributions for the number of total employees reported, the proportions of workers represented in each occupational category, as well as the percentages of university graduates.
Figures

Figure 5.1: Nationality of Workers by Occupation (all firms)
Each bar represents the proportion of a given nationality represented in the total workers of a given occupation. Follow the bars for each occupation across all of the nationality categories to reach a total.
(Source: Author’s survey)
Figure 5.2: Nationality of Workers by Firm Type (Source: Author’s survey)
Figure 5.3: Nationality of Workers by Occupation (local firms). See note under Figure 5.1 on how to interpret the figure. (Source: Author’s survey)

Figure 5.4: Nationality of Workers by Occupation (foreign firms). See note under Figure 5.1 on how to interpret the figure. (Source: Author’s survey)
Figure 5.5: Nationality of Workers by Sector (all firms) (Source: Author’s survey)

Figure 5.6: Nationality of Workers by Firm Location (Source: Author’s survey)
Figure 5.7: Positions for which your Firm 'Almost Always' Searches either Internationally (outside of the Gulf States) or Locally (within the Gulf States) **Chi-square significant at 0.05 (Source: Author’s survey)

Figure 5.8: Main Methods of Recruitment **Chi-square significant at 0.05 (Source: Author’s survey)
Figure 5.9: Primary Source of Hires for Positions which Require a University Degree

**Chi-square significant at 0.05**  (Source: Author’s survey)
Chapter 6: Knowledge Circulation, Transfer and Absorption

Since the 1970s, the Gulf States have made major investments to diversify their economies beyond oil. These efforts have resulted in some significant successes in creating new economic activities, as measured by the portion of revenue they create. In particular, a second oil boom (1996-2008) provided massive new windfalls that the region could use to invest in creating post-oil economies. These recent efforts have built on the most successful diversification projects undertaken in the region over the past forty years, but in new, more spectacular forms. Most significantly, the region has deployed its oil revenue to attract global flows of trade, migration, and investment with the goal of creating new hubs for services and for capital- and energy-intensive industries. The region’s governments have used their ability to source foreign-owned factors of production, learned through oil development, as a basis to construct a new competitive advantage. However, based on the results presented in the previous chapter, questions do still remain about the long-term sustainability of such a strategy.

The Gulf’s goal of creating globally competitive and locally sustainable economies for a post-oil era set into motion a series of contradictory processes that have, in turn, produced some unintended consequences. First, the Gulf States’ post-oil efforts have required new forms of integration and connectivity between the region and the global economy. New flows of trade, knowledge, labor, and investment were attracted to
the region for the purpose of jump-starting post-oil industries. More than a temporary measure, however, the region’s post-oil aspiration is now to create permanent hubs for trade, knowledge, labor, and investment and to remain attractive to these flows in the future. Second, the region has needed to find a way to make these global flows stick. This means that new industries are able to generate local revenue. It means creating greater employment opportunities for local citizens, and that the region can reduce its reliance on foreign labor. Lastly, it means that the non-oil industrial knowledge held by foreign participants in the region is transferred to local populations and markets.

This discussion will now move from conceptualizing labor markets as loci for processes of migration and employment to labor markets as loci for knowledge mobility, transfer, and absorption. The results from a quantitative survey of 300 firms in the region presented in Chapter 5 have thus far painted a picture of the Gulf labor market that would not be possible with secondary data alone. Interview results provided insight into how the Gulf’s labor markets are produced and reproduced from the perspective of those individuals responsible for making the hiring decisions at some of the region’s most significant firms. Firms and their workers, however, represent more than investors, employers, and employees; they also embody industrial capacity, technology, and knowledge. The results presented above, most significantly, raise the following questions: How, and to what degree, is global human capital attracted to a region that is being converted to local, non-oil development capacity? Is the foreign knowledge imported to create local development being transferred to or absorbed by the Gulf economies? This chapter presents results from both survey and interview data.
Strategies and Projects

Foreign investment. Since the Second World War, largely Western MNCs have had a major presence in the Arab Gulf region, especially in the fields of oil, construction and engineering – a presence that increased as the region became the key global supplier of oil in the early 1970s (Field, 1985; Kelly, 1980; Owen and Pamuk, 1998). During the first oil boom, foreign companies provided the Gulf with the required skills and technology to build this initial physical and social infrastructure, and especially state industry (petroleum) infrastructure (Kapiszewski, 2001). In the countries of the region, the majority of foreign investment came firstly from Western companies concerned with oil extraction, refining or exporting, secondly from service companies in the petroleum sector, and lastly a small number of industrial plants (Amin, 1976).

During the 1970s and 1980s, Gulf political discourse justified the presence of foreign companies and labor to its citizens as a necessary measure which facilitated the region’s rapid development. The distribution of oil wealth to citizens, and the availability of public employment, served to placate any objections. As the region’s governments initiated a number of major diversification efforts during this period, a new set of arguments were employed. Citizens appreciated the need to create new sources of economic growth for the sake of future generations and cheered the deployment of oil wealth into diversification. Without local capacity in non-oil industries, foreign companies and labor were required, according to the Gulf governments, as a temporary measure. The Gulf would import the necessary knowledge and technology required to jump-start non-oil industries, but this would only be a temporary measure. These
companies would train local workers, thereby transferring non-oil development capacity to the region. Upon completion, the region’s development projects were promised to provide jobs to the local populace and a future beyond oil for the country.

While the Gulf economies have experienced significant levels of non-oil foreign direct investment and skilled in-migration, it is widely acknowledged that, on the whole, low levels of educational attainment have prevented the absorption of technical skills and competencies from the presence of foreign knowledge (UNDP, 2003; Yousef, 2004). Oil revenues have funded vast education expenditures, providing higher education opportunities for Gulf nationals at home and abroad. These education expenditures did not include sectoral education priorities or requirements for student fields of study. As a result, the technical, non-petroleum education required to create or sustain diversified economic growth were neglected (Looney, 1994; Muysken and Nour, 2006). Foreign investors in oil and non-oil industries have delivered state-of-the-art technology and infrastructure to the region, but not the “know-how” required to transform these imports into local capacity (UNDP, 2003). The transfer of this knowledge to local markets, where present, occurred primarily in oil-related activities, with unique knowledge requirements that have little applicability to non-oil sectors. As a result, diversification has consistently required further imports of foreign capacities and capabilities.

_Dual track reform strategies._ The World Bank makes three key recommendations based on cross-country empirical data on successful diversification: i) open markets to trade and foreign direct investment, ii) invest in human capital, institutions and infrastructure, and iii) “play to your strengths” in building on existing comparative
advantage in natural resources (Eifert, Gelb, and Tallroth, 2002). For the most part, this is exactly what the region has done. During the recent oil boom, however, the Gulf States have turned towards a dual market reform strategy (Auty, 2007). This strategy creates a dynamic market economy alongside a distorted, rent-dependent economy. Rather than using a dual market strategy to promote competitive industrialization (as Malaysia did), Gulf diversification efforts have been resource-based (e.g. petrochemicals and plastics) and service-based (e.g. banking, trade and tourism), but there have been some recent inroads into knowledge-based development (e.g. research and development).

The 1998-2008 oil boom has provided the Gulf with massive new windfalls from which to invest in creating post-oil economies. In each country, three human capital policy programs have since been implemented to promote diversification: the attraction of foreign companies and labor in non-oil activities, labor force indigenization incentives to steadily substitute the foreign population in skilled occupations with local labor, and higher education expenditure to create a highly skilled indigenous labor force (World Bank, 2004). The impacts of these strategies vary across countries and economic sectors: certain types of companies and operations have been attracted, indigenization is applied only to certain occupations, and specific types of higher education have been promoted. These efforts have accelerated with the arrival of the second oil boom to promote service and knowledge-based development.

The Gulf’s dual-track reform strategies have taken three distinct geographic manifestations: first, industrial complexes for resource-based and energy-intensive industry; second, special industry and technology zones, research and university parks,
free trade zones and offshore banking; third, creating tourism infrastructure and amenities in the form of conference centers, hotels, resorts restaurants, shopping centers and amusement parks, and even man-made islands. The cities of the Arab Gulf, particularly Dubai, have also made strong efforts to attain global city status by taking advantage of “global spectacle” – constructing spectacular infrastructural projects and promoting mega-events that gain global media attention and attract foreign investors, corporations, workers and tourists (Short, 2004). The current proliferation of megaprojects reflects its success in attracting number of prestigious foreign universities to the region as well; some key participants in this regard are listed in Table 6.1 (Krieger, 2008a, 2008b).

For the development projects of the first oil boom the Gulf brought in foreign companies and labor as a “temporary measure,” a necessary input to jump-start new industries. For recent diversification projects, however, the attraction of foreign labor and knowledge is a final goal, part of the region’s post-oil aspirations. If inward flows of foreign direct investment are any measure, they have succeeded in this goal, as illustrated in Figure 6.1. Massive construction projects have attracted significant levels of foreign investment, primarily from global construction companies seeking to join in the building frenzy. Moreover, by building the require physical, technological and communications infrastructure for diversified development, a key goal is to attract foreign knowledge, trade and investment from around the world (James, 2008; Martins et al., 2008). This is accomplished through offering incentives and subsidies to foreign firms such as free or subsidized fuel, utilities and water, financial incentives, profit repatriation, land use in industrial zones, offshore banking and free-trade zones (Anthony 2003). In fact, these oil
windfall deployment strategies have made the Gulf more attractive to multinational corporations and their personnel (Keivani et al., 2003). MNCs include firms in the oil and construction sector seeking to profit from the recent oil boom and firms setting up corporate operations to service the wider region, for example. More striking, however, are non-oil companies in advanced producer service fields (e.g. finance, accounting, engineering services and advertising) having moved to the region. What do the foreign firms which have been attracted to the region, as well as their local non-oil counterparts, look like? Is the region succeeding in converting global human capital imported for economic diversification into local development capacity to sustain these industries?

*Diversification through Internationalization*

This section examines the international and local business and revenue characteristics of non-oil firms in the Gulf, based on the survey study described in Chapter 5. Figures 6.2 and 6.3 provide the level and geographic composition of international business and foreign revenue among foreign and local non-oil firms in the Gulf. For each of the survey responses presented in this section, participants were allowed to select more than one nationality in their responses. It is not surprising that foreign-owned companies would be more internationalized than their locally owned counterparts and that a higher percentage would report international branches and foreign business. Indeed, 52% of local firms reported “no foreign branches,” while only 18% of foreign firms had no foreign business. Additionally, 38% of local firms, but just 18% of foreign firms, reported “no foreign business.” Those MNCs and joint ventures without
foreign business or international branches are for the most part wholly-owned subsidiaries without significant business linkages to the global networks of their namesake headquarters.

The geographic composition of international branches and foreign business for each of these groups sheds an interesting light on the international connectivity and revenue sources of these firms. For both local and foreign firms “other Gulf countries” are the most important locations of foreign business. Many of the foreign firms surveyed, for instance, play important roles as regional headquarters or offices for their parent corporations’ operations in the Arabian Peninsula or the broader Middle East.

Local firms have established branches in “Other Gulf” or “Other Middle East” locations more than other regional categories. Interestingly, local firms reported “Europe” as the second most important destination of foreign business over the nearby “Other Middle East” or “South Asia” countries. North America is the least important location of foreign business for these local firms. The Gulf States are the primary suppliers of oil to Europe, while the United States gets most of its oil from Canada and South America. It is suspected that the linkages that the Gulf has established with Europe through the oil trade have provided business ties for non-oil trade as well. In terms of location of international branches for foreign firms, however, North America comes in second to Europe in importance. This contradiction reflects the important role the Gulf States play for firms from North America, but the lesser role that North America plays for firms from the Gulf.

Figure 6.4 displays the ownership of MNCs and joint ventures by nationality. Over 40% of MNCs and joint ventures reported local ownership. By definition, a joint
venture constitutes a cooperative agreement between at least two firms – either two foreign firms or a foreign firm and a local host firm. A distinct feature in the Gulf is that some countries require 51% local ownership over the foreign affiliates and subsidiaries of any MNC entering the region. Local ownership is primarily stipulated for the purpose of local profit generation and operational control. Gulf governments learned how to manage foreign companies, as oil concessions were negotiated and renegotiated throughout the 20th century. This learned skill has been particularly handy as the region sought to attract non-oil companies with subsidies and incentives. Much of the literature on the role of MNCs in the developing world has focused on the exploitative tactics of foreign companies. Such exploitation has been much less common in the Gulf States, particularly since the 1973 oil embargo, when the region’s monarchs realized the leveraging power of oil and money. Most of the MNCs and joint ventures surveyed are of European origin (approx. 35%) while North American firms follow at a distant second (approx. 20%).

Respondents were asked to provide the year that their firm was established locally in the Gulf. Aggregate responses by sector are shown in Figure 6.5. Responses disaggregated by foreign and local company ownership are shown in Figure 6.6. Most of the firms surveyed were established locally since the year 2000; the mean year is 1997 for both foreign and local firms. While there is a solid contingent of firms that have remained in the region since the first oil boom or before, only a small group arrived during the 1984-1994 period when oil prices were comparatively low. The firms with the longest history in the region are found in the trade, transport, and communications and resource-based industry sectors. The prevalence of trade firms established before and
during the first oil boom is a statement to the region’s trade history – particularly that of Dubai’s pre-oil role as a trade hub. Of course, many trade and transport firms still have linkages to the oil sector. Port construction was a major feature of the building frenzy that accompanied the first oil boom in the region. The Gulf’s rise as a global oil supply region required creating a state-of-the art seaborne transportation infrastructure. Many of the companies surveyed in the sector, however, have little or no relation to the oil industry. Wholesale trade firms, for instance, have flocked to the region’s free zones to take advantage of port infrastructure that is technologically superior to that found in the Indian subcontinent. More than half of the local firms in this sector were established before 1984. However, almost 40% of foreign firms in this sector arrived in the Gulf since 2000.

Finance and real estate firms are the most recent arrivals to the region, and most of those surveyed established themselves locally in the Gulf since 2005. Record oil prices meant record cash reserves which both attracted foreign banks and stimulated the rise of local financial firms. The region’s oil-fueled real estate boom played an equally significant role in attracting foreign finance and real estate companies, but also gave rise to major real estate conglomerates owned locally. Local finance and real estate firms have been more recently established in comparison to foreign firms surveyed in this sector. Foreign and local construction firms were key beneficiaries of the region’s building activity during both the first and second oil booms. While a number of construction firms have been established in the region since the first oil boom (e.g. the highly-profitable Saudi Binladen Group), construction activity largely came to a halt during the oil bust of the mid-1980s. The recent oil boom has witnessed new construction
firms emerging in the region and the reentry of firms that participated in the previous oil boom. Half of all firms surveyed from this sector were established locally in the region after the year 2000.

Resource-based manufacturing firms are spread more evenly across time periods than are the other firms. Being the first diversification strategy implemented in the Gulf, this sector is comprised of some of the oldest “non-oil” firms in the region. Oil as an industrial feedstock is more attractive when it is cheaper. Therefore, more of these firms arrived during periods when oil prices were at all-time lows. These industries are capital-intensive, however, and require large up-front investments. The only periods when the Gulf governments have had the necessary capital to make such investments have been during the oil booms. This aspect is reflected in the sectoral breakdown of foreign and local resource-based industry firms, where local firms represent a significantly older population of firms than their local counterparts. The social and personal services sector represents those firms that provide services to the expatriate communities and local populations. Most of this sector delivers health and educational services.

Figure 6.7 displays the location of most foreign business as represented by types of industries surveyed. “Other GCC” is the most important destination of foreign business for each sector with the percent of respondents by sector ranging from 35% to 57%. Resource-based industries are the most internationalized of all of the region’s industries – a testimony to the downstream and trade linkages this sector has with the oil industry. It is not surprising that construction firms are less internationalized than the other industries, as these firms provide a locally-fixed product. It is surprising that the
trade sector is less internationalized than any of the other sectors. Since many of these firms are located in globally important ports, like Jebel Ali in Dubai, one would think that they would have more global business linkages. Instead, these firms appear to be playing more important roles as regional hubs than as global hubs. The most significant linkages to Europe and North America are found in the resource-based industry (36% and 25%, respectively) and the financial sector (29% and 15% respectively). The most important linkage to North America is found in the resource-based industry sector as well.

If we examine how these patterns of internationalization vary by location, we can see some important sub-regional variations, as displayed in Figure 6.8. It is clear from this visual that firms located in Dubai are by far the most internationalized of all firms in the region. The most important destination of foreign business for firms from all companies is “other GCC” countries. The purpose of Figure 6.8, however, is to show how internationalized these firms are beyond the Gulf region. One striking feature is that firms established in Abu Dhabi are the least international of all firms. This finding can be explained by Abu Dhabi’s vast oil wealth and concomitant oil-driven economy, but less dynamic non-oil economy. Saudi Arabia edges out other locations in its connectivity with Europe and North America. Interestingly, firms from Dubai, Saudi Arabia, Bahrain, and Oman all have similar distributions of foreign business in the non-Gulf Middle East, Europe, and North America. Firms in Dubai are especially distinguished by their high levels of activity in South Asia and Other Asia countries.

The Gulf’s strategy to attract global flows of labor, knowledge, and investment presents a number of policy conundrums for the region's current need to generate local
employment and development capacity. On the one hand, the presence of international companies and their knowledgeable workforces creates opportunities for designing and implementing purposeful public policy. The region has clearly learned how to develop policies that can attract these global flows, and these foreign participants certainly generate profit – otherwise, the region would not be such an attractive destination. On the other hand, the region has had to figure out how to ensure that global human capital imported for non-oil growth also generates local human capital spillovers. This means that foreign participants must transfer their state-of-the-art industrial knowledge to the local populations. It also means that local populations must have the opportunities and capacities required to absorb this knowledge. Each side of this policy conundrum speaks to the broader issue of what it means for places to be “sticky” in the global economy.

Knowledge Circulation and Exchange

Foreign knowledge and local development. A key theme presented in the previous chapter is that there is very little interaction between local workers and non-oil private sector companies. According to an HR manager at the regional headquarters of a major international engineering firm, this lack of interaction is the primary obstacle to knowledge transfer:

“The UAE is not absorbing the knowledge of the foreign investors they have brought in simply because there is no interaction between foreign and local labor. There is no pressure to employ certain persons (in other words, nationals) and highly-skilled expats are busy and do not need the distraction either.”

Whether or not foreign and local interaction is taking place, the presence of international firms creates a potential for high levels of knowledge transfer. These companies have a
great deal of integration and connectivity to global markets via flows of migration, trade, and investment. While many interviewees were pessimistic as to whether the region can leverage the presence of foreign knowledge to create local development, others claimed that it is just a matter of time and patience:

“The mere presence of foreign firms and high-skilled workers tickles the local imagination. It has provided a great deal of opportunities, and if a local is willing to work hard, he can certainly do well in the private sector. This is a process, and locals are bound to learn from the presence of so much foreign knowledge.”

The diverging opinions presenting by these two quotations form the basis for the rest of this chapter. In particular, this chapter explores how international business and employment dynamics relate to local knowledge transfer. We know that there is very little incentive for firms to hire local workers, but what about incentives to transfer knowledge? Under which conditions is foreign knowledge being transferred to the local Gulf markets, and conversely, under which conditions is foreign knowledge merely circulating in the region and then exiting?

*Incentives for expatriate knowledge transfer.* While Dubai’s attractiveness as a destination has given it a clear edge in attracting global firms and workforces and in creating non-oil revenue, this same attractiveness presents a disincentive for knowledge transfer. According to an interviewee from a Jebel Ali trade firm, “Many conclude after their first contract that ‘Dubai has rewarded me, therefore I want to stay longer.’” This view negatively impacts potential knowledge transfer because, according to a second interviewee, “There is no incentive for an expat to teach nationals because they want to stay in Dubai.” For an expatriate, if training a local worker means training his or her potential replacement, then knowledge transfer could mean losing their job as well. Still
another participant claimed, “Expats are afraid to give new knowledge to locals; they are afraid for their job security.” In fact, the majority of participants pointed to expatriates wanting to remain indefinitely as the number one reason for foreign knowledge not being transferred.

These interviewees from financial firms, however, claimed to have found solutions to the problem of expatriates’ being unwilling to transfer knowledge for the sake of self-preservation. For some, this issue means making succession plans known to expats from the start: “Expats need to believe that Emiratis have the right to take their job. There will always be some insecurity, but succession planning should make things more clear.” For others it means a strategy of more “carrots” than “sticks.” As another interviewee responded, “expats need to have an objective to pass on knowledge. We give promotions and monetary incentives to expats who are recognized as transferring knowledge to nationals.”

Whether the firms used either approach, financial sector interviewees all agreed that there are certain expatriates with specialized skills that are invaluable. Banks, for example, cannot afford to allow these employees to feel that their jobs are in danger. The solution to preventing this from happening is quite simple, according to one respondent: “We make sure that highly-skilled expats do not feel threatened because the nationals we hire are very young and inexperienced.” On a similar note, one interviewee distinguished between the need to both attract and retain some expatriates and the need to simply attract a more expendable variety: “We attract expats with high salaries and retain them via share-ownership options. Some of our expat hires are short-term, and we only need to
think about how to attract them. Others are long-term hires, and we provide them with more.” These comments reflect a broader theme from the interviews: that the methods used to attract foreign knowledge to the region help to determine what happens to that knowledge once it has arrived.

Highly-skilled labor is attracted to the Gulf for the high salaries that firms offer, and they remain because of the quality of life the region offers. The Gulf has succeeded in attracting the labor and knowledge it needs, but not all people are willing to travel internationally for a temporary job. The expatriate workforce in the Gulf is a footloose workforce. This aspect stimulates high levels of labor mobility within the region, as expatriate workers seek out better opportunities. It also further complicates the prospect of knowledge transfer: “Expat turnover is very high – it is difficult to actually capture expat knowledge.” It must be remembered as well that these are temporary workers by definition. They can indefinitely renew their visas, which generally expire every three years, but can never become citizens. The United States attracts highly-skilled international workers, but it is also able to permanently capture their knowledge through the immigration process. The expatriate workforce in the Gulf is essentially a mercenary workforce. This circumstance is problematic for the region, but also for its firms. As one interviewee indicated, “Closed labor contracts hurt employee development in the UAE because employers cannot plan long-term or develop employees for long relationships. There is no sense of building careers.” The same factors that attract expatriate workers to the region also prevent them from feeling truly invested in the Gulf’s national development goals as well as their employer’s human resource development priorities.
We have established then that highly-skilled workers are attracted to the Gulf and want to remain in the region because of the high wages and quality of life offered there and also that this is a disincentive for knowledge transfer. It is also clear that firms in the region need to keep their costs low. While some firms are willing to pay high salaries to highly-skilled Westerners because of the skills and experience they offer, very few firms are as willing to pay the same high wages to local citizens. For the President of a multinational HR consultancy in Dubai, this result indeed contradicts the entire purpose of utilizing expatriate workers and with some unintended consequences:

“The definition of an expat is someone who goes to a country with specialist skills, transfer those skills, and then leaves. Here the length of stay is open-ended. When a senior western expat does come here on a two-year contract to train a local replacement, he usually ends up wanting to stay. Why should he want to train anyone? Anyway, it is more likely that he will be forced to train a cheaper TCN [Third Country National] as a replacement than a local.”

These comments suggest that when knowledge transfer does occur, it does so to replace more expensive skilled Westerners with less expensive but equally-capable skilled South Asians. Based on such comments, we can see that human resource development in the UAE is not always for local citizens.

Structured knowledge transfer agreements. One theme which arose particularly among industrial and engineering firms was that of “structured knowledge transfer agreements.” For multinational industrial conglomerates that build and operate industrial plants and particularly those with operations in the developing world, contracts stipulate some sort of local training and technology transfer. Large-scale industrial projects are usually “turnkey” operations. These operations are often so large and complex that only the world’s largest and most advanced companies can undertake them. They are so
expensive that public investment is also generally required for financing. The most common agreement is one of “build, operate, and transfer” or “BOT.” The international firm will deliver and put together a particularly hard technology, machinery, or infrastructure. After the operation is up and running, that firm will begin the process of transferring the ability to operate and maintain the project to the local people. Joint ventures between the international firm and a local business are created for just this purpose. Even after training is complete, a few employees from the international firm will usually remain on staff permanently, and long-term maintenance will also be included in the contract. This is not how things work in the UAE, however, according to an interviewee from an international engineering firm:

“Structured knowledge transfer agreements are overhead. You’ll never win a bid putting that kind of junk in. I have never had a commercial agreement to train clients or their workers. Training has to be covered with overhead cash flow, and this does not add to the bottom line profit for the clients.”

This interviewee, as well as others, indicated that their ultimate contractual objective is to create a functioning and profitable operation. Hiring and training benchmarks will cost money. If the client is not asking for such provisions and if the lowest bid will win the contract, why include such offerings in a proposal?

When the interviewees were not involved in joint ventures, their companies would sign renewable contracts with the objective to permanently remain in the region to run the operation. Some portion of the revenue would then be spilt with the local government. With joint ventures, this meant turning the operation over to a local counterpart in name, but the local firm would then outsource employment to the foreign firm. From these comments, we can see that a disincentive for knowledge transfer in the region is the
condition under which foreign labor, knowledge and investment does enter the region. Local governments effectively operationalize incentives to attract global investment and knowledge, but similar incentives are not operationalized for knowledge transfer.

The topic of operationalizing knowledge transfer raised comments made by three interviewees about the determinants of regional variation in local development capacity. The UAE has been the most successful in attracting foreign labor, knowledge, and investment. However, they have been the least successful in ensuring that this know-how is transferred to the local population. Saudi Arabia, on the other hand, has had more success with the latter:

“Structured knowledge transfer occurs in the absolute minority of cases in the UAE. In Saudi, this does happen sometimes, with two- to six-year benchmarks for number or percent of locals employed. This doesn’t happen in the UAE because neither party is committed. Expats want to stay indefinitely, and the common goal for foreign and local firms is to create a lower cost workforce.”

Both the secondary and survey data would suggest that Saudi Arabia’s initiatives in this regard have worked; they have significantly more local employees represented in the overall workforce as well as in their industrial sectors. The UAE, on the other hand, is clearly a more attractive destination for an expatriate than Saudi Arabia. Wages and quality of life are both significantly higher in Dubai, where a Western employee can live a truly Western lifestyle.

Training and development. The survey elicited information on firm training and research and development activities. From Figure 6.9, we can see that these firms are certainly investing in a number of training activities for their employees. While on-the-job training is the most significant training method, almost 40% of foreign companies
send employees abroad to international headquarters for more advanced training. MNC affiliates also come to the region as members of their parent firms’ global network of headquarters, branches and subsidiaries. This international connectivity presents an incredible opportunity for local knowledge transfer. Certainly, expatriate knowledge workers who enter the region as part of a “tour of duty” for their firm are indoctrinated into this global training infrastructure. Multinational employers are thus providing their global knowledge workers with new and more advanced skill sets and preparing their employees for advancement to their next tour of duty. Maybe this next duty station is in the Middle East, or maybe it is in South America. The potential for local workers to join this global training and employment network could provide a significant source of local capacity creation. Perhaps local workers would take employment with the MNCs and remain in the region. Perhaps they would leave the region, but return later as entrepreneurs. Such knowledge transfer could only occur, however, if local workers were being hired. Instead, while MNCs are undertaking significant knowledge transfer activities in the region, these activities are almost entirely for the benefit of a foreign employment base.

Firms were also asked about their local and international research and development affiliations. Almost 50% of the foreign companies surveyed possess international R&D affiliations with their parent headquarters, and 25% have such affiliations with international universities. Again, such affiliations have little potential for local spillovers if there is not actual local-foreign employment interaction occurring. The R&D linkages between foreign and local firms do provide some cause for optimism; 23%
of local firms reported R&D affiliations with locally established foreign firms. However, a question remains as to what extent these affiliations actually generate local capacity or, conversely, the extent to which they benefit an expatriate knowledge base employed at foreign companies.

Scales and Types of Industrial Knowledge

In the previous chapter, the results obtained from questions on recruitment methods and preferences showed in general that i) foreign workers dominate skilled positions at both foreign and local companies; ii) foreign knowledge workers are often recruited from within the Gulf, largely at other locally-established foreign or locally-owned companies; and iii) citizenship plays a major role in explaining patterns of employment and methods of hiring and recruitment in the Gulf. Accordingly, one would assume that “nationality” would be at the top of the list when firms were asked the question, “What are the most important factors when recruiting for positions which require a university degree?” Yet in Figure 6.10, we see that nationality is one of the least important factors. Moreover, if international industrial knowledge is such an important factor of production for firms in the region, it would naturally follow that “international work experience” would be an equally important factor in determining employment. Instead, “local Gulf work experience is by far the most important factor in recruiting for skilled positions among both foreign and local firms in the region.

The “importance of Gulf experience” was a theme explored with each key informant interview session. In particular, interviewees were asked to identify what types
of knowledge their firm and industry requires, which parts of this knowledge are common to their industry internationally, and which parts are specific to how their specific firm or industry operates in the Gulf. What is “Gulf-specific knowledge” and what is “international knowledge?” How are these requirements defined differently across various industries?

*Engineering.* For one interviewee, “Gulf experience” represents a right of passage for membership to a club, a barrier for entry to the region similar to that seen in Singapore:

“The Gulf skilled market is like that of Asia. It is hard to get into Asia without Asia work experience. The vast majority of companies want employees with experience in the Gulf. Some companies take it too far to act as though experience outside of the Gulf does not count, but MNCs are more open. Certain countries, like Kuwait or Saudi, have very difficult work environments, and Gulf experience is more important there than international experience. In the UAE, more than Gulf experience, perhaps, multinational experience is important.”

According to this individual, it is tough to initially gain entry to the region’s skilled labor market, but once you are in, you are in. Gulf experience is important for those firms whose operations are located outside of “global Dubai” where international experience may be more highly valued.

For firms in Saudi Arabia or Kuwait, Gulf experience is a badge that shows that an employee is capable of operating in tough working conditions. These environments attract and require a certain type of individual according to the HR head of a British engineering multinational:

“These are $3 and $4 billion projects. Client requirements can make the first few years very demanding. New hires from the UK come here as part of the career path and many don’t ever want to go back to the doldrums of UK life. They
almost get addicted to the high-pressure environment. They may go from Abu Dhabi to Saudi to Malaysia and never return to the UK on a permanent basis.”

Interviewees from engineering, construction, and industrial firms focused their comments on describing the type of worker that can provide their firm with the necessary knowledge and technical skills. These engineers and technical workers, tested by the working conditions experienced outside of the region’s plush cities, are not recruited in the same way as a Dubai banker, for instance:

“We recruit primarily through word of mouth. This is a very specialized field and workers know people in the industry. Field service technicians have no degree, but a lot of experience. Application engineers who do design work are engineers with degrees, but they are also hired through word of mouth.”

This type of worker, the permanent expatriate, has been produced and reproduced via the Gulf’s labor market since Standard Oil’s first entry there in the 1930s. More than merely labor, engineers from Western MNCs deliver on behalf of their employers a very special type of industrial knowledge and technical capacity specific to the Arabian Peninsula. Their employers conduct research and development on hard technology to sell to their Gulf clients, which can withstand the rigors of the region’s physical environment. As one interviewee rhetorically asked, “Do you know how hard it is to build on sand … to make a power plant run in this kind of heat?” This technology is designed specifically for sale and use within the region in the world’s largest expanse of desert, but it has little applicability for implementation in other contexts. Most interestingly, the most sophisticated development knowledge in the Gulf is developed and located outside of the region, at these firms’ headquarters in Houston and London.
During the first oil boom, the region was an attractive destination for international construction firms, but a mass exodus occurred with the onset of the mid-1980’s oil bust. While the construction industry may not represent a sustainable base on which to build a post-oil future in the region, numerous forms of engineering knowledge will still be required. One interviewee indicated that expatriate turnover is more of an issue for some sectors than it is for others:

“In the construction sector we need people with specific skills to hit the ground running without training. This is contract work, so an expat’s length of stay in the UAE is not an issue; we don’t need time to develop an employee. In the health sector, however, they need longer stays to develop expertise because of the sector’s different skill requirements. They are hurt by not having people in-country long enough to be adequately trained.”

Even if the construction sector does not need time to develop its employees, however, the question remains as to how or whether their knowledge can be transferred under conditions of high worker turnover. Has the region taken steps to absorb foreign engineering and construction knowledge during the recent oil boom? According to an Egyptian national from a consulting firm, the UAE has not yet, but they must, and they eventually will:

“Locals have no chance of competing in the construction sector because there is one engineer for a thousand low-skilled workers. You cannot compete with 1000 laborers, so you must compete with the engineer, but the private sector is not willing to train locals. These firms are here for a year to finish a project, and then leave. A highly-educated local workforce must include specialists in engineering. Skilled local engineers would be able to run everything that has been created here. Engineering know-how is applicable to many fields in both the private and public sectors, unlike oil. Eventually, the UAE could export engineers.”

While these comments do provide a sense of optimism for the region’s future, an Emirati national at a major local construction firm provided a more pessimistic outlook. He
claims that the UAE has not been able to create local engineering capacity because the work environment offered in the construction industry is just not attractive enough for UAE nationals to study engineering:

“Of the UAE nationals who are looking for employment, very few will want to work outside or in the harsh environment of construction. There are much more comfortable jobs in other sectors, such as government or banking. The boom is over, and we need to be more careful and long-term in our thinking. Currently there is no local capacity in engineering and construction. This sector will need UAE nationals, but there are very few engineers coming up in the market.”

For this individual, an oil bust means a lost opportunity. An interviewee from a multinational engineering firm expressed similar sentiments in that “All construction and engineering companies will leave after the building boom to find new markets.” Because these interviews took place after global crude prices collapsed in December 2009, many participants pondered the significance of the decade long oil boom ending.

Trade. For firms in the trade sector, the importance of Gulf experience is something quite different. For these firms, Gulf-specific knowledge represents having knowledge of how to negotiate the Gulf’s labyrinth-like bureaucracies:

“Dubai is a never-ending, constantly-changing maze of rules and regulations. Some of these business regulations are only found in the Gulf, and some, only in the UAE. The importance of people with Gulf experience is that they know how to operate here, and to navigate frequent changes to rules and regulations.”

During my shorter trips to the region for preliminary research, and especially during my year of dissertation fieldwork, I learned to appreciate such specialized skills. Visa regulations constantly changed, requiring visits to one government ministry or another to update my residency status. At one point, the UAE mandated a national identification card for all foreign workers, including myself. A massive advertising campaign was
implemented, with signs warning of the consequences for any expatriate who failed to comply. After I made numerous failed attempts to take the required steps to obtain this card, I learned that the government had cancelled the entire program. While I wasted significant time, money, and energy trying to do as I was told, more experienced expatriates knew from the beginning to ignore the program. From key informant interviews, I learned that businesses are constantly subjected to new rules and regulations or changes to existing ones. A newcomer to the region, such as me, would not be able to navigate such a dynamic regulatory environment or be able to follow the necessary steps for compliance. Firms need workers with experience in the region who can do just that.

If firms in the trade sector require the knowledge to be able to navigate the Gulf’s rules and regulations, we should also identify the Gulf’s mastery in attracting and managing foreign participants as another form of trade knowledge. In effect, the Gulf experience has created a distinct competitive advantage in attracting foreign companies, thereby gaining access to their networks of global labor pools. The purpose is clear—to use oil money to import new development capabilities, thereby accelerating the learning curve of post-oil development. His ability is a more positive legacy of the oil era.

Dubai, at least, the origin of this knowledge can be traced to its history as a trade hub:

“There is no Emirati knowledge or know-how except in trade. This is being exported through running other ports around the world. It is also a base for Dubai to establish its high-tech priorities. The high-tech free zones are just more advanced forms of the traditional free zones that focus on import and export.”

The region’s trade heritage also provides a base for its post-oil human capital aspirations. Highly skilled migrants, in particular, have become objects of the Gulf States’ very open and public strategies to become global hubs for talent. Dubai, especially, represents a
distinct trajectory in the system of world cities – the creation of a knowledge node that is completely reliant on foreign labor. Along with the vast numbers of low-skilled service sector workers in Dubai are other highly skilled foreign engineers, architects and planners. These highly skilled migrants are explicitly facilitating Dubai’s world city aspirations through designing and building the urban infrastructure required for the Emirate’s service and knowledge aspirations (Malecki and Ewers, 2007). The creation of this infrastructure is serving to attract MNCs and foreign universities, but it is in turn also attracting their workers. This situation runs concomitant with Dubai’s recruitment programs, namely, using national oil-windfalls to attract highly skilled professionals.

In addition to the region’s current trade efforts, one interviewee pointed to the success of the UAE’s banking sector as being a beneficiary of the country’s trade heritage and the skills its government possesses for accessing global markets:

“Banking is special because it is a natural extension of the UAE’s traditional role as a center of trade, connecting the Middle East with India and Africa. Banking is a natural extension of this tradition. Just as the UAE provides a safe and secure place for trade, it provides safety and security for financial investors. The government likes banking because it is something that can put you on the map.”

The types of knowledge required by firms in the financial sector provide the focus for the next theme discussed below

Finance. The financial sector requires both Gulf-specific knowledge and international knowledge. Gulf-specific knowledge in banking is based on local relationships. The need for local content in order to generate revenue provides an important explanation for how and why the region has succeeded in creating local capacity in this particular business sector.
“The most important thing when I hire someone is the depth of their Blackberry. To get to the real money here, you need to know the families, and that is one skill I can’t get from an expat. We may have a very highly-skilled expat, but if we are trying to get business with one of the ministries here, that person will not have any contacts there. On the other hand, a local may personally know the minister.”

As each financial sector interviewee indicated, the real money in the Gulf is held by government ministries, the Gulf leadership, and the Royal families. The only way to access this money and the resulting business for a bank is to establish local connections. By employing Gulf citizens, a firm is establishing these connections.

To be sure, financial firms need expatriates, but foreign and local workers do each add a different form of value. This is even the case for international banks, as one interviewee stated:

“We benefit from expats who come in from foreign banks and locals who join us from the public sector. Expats bring global corporate culture, technical knowledge of risk and governance, and hands-on experience. Locals from the government sector bring sales and relationships. We try to find a mix between local talent and foreign experience.”

Gulf-specific knowledge in banking, therefore, is twofold. First, it is local relationships, fundamental for business success for both foreign and local firms. Foreign banks are attracted to the region because of the vast stocks of capital it offers. The only way to access this capital is by hiring people who know the region’s elite. Second, it is the sector-specific technical expertise acquired through international experience. This expertise can only be obtained through expatriate workers whose careers have carried them up through the development ladder of an international bank. As another interviewee said, “We don’t buy expats; we buy experience, and the knowledge of doing things.” In sum, banks require and benefit from the international experience and the technical
expertise provided by expatriates and also the local relationship knowledge provided by local workers.

Are banks able to create local workers that can offer both traits? For four of the six banks that participated in this study, the answer is “yes.” For each of these firms, this task involved some form of “expat shadowing.” One firm in particular had quite a comprehensive strategy to transform local workers into international financial experts:

“Knowledge transfer from expatriate to local labor is ensured through three programs. We have a ‘parachute program’ with a foreign expert from the industry. We hire a consultant for a 6-month contract with the only task being to shadow Emirati and get them from A to C. We have a buddy system that uses an external coach or mentor. If a person lacks experience in risk, the company will find people with that experience who will then sit with him for few days and create scenario plans. We also have a talent management system where we send middle managers abroad for MBAs, and higher level ones abroad for strategic courses.”

Banks in the region require high levels of work effort, local connections, and international experience. If most Gulf citizens would prefer the public sector, how have financial firms succeeded in developing such high levels of local employment content at their firms?

In general, the Gulf States have been able to successfully create local banking capacity for the following reasons: First, the banking sector builds on existing strengths in the region, ranging from the Gulf’s pre-oil trade heritage to its experience investing oil revenues in international equity markets. Second, it provides a working environment not dissimilar from the public sector and offers the highest private sector pay of any industry in the region. Third, while successful financial firms will require international experience and technical expertise to run their operations, they require local employment and knowledge content to make profit. Fourth, firms have effectively ensured high levels of
interaction between foreign experts and local workers, which has in turn generated high levels of knowledge transfer. This interaction is possible because Gulf governments have mandated local employment content at all firms in this sector. Whether banks like it or not, this strategy provides a positive incentive for the training of local workers in a non-oil industry.

Emirati HR administrators who were interviewed did not seem bothered by having to meet local employment quotas. Moreover, they were not interested in recruiting individuals who preferred the public sector:

“We have achieved the largest nationalization of any bank in the UAE, but we do not look at it as a quota system. Being a leading organization in the region is a responsibility. Moreover, we are not interested in people who would want to work in the public sector. We want Emiratis who seek a real challenge.”

For this individual, the hiring and training of local citizens is both a public service and a national duty for any large financial institution. It should be noted that these remarks came from the head of HR at one of the UAE's largest local banks. Moreover, Gulf citizens are attracted to banking for more than just high wages according to another Emirati interviewee: “I have seen lots of well-educated Emiratis from very good families that could easily get a high-paying government job, but they want the challenge and international experience provided by the banking sector.” Identifying local talent presents a challenge with great rewards. In particular, it is a chance to alter the popular perceptions of Emirati citizens and a chance to develop local, non-oil capacities.
Conclusion

As the Gulf States attempt to invest in sustainable futures, they face (at least) three major uphill challenges. First, there is the contradiction between the culture of competitiveness and innovation, which requires openness and participation, and the region’s preference for insiders and reliance on government or paternalistic monarchs. Second, as even later-comers than the Asian late-comer economies, it will take considerable time for Dubai, Abu Dhabi, and Qatar – not to mention Saudi Arabia, Kuwait, and Oman – to amass a body of knowledge about global firms and their decision-making processes. While incentives and subsidies are important, they are only a partial strategy, and one that can be manipulated by the MNCs (Schwag Serger, 2006). Third, the region is unique globally in its dependence on foreign labor, so there are no clear precedents available to follow.

In the short run, the fact remains that local human resource capacity is not adequate to support the region’s ambitious knowledge-based development plans. The only realistic option is to increase intake of foreign talent, but “enticing the required number of skilled knowledge workers to Dubai, however, is not as straightforward as it may appear” (Keivani et al., 2003, p. 37). Dubai “faces stiff competition for foreign talent from more established and advanced economies in Southeast Asia, Europe, and North America” that can offer incentives to retain key personnel. These more established centers also have a competitive advantage in attracting and retaining skilled labor due to their established networks and greater entrepreneurial opportunities.
Highly competitive economies are the loci of global knowledge circulation where ideas are exchanged and cutting-edge innovation takes place (Hughes, 2007). The question remains as to whether oil, money, and location are enough of an advantage to create the necessary conditions for global competitiveness. Can money buy development? Does hiring the best consulting firms and building the best buildings or even creating the best climate for inward investment create real, long-term development? This is the mode of operation in the Gulf States. Without the local capacity to create world-class, diversified economies, these countries instead have chosen to use windfalls from the current oil boom to import the knowledge and build the physical infrastructure required by a post-oil economy. The idea is that their money can be used to hire the best personnel in the world and then create a highly attractive investment climate. The desired process is that of cumulative causation, so that there will always continue to be a steady stream of knowledge and capital. While these countries are clearly investing in local capacity, population constraints ensure that local capacity will never be enough; indeed, this may not even be the intended result. The key assumption is that they will always have the funds to hire the best, and by having a state-of-the-art infrastructure and highly attractive investment climates, this process will become self-generating.
Tables and Figures

**Tables**

<table>
<thead>
<tr>
<th>Location</th>
<th>University name</th>
<th>Year</th>
<th>Degree or course offerings</th>
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<tbody>
<tr>
<td>Abu Dhabi, UAE</td>
<td>INSEAD Business School</td>
<td>2007</td>
<td>Executive-education courses</td>
</tr>
<tr>
<td></td>
<td>Johns Hopkins University</td>
<td>2008</td>
<td>A graduate program in public health</td>
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<td></td>
<td>Massachusetts Institute of Technology (Masdar Institute)</td>
<td>2009</td>
<td>Graduate education and research in science and technology</td>
</tr>
<tr>
<td></td>
<td>New York University</td>
<td>2010</td>
<td>Full liberal-arts curriculum, undergraduate and graduate</td>
</tr>
<tr>
<td></td>
<td>Sorbonne</td>
<td>2006</td>
<td>License, master's, and doctorate in 10 departments</td>
</tr>
<tr>
<td>Dubai, UAE</td>
<td>Boston University</td>
<td>2008</td>
<td>Graduate dental training</td>
</tr>
<tr>
<td></td>
<td>Harvard University</td>
<td>2004</td>
<td>Continuing-medical-education courses</td>
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<td></td>
<td>London School of Business &amp; Finance</td>
<td>2007</td>
<td>Executive M.B.A. and executive-education</td>
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<tr>
<td></td>
<td>Michigan State University</td>
<td>2008</td>
<td>Full liberal-arts curriculum</td>
</tr>
<tr>
<td></td>
<td>Rochester Institute of Technology</td>
<td>2008</td>
<td>Eventually, undergraduate and graduate courses in engineering, technology, finance and service and facility management.</td>
</tr>
<tr>
<td>Doha, Qatar</td>
<td>Carnegie Mellon University</td>
<td>2004</td>
<td>B.S in computer science, information systems, and business</td>
</tr>
<tr>
<td></td>
<td>Georgetown University</td>
<td>2005</td>
<td>B.S. in foreign service</td>
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Table 6.1: Foreign Universities in the Gulf States (Source: Adapted from Krieger, 2008a, 2008b)
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Chapter 7: Conclusions of the Study

This conclusion serves to summarize and synthesize the findings presented in this study. It also discusses the broader significance and implications of the study’s findings, for the Gulf region, and for oil economies more broadly, as well as for a post-oil global economy. This research studied the human capital dimensions of structural change in oil economies. In particular, it examined how oil-driven development in the Arab Gulf States has resulted in entrenched patterns of employment and migration, which have forestalled efforts by these countries to transition into diversified, non-oil economies. This was accomplished presenting results from a four-decade analysis of Gulf industry and labor data, a large-scale employment and human capital survey of 300 companies in the region, and key-informant interviews with human resource professionals in the UAE.

Since the first oil boom (1973-1986), the oil-abundant, labor-deficient Arab Gulf States have searched for ways to diversify their economies beyond oil, and into more sustainable forms of economic growth. Oil-driven development in the Gulf, however, resulted in entrenched patterns of employment and migration, which present a human capital barrier to structural change. The oil bust of the mid-1980s forced the region’s governments to confront an inability to expand public employment in the presence of young, fast-growing populations, high local unemployment, and large levels of foreign labor. A second oil boom (1998-2008) has provided the Gulf with a new opportunity to
address the lessons and legacies of oil development in the region. Oil windfalls have been deployed to construct new evolutions of the most significant diversification megaprojects from the 1970s, representing two key post-oil trajectories: first, resource-based industrialization, to include petrochemicals, plastics and aluminum; second, services and knowledge activities, in trade and entrepôt, information technology, tourism and education. In order to create and sustain such development trajectories, new forms of human capital are required. Indeed, the Gulf States have sought to leverage their ability to attract foreign labor, knowledge and technology, learned through oil development, as a basis on which to construct a new competitive advantage.

Summary of results. The secondary data analysis for the period of 1975-2007/8 identified major successes in creating new sources of economic growth, as measured by the revenue generated; this was found to be particularly true since 1998. Three distinct initiatives were identified to have been implemented since the 1980’s oil bust in each of the Gulf States to assist in promoting diversification: the attraction of foreign companies and labor in non-oil activities; labor force nationalization policies to steadily substitute the foreign population in skilled occupations with local labor; and higher education expenditures to create a skilled indigenous labor force. The impacts of the strategies have varied across countries and economic sectors: new companies and employees were attracted to the region, indigenization was applied to only certain occupations, and specific types of higher education were promoted. Since the 1998 oil boom, the Gulf States have most notably invested heavily in massive urban development projects designed to create global finance, trade, tourism and education hubs (Keivani et al., 2003;
Reed, 2006). Results from secondary data analysis in Chapter 4 showed that, while the region as a whole has succeeded in creating new revenue streams over the past four decades, diversification efforts have not remedied the region’s labor market and human capital distortions. As a consequence, the creation of new sources of economic growth in the region, has not remedied the legacies of oil driven development.

Survey and interview data were presented together in both Chapter 5 and Chapter 6. The purpose of Chapter 5 was to identify how the large-scale, national and regional level labor market patterns dynamics in Chapter 4 are produced and reproduced. This was accomplished by focusing on the workforce composition and employment practices and preferences of key foreign and local firms in the Gulf’s non-oil private sector. From this chapter we learned that the Gulf labor market is reproduced, in part, through social constructions of work according to nationality and occupation. These patterns are legacies of oil-driven development in the region which have remained as the Gulf has diversified its economies, and have since been adopted by firms outside of the oil sector.

Gulf citizens who are employed in non-oil sectors primarily fill executive and managerial functions, while professional, specialist and technician occupations continue to be dominated by foreign workers. The recent oil boom has provided a new source of demand for foreign workforces to provide the labor and knowledge needed by the region to achieve its non-oil aspirations. This oil boom has also mollified the demand for new sources of local employment, as windfalls have provided revenue for continued public sector employment expansion.
Since the 1970s, expatriate workers have provided the labor and knowledge to drive the Gulf’s economic growth. From Chapter Six we learned that, without local incentives to acquire new forms of development capacity, the region has been unable to effectively absorb foreign knowledge. The region’s various diversification efforts have been undertaken in separate geographic and institutional spaces in order to preserve the legitimacy of these governments and the institutions which govern wealth distribution and public employment. The unintended consequence of such a strategy, however, is that there is little interaction between local populations and the non-oil sector. The result is that foreign knowledge imported for diversification has not been transferred to the local population. Instead, this knowledge is held by foreign companies and their workers, who are reproduced via global and regional labor market mobility.

Survey and interview results pointed to three types of knowledge required by the region’s diversification efforts: engineering and industrial knowledge, trade knowledge and financial knowledge. Engineering and industrial knowledge was discovered to be generated internationally, through a set of major multinationals located in London and Houston. These firms first entered the region in the 1970s, developing the technology necessary for oil production and related construction in the harsh environment of the Arabian Desert. As new types of technology were created, so was a new class of workers – permanent expatriates that travel to and within the region as part of their career track. The import of this form of industrial knowledge over the past four decades has reduced incentives for local capacity creation in engineering, construction and manufacturing sectors. Before oil, the only knowledge of how to navigate and operate within the largest
expanse of desert in the world was held by the indigenous tribes of the Arabian Peninsula. This indigenous knowledge, which had been passed down over many generations of Gulf residents, has since been “crowded out,” outsourced to foreign companies and workforces. On the other hand, the technological demand created in the Gulf States has created incentives for innovation by MNCs who have responded to their clients needs. Firms operating in the region have required and, thus, developed highly-advanced technology for horizontal oil drilling and creating machinery capable of withstanding extreme environments, among others.

Two forms of knowledge in the trade sector were identified. The Gulf governments need global human capital to achieve their diversification ambitions but need local human capital to sustain these strategies into the future. This divergence is reflected in a dynamic policy environment, as the region’s governments experiment through trial and error with policies intended to attract foreign participants and policies to ensure local spillovers. While the Gulf States have not yet found the necessary techniques to ensure foreign knowledge transfer, they have achieved world-class capability in attracting and managing global flows of investment, trade and migration. Firms in the trade sector indicated that experience working in the Gulf is a major factor in determining who they hire. These firms need people who can negotiate the Gulf’s maze of bureaucratic rules and regulations.

More than any other sector examined, the region has established high levels of local development capacity in the financial sector. First, the banking industry is subject to labor nationalization regulations, which stipulating increasing proportions of local
employment content, but also force interaction between local and foreign labor. Second, the banking sector builds on both the region’s pre-oil trade heritage and the equity investment knowledge garnered as part of the oil development experience. Third, the wage and working conditions found in banking are the most similar to that of the public sector, providing an attractive alternative to Gulf citizens seeking more challenge and international experience than would be offered in government employment. Forth, while the technical skills and industry-specific expertise of expatriates is an operational requirement of international banking, as it is throughout the world, local employment content is equally necessary to generate revenue. Only local citizens have the established connections with the Gulf’s pools of available capital. As a result, even foreign banks see local employees as vital for success in the Gulf business environment. Nevertheless, it is clear that the financial sector is intimately linked with oil revenue; it is a channel for the deployment of oil windfalls. Questions remain as to whether the region can continue to attract foreign banks and sustain competitive local banks in a post-oil era.

As new regional innovation systems are built in Gulf and evolve over the next several decades, they could follow any of several possible future paths. The question remains: To what degree can expats be the human capital basis for a (greatly expanded) knowledge-based economy? Davis and Hayashi (2007) paint three scenarios: oasis, sandstorm, and the fertile Gulf. Their oasis scenario sees effective governance and institutions as compensating for greater regional instability. The sandstorm scenario would result from ineffective institutional reform coupled with regional instability. The third scenario, the fertile Gulf, combines improved institutions, greater emphasis on
education and R&D, and growth of entrepreneurship and innovation. In effect, the fertile Gulf in 2050 would be a region in which regional innovation systems are characterized by the global state-of-the-art processes of innovative learning and entrepreneurship.

Implications. Since the onset of the industrial revolution, new models of economic development have evolved in conjunction with new models of combining labor, knowledge and technology in the production process. Each new development model is associated with very different social and technical divisions of labor, production practices and skill requirements (Braverman, 1974; Storper and Walker, 1989; Wardell, 1999). Facilitating and, indeed, driving these processes of socio-technical transition has been the emergence of new fuel types and energy conversion technologies. Transitions to new energy mixes and technologies have brought about major shifts in the location and spatial distribution of populations, industries and cities. Choices of fuel have also evolved in conjunction with broader societal transformations, creating new industries and occupations, promoting new advances in transportation technologies, and requiring new forms of governance and definitions of sovereignty.

Today, oil plays many conflicting roles in our world. Oil can be converted to energy with which to power industry and modes of transportation, but it is a depletable resource which also generates pollution and greenhouse gasses. Oil comprises a majority of the world’s seaborne trade, but this trade links the world’s major industrial powers with major conflict zones. Oil can provide immense profits for the companies which extract and produce it, but it is also a prime destination for industrial terrorism and most oil companies are hardly beacons of corporate governance. Oil provides employment for
millions of people around the world, from basic oil field workers to highly-skilled engineers, but it displaces millions of others through war and conflict.

The popular discourse surrounding what the world may look like under a new, post-oil energy paradigm focuses, in essence, on only one side of this equation. That is, when we imagine a post-oil world, we only imagine how we will power industry and transportation, which countries and firms will dominate this new energy paradigm, what the new energy jobs will look like. On the other side of the equation, however, are the world’s key oil supply regions. Just as oil facilitated societal transformations in the world’s industrial nations, the world’s key oil suppliers witnessed major transformations. These are places which were previously “off the map” in the global economy, but for which oil has provided high levels of revenue and, at times, rapid economic growth. Oil-generated wealth accumulation provided fuel for massive transformations of landscapes, as cities and new forms of infrastructure emerged. Oil wealth also transformed the societies in these places, promoting corruption, rent-seeking and wealth inequality, displacing populations through the extractive process and oil wars, and leaving behind failed states. We assume that because oil is the source of so many global conflicts, we need only replace it as an energy source in order to end these conflicts. To be sure, one of the reasons why popular discourse on energy futures ignores oil economies is because we would like to see less of the places in our lives: we hope that in a post-oil future we no longer have to deal with military interventions in the Persian Gulf, news of civil war in Nigeria, or angry diatribes from Iranian presidents.
What are the implications of a global energy transitions for oil economies? First, if oil is replaced as an energy source, many of the problems associated with oil economies could be exacerbated. For many places, such as Nigeria, Iran and Algeria, oil represents the dominant source of fiscal revenue. If these countries fail to diversify their economies in time for a global energy transition, their already desperate economic development situation could turn for the worse. In conjunction with issues of local economic development, we could also see intensification in political and civil strife. More interestingly, other oil economies have decided that they will play an even more important role in the world economy after oil. How oil economies manage a transition beyond oil – and whether they emerge at the other side of this transition – has major implications for local development in these places, for the structure of a global economic landscape after oil, and for global political security.

As this paper has shown, we can identify a highly-ambitious post-oil agenda to have emerged in the Arab Gulf States of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). Fueled by a second (1998-2008) oil boom, the Gulf States have made bold moves for transforming their oil-driven desert economies into major centers of energy- and capital-intensive industry, and global hubs of trade and finance. In the balance, however, is a set of alternative geographic futures for the region.

I argue that the ultimate outcomes of their ambitious, post-oil strategies rest on a bold imagination of what a post-oil world will look like and what role the Gulf States will play in it. Whether such a world will materialize, I argue, rests on the behavior of unstable markets, the outcomes of contingent events, bets based on loose assumptions,
and the actions of unpredictable players. These include: first, a long-term demand for oil as a source of global energy, local revenue and industrial feedstock; second, the deployment of oil windfalls into infrastructure-led development projects as means to drive non-oil growth while protecting the legitimacy of oil regimes; third, the import of foreign workforces for non-oil private sector activities and the provision of high-wage public employment to a minority citizenry; and, lastly, the attractiveness of the region to foreign investors.

What if the Gulf States succeed with their ambitious strategies to create post-oil economies? If the region’s governments have their way, they will change the global economic landscape in previously unimagined ways. The region will become the home to major trade and transportation hubs connecting Asia with Europe and North America. It will become a major destination for multinationals in a broad range of industries seeking to serve the markets of the more populous countries of the Middle East and South Asia. The region’s decision to “turn to industries which rely on oil, a lot of oil,” could present major challenges to current projections of global oil consumption and greenhouse gas emissions.

What if the region fails to diversify beyond oil? With young, fast-growing, unemployed local populations and large populations of foreign labor, the potential for regional conflict is alarming. The legitimacy of Gulf governments is maintained through the distribution of oil revenue to minority local populations. Public sector employment represents the most significant means of wealth distribution among the vast labyrinth of rent-fueled social entitlements in the region. Without the ability to maintain these social
contracts, the region’s monarchies face serious challenges to their power. In line to replace the region’s monarchs is a cadre of Islamic extremists who provides a new set of challenges to western governments. Moreover, the region’s private sector is dominated by foreign workers – representing 90% of the total workforce in some countries. These jobs and the remittances they generate provide significant sources of work and income for the Gulf’s main sending countries of Bangladesh, India, Pakistan and Sri Lanka.

**Significance.** While a number of studies have examined the economic, political and social impacts of oil-based development in the Gulf, few studies have examined the region’s widely varying efforts to remedy these impacts. Similarly, the region’s recent service and knowledge-based development strategies have only been evaluated as new sources of revenue, not as how they have addressed the lessons and legacies of oil-based development. Such topics were not debated in 2006 and 2007, when I was conducting my pre-dissertation fieldwork in the region. In the summer of 2008, when I began my Fulbright-Hays year in the UAE, world crude oil prices had reached a record of US $145 per barrel. The Gulf building boom was in high gear and record budget surpluses were being announced. The consensus in the Gulf and the rest of the world was that oil prices could go nowhere but up. This consensus was reflected in the optimistic outlook for the region, documented by key informant interviews undertaken during this time.

Less than five months later, however, in December of 2008, oil prices plummeted to under US $39 per barrel. Instead of being awash in petrodollars, and announcing the latest, biggest development project yet, budget deficits were projected across much of the

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11 This section taken from Ewers and Malecki (Forthcoming b)
region. With this oil bust, the largest of the region's diversification megaprojects – most of which were multi-year undertakings – were either cancelled or temporarily suspended. Oil has since begun to rebound and, at some point, the next great oil boom will arrive. The 2008 oil bust, however, provided this research with an empirical resting-point; the "post-1998 oil boom" became the "1998-2008 oil boom." By witnessing the reaction to the oil crash firsthand, this research was presented with an opportunity to evaluate the region's efforts over the last four decades as well to assess the region's future.

Local and foreign investors in the region are feeling the most immediate impact of the global economic crisis. Global construction firms have flocked to the Gulf during the past decade’s oil boom to build the megaprojects and banks have flocked to finance the projects. Real estate speculators have followed suit. In June of 2006, the total value of construction projects for the six Gulf countries combined was just under $400 US billion. In June of 2008, the total value had risen to almost $2 US trillion (“MEED projects,” 2008). Over the past decade the Gulf has become the primary source of global construction revenue. All parties involved in these projects have a great deal to lose, as described by a senior Dubai official in December, 2008: "It's a tragedy in the making … A lot of people are going to get hurt. A lot of dreams are going to be shattered … Have you seen all those ships lined up on the horizon? They're stuck out there full of steel and concrete nobody wants anymore" (Dickey, Salama and Summers, 2008, p. 44). While the region has created a number of its own multinational construction firms, most construction companies operating in the region are of North American, Western European and East Asian origin. The activities of these companies represent important
components of their respective home countries’ national revenues. The potential loss of profits from delayed or cancelled projects could add to the financial woes these countries are currently experiencing. More locally, a significant amount of construction activity in the region has been intended to accommodate higher skilled, higher net-worth expatriates. A decline in demand for such accommodation will only exacerbate the local impact of the global economic crisis.

The most severe impacts could be felt across the Persian Gulf in the Indian Subcontinent. The largest contractors in Dubai employ as many as 40,000 workers, and as construction activity slows, many workers will be sent back to their home country (“Is it time to return to Iraq?,” 2008). As one analyst (Seale, 2008, p. 1) asks, “What will happen to these workers if many real estate and construction projects are delayed or even cancelled? What will be the impact on the economies of the sub-continent if hundreds of thousands of these immigrant workers head back..?” To be sure, the South Asian economies have felt the credit collapse as much as the rest of the world. Unlike Europe and the US, however, these economies are dependent on remittances from vast numbers of their citizens working in the Gulf, primarily in the oil and construction industries. According to World Bank remittance tracking, migrant cash transfers to the developing world are expected to decline in 2009 after several years of double-digit growth (Tavernise, 2008). In 1991, after the (first) Gulf War, Kuwait expelled nearly half a million Palestinian workers from their country in short order. It would not be unreasonable to expect an even larger expulsion of millions of low-skilled South Asian workers in the Gulf region.
Gulf citizens, the intended beneficiaries of the regions’ massive development projects, have the most to potentially lose in the long-term. Since the 1970s oil boom, the region’s leaders have rationalized extravagant megaprojects to their citizenry as long-term investments for future generations. The presence of foreign companies and labor is justified in Gulf political discourse as a necessary and temporary evil required for jump-starting local capacity in non-oil industries. Upon completion, the projects are promised to provide jobs to the local populace and a future beyond oil for the country.

Based on the results of fieldwork in the UAE, it appears that the region’s governments may have lost sight of this end-goal as investors tasted, for the first time, the extraordinary profit potential of real estate development and speculation. Indeed, the Gulf States did not waste time in attempting to duplicate Dubai’s initial success in the late-1990s, competing with each other to build more and more massive property, tourism, commercial and industrial projects. While the region has made record investments in building new universities in the last decade, university construction has come to represent just another Gulf megaproject. Time will tell whether these investments in physical capital have been accompanied by the human capital investments required to sustain the economies after the construction projects are completed.
This project began with a set of research questions designed to capture a dynamic confluence of social and economic processes which drive broader economic development outcomes in the Arab Gulf States. The research is founded on a set of basic empirical patterns characterizing the composition of the Gulf economies and workforces. In order to examine these patterns within a single conceptual framework, this research drew upon diverse bodies of literature on natural resource-based development and diversification, employment and labor migration, foreign investment and international trade, and human capital development and knowledge transfer. As a result, while this study’s findings were interpreted as to how they addressed the specific research questions at hand, it is clear that these results have broader implications. The purpose of this epilogue is to imagine some of the alternative ways in which these results could have been interpreted. By reinterpreting some of this study’s results, the epilogue also speaks to the study’s limitations; that is, the issues, perspectives, and events which are known to be relevant and important to the study, but which were excluded. Some of these exclusions were intentional, while others were realized (or pointed out) after the study was completed. What follows is not exhaustive, but rather, an attempt to identify and describe some of the apparent limitations which characterize this research, as well as alternative ways in which it could have been conducted.
The agency of the Gulf States in determining their fates

The analysis of economic diversification and foreign and local employment in this study was largely based on the premise that the Gulf States have some agency in determining economic development processes. Do these countries really have a choice, though? Or do dynamics originating from outside of the region play a more important role in determining these outcomes? How much agency do the Gulf States possess? A large body of literature would suggest that external factors, including global economic processes, play an equal or greater role in determining Gulf development outcomes.

In this regard, the Gulf development conundrum could have been interpreted as a product of factors external to the region. For many development theorists, development and underdevelopment is determined by the actions of Western industrial powers and multinational corporations. The basic message of dependency theorists, for instance, was that economic development in the core economies led to, and indeed required, the underdevelopment of peripheral economies. Peripheral economies were not underdeveloped because of an inability to mobilize savings and investment. Instead, core economies have played an active role in promoting underdevelopment in the periphery. Colonial powers extracted resources from peripheral economies to fuel industrial growth. Peripheral economies represented satellites within the global economy to the core regions’ industrial growth. Thus, as the core became more and more developed, the periphery became more and more underdeveloped – locked into a path of agriculture and mineral production. Additionally, dependency theory blames foreign corporations, rather than states alone, as key actors in promoting uneven development by repatriating
investments and crowding out local firms. Because of the disparity in wage rates between
the core and the periphery, as long as capital goods were produced in the core, the
periphery would remain disarticulated (Porter and Sheppard, 1998). The only way for
peripheral economies to emerge from this role is to interrupt the world system of
capitalist relations (Higgins and Savoie, 2005).

These ideas have broad implications for the examination of economic
development in the Gulf States. The Gulf is the world’s primary oil supply region. It
would not be in the interest of the world’s industrial powers to see the Gulf States
diversify their economies if it means a decrease in oil production. Moreover, if the Gulf
States increasingly turn to oil as an industrial feedstock for aluminum smelting,
petrochemicals and plastics, for example, this would mean less oil for export. The
relationship between the Gulf countries and the world economy emerged as one of
derivative dependency; it is a relationship based on single product whose demand is a
derivative function of global demand for this product (Alnasrawi, 1991). The Gulf
economies are dependent on Western countries from which they import capital goods and
highly-skilled labor and on developing countries from which they import low-skilled
labor.

Accumulation in the Gulf is a result of beneficial terms of trade in the oil sector;
terms that were solidified with the 1973 OPEC embargo. The growth of cities and
military complexes was a direct result of oil prices (De Janvry, 1982). The capacity to
consume nationally is a product of the countries’ relationships with oil importers, based
on the level of demand for oil. It is therefore an external relationship between
consumption and production that maintains the balance of payments (De Janvry, 1982). In the countries of the region, the majority of foreign investment has come firstly from Western companies concerned with oil extraction, refining or exporting, secondly from service companies in the petroleum sector and lastly a small number of industrial plants (Amin, 1976). National income, government infrastructure, foreign investment earnings and quality of life are all dependent on this single, non-renewable resource. Because of lack of taxation, even the Gulf States’ social programs are determined by foreign markets.

In this research, “oil” represented a source of local revenue which produced a set of local development outcomes. Oil, of course, embodies much more than this. The advent of oil as the world’s fuel of choice, however, required new, more sophisticated extraction and production technologies, more distant and exotic resource supply locations, and new modes and routes of transportation. Commitments and sacrifices were made on the part of industrial nations to secure oil as an energy source. These actions allowed for a period of previously unseen industrial expansion and economic growth in the West. New forms of industrial organization (e.g. global production networks) and population settlement (e.g. suburbs) emerged as a result of access to oil as a cheap energy source (Steiner, 2009). In order to maintain and control access to this energy source, Western states have exerted heavy pressure on Gulf governments. The role of Western energy demand, and actions to secure Gulf energy supplies, therefore has implications for the region’s ability to diversify beyond oil.
The role of war, terrorism and geopolitics in Gulf development

Topics of war, terrorism and geopolitics are largely left untouched by this research. This was intentional. While these topics are certainly relevant, each is itself a dissertation. A choice was made early on in this research to leave these issues out entirely, rather than provide only a superficial treatment. The Gulf States are seriously impacted by conflicts in Israel and Palestine, Iran, Iraq and South Asia, among others. Money from the Gulf States flows out of the region to support players in these conflicts. Osama Bin Laden is from Saudi Arabia, and terrorism is an internal threat to the region’s governments as well as an external threat to Western nations, originating from within the region. How do these factors relate to the behavior of foreign participants in the region’s economic growth who were examined in this research?

The conflicting political interests that have driven past and present MNC locational behavior in the Persian Gulf, and throughout the Middle East, reflect an evolving set of public and private economic and political interests, both domestic and foreign. The changing topography of foreign investment in the region has historically been driven by the relationship between four main sets of actors, interests and events: 1) MNC corporate regional risk perception 2), Western foreign policy and geo-strategic interest, 3) Gulf foreign and domestic interests, and 4) Security threats. With oil, construction and engineering MNCs during the first oil boom, this meant achieving a balance of security. The Gulf needed the US to buy oil and needed US MNCs to provide knowledge and technology for oil production. The US needed Gulf oil and needed US MNCs to assist the Gulf States in producing this oil. MNCs needed money. All three
needed security. How each perceived the risk (threat or benefit) of the other is reflected in the changing topography of MNC locational behavior from 1975 to today (Anthony, 2003; Gause, 2003; Kennedy, 1984).

Foreign policy and corporate locational decision-making over the past four decades is the result of assessments of regional threats and benefits in the region, based on internal and external political and military developments. During certain periods we see a convergence of these interests, other times we see convenience bring them together, and still other times, we see divergence or incoherence. Instability and threats in the region at times actually culminated in attacks on corporate installations. As a result of the post-1998 oil boom, post-9/11 foreign policy, and internal and external security threats in the broader Middle East, relations between the Gulf and the West are now characterized by a greater political, economic and military interest in the smaller Gulf countries of Bahrain, Kuwait, Oman, Qatar and the UAE – perceived as safer and more stable (Anthony, 2003; PRS Group, 2006).

Western political needs are currently converging with new patterns of economic development and diversification in the region. At the same time, however, the reaction to post-9/11 US foreign policy in the Gulf has generated a new set of security concerns, and one that could potentially hurt the Gulf’s attractiveness to foreign investment. The US, for instance, was able to negotiate new political and military guarantees with these countries – including the construction of a number of new bases to fight wars in Iraq and Afghanistan, and the use of ports and transit lines – in exchange for the provision of economic incentives and arms deals (Katzman, 2006). The US believes that the smaller
Gulf States can better deal with a US military presence, as past military, political and economic ties with the US have historically overcome the political and cultural differences between the countries (Gause, 2003). Bahrain, for instance, is home to the United States Naval Forces Central Command and United States Fifth Fleet – a major base for US military operations throughout Southwest Asia (Bowman, 2008).

Past US military involvement in the region, however, has been a key factor in turning public opinion in the Gulf increasingly against any American presence. Current U.S. military operations in the region and the perception of these operations a war on Islam, however, have placed MNCs in a new position of insecurity (Khawaji, 2004; Pollack 2003). While levels of threat have not reached those perceived in Saudi Arabia, the trend could be move in that direction, as public opinion has turned further against decisions by the monarchies to support US military operations (Cordesman and Obaid, 2005; Henry, 2005; Luciani, 2005). In this study, foreign investors were examined as participants in the region’s development efforts, attracted by subsidies and driven by the pursuit of profit. From this sub-section, it is evident that there is also a more complicated set of global political and economic dynamics driving the behavior of foreign investors in the Gulf which were not addressed in this research.

**Conclusion**

When we define a research question we are, as much as anything, creating limitations for ourselves. A research question identifies a particular problem, frames an empirical puzzle, and defines parameters for the scale and scope of analysis. Specifying a
particular question is necessary to ensure that what follows is theoretically sound, empirically relevant, and practical to undertake. It is unlikely that very broad research questions could be sufficiently addressed in a single project. In addition to being constrained by practical limitations of time, resources and document length, very broad research questions are usually associated with shallow analysis. If the question is too specific, on the other hand, it is unlikely that the research is interesting or relevant. In other words, the process of creating a research question is one of choosing an optimal balance.

The questions addressed in this research, and the analysis used to answer these questions, represent such a choice. Anyone who has visited the Arab Gulf States could speak to the importance of oil in the region, the strategies being undertaken to move beyond oil, the role of massive foreign workforces and the dilemmas of employment for the region’s citizens. Each of these elements is intractably linked to the other. When a researcher attempts to create a theoretical framework which captures these observations, however, he or she is confronted by the breadth of research which surrounds each of these issues.

Oil can be studied from the perspectives of political science and international relations, climate change and the environment, trade and development, engineering and geology, among others. The study of labor migration includes research on demography and population, geopolitics and border, race and ethnicity, and labor economics. The same is true for topics of employment and human capital. Each of these topics could be studied on its own from one perspective and each on its own cross disciplinary
boundaries. Moreover, the mere mention of the Arab Gulf States calls to mind even more complex issues regarding war, terrorism, religion. Because this research was approached inductively, beginning with an empirical problem, an interdisciplinary approach was necessary. By framing this research as an economic development study, the goal was to take an approach broad and rich enough to appreciate the complexity of the empirical problem at hand, but also narrow and precise enough to actually address the problem. It is clear from this epilogue that there are alternative ways that this research could have been undertaken and through which this study’s results could have been interpreted.
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Appendix A: Firm Survey Questionnaire

Welcome to the 2009 GCC-International Human Capital Survey!

General characteristics of your company and its workforce - Page 1 of 4

The questions in this survey ask about "your firm." This means the local branch or office of your company which you are responsible for, as far as human resources are concerned.

Local = your GCC country of location. If your firm is located in Bahrain, this means Bahrain.

Other GCC = Gulf countries other than the one in which you are located. If your firm is located in Bahrain, this means the other five GCC countries (Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates).

In which country is your firm (the unit for which you are responsible for human resources) currently located?
Please tick one of the following answers:

☐ Bahrain  ☐ Qatar  ☐ Saudi Arabia
☐ Kuwait  ☐ Oman  ☐ United Arab Emirates

In which city is your firm located?

Please type the name of the city in the box provided.

What year was your firm established locally in this country and city? Please choose one of the following choices:

☐ 2000-2004  ☐ 1985-1993  ☐ 15/4-19/8
To which economic sector does your firm belong? (Please tick one box. If you firm fits within more than one of these options, please tick the one which represents the most important of your firm's activities.)

- Information technology
- Oil, Mining and Quarrying
- Manufacturing
- Electricity, gas and water
- Construction
- Transport and storage
- Finance, banking and insurance
- Real estate and business services
- Restaurants and hotels
- Education
- Health

Approximately how many total employees work at your company locally? Please choose one of the following options:

- 1-25
- 26-50
- 51-100
- 101-250
- 251-500
- 501-750
- 751-1000
- More than 1000

Of the total number of employees at your location:

Where are they from?

Please choose from the following nationality categories:

Local citizens = your GCC country (if you are located in Bahrain, this means Bahraini nationals)

Other Gulf (GCC) = citizens of one of the other five GCC countries (if you are located in Bahrain, this means nationals of Kuwait, Oman, Qatar, Saudi Arabia or UAE)

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<th>Local Gulf (GCC) country citizens</th>
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Approximately what percent of employees at your company hold a university degree?

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<th>Percent of employees with a university degree</th>
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Recruitment, training and development of employees - Page 2 of 4

This page asks about the recruiting, training and development of university graduates at your firm in your Gulf country/city location. The questions on this page are only referring to individuals who hold either a Bachelor’s degree or a Master’s degree or a PhD degree.

What are your main methods of recruitment for positions requiring a university degree? Multiple answers allowed.

- Recruitment agencies
- Employee networks / word of mouth
- Ads in local publications
- Professional organizations
- Ads in international publications
- Internet job search engines/job websites
- Placement from foreign headquarters
- Your company’s website

When vacancies for personnel holding a university degree are to be filled, for which positions do you almost always search INTERNATIONALLY, outside of the Gulf (GCC) region to fill?

Multiple answers allowed.

- Executives and managers
- Skilled professionals and specialists
- Engineers and scientists
- Information technology workers
- Sales and marketing
- None of the above

When vacancies for personnel holding a university degree are to be filled, for which positions do you almost always search WITHIN THE GULF (GCC) region to fill?

Multiple answers allowed.

- Executives and managers
- Skilled professionals and specialists
- Engineers and scientists
- Information technology workers
- Sales and marketing
- None of the above
What are the key factors that determine who you hire when recruiting for positions with that require at least a university degree?

Please select any of the following factors which you would consider to be “very important” in determining who you hire. Multiple answers allowed.

- Nationality of applicant
- Country of education of applicant
- Years of experience working in the Gulf
- Years of experience working in countries outside of the Gulf
- Knowledge of the language of management in your firm (if other than Arabic)
- Knowledge of Arabic

Does your company have relationships with any of the following through which you hire, train, or provide work experience to current or prospective employees? Multiple answers allowed.

- Local Gulf (GCC) university
- Foreign university outside of the GCC
- Other companies in the GCC
- Other companies outside of the GCC
- Branch of your company outside GCC
- Government organizations or business organizations
- None, none of the above

Which of the following ways are employees with university degrees primarily trained within your company? Multiple answers allowed.

- On-the-job or on-site training
- Off-site training within the Gulf (GCC)
- Training internationally (outside of the GCC) at a different firm
- Training internationally at another branch of your firm
- Courses at local universities
- Courses outside of the GCC at foreign universities
- None of the above
In which occupations do employees at your firm work?

Please tick the approximate percentage of total employees at your firm who work in each of the following occupational categories:

The total sum of your selections from all four categories should equal approximately 100% of the total employment at your firm.

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Of the MANAGERS AND EXECUTIVES at your firm:

Where are they from?

Please choose from the following nationality categories:

Local citizens = your GCC country (example: if you are located in Bahrain, this means Bahraini nationals)

Other Gulf (GCC) = citizens of one of the other five GCC countries (example: if you are located in Bahrain, this means nationals of Kuwait, Oman, Qatar, Saudi Arabia or U.A.E.)

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Of the PROFESSIONALS at your firm:

Where are they from?

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Of the TECHNICIANS AND ASSOCIATE PROFESSIONALS at your firm:

Where are they from?

Please choose from the following nationality categories:

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Which of the following best describe your firm? Multiple options allowed.

- Locally owned private company
- Locally owned public company
- Mixed public and private company
- Joint venture
- Affiliate of a multinational company
- Other (please specify)

Are you located in any kind of special economic zone, such as a free trade zone, export processing zone, industrial park, etc.?
Please tick yes or no:

- Yes
- No

What is the percent local and foreign ownership of your firm? Please select the approximate percentage of each.
Total equals 100%:

Percent local ownership:
- 0-5%
- 10%
- 25%
- 50%
- 75%
- 90%
- 95-100%

Percent foreign ownership:
- 0-5%
- 10%
- 25%
- 50%
- 75%
- 90%
- 95-100%

What is the nationality of the main owner(s) or parent firm(s) of your company?
Multiple answers allowed.

- Local (your GCC country location)
- Other Gulf (GCC)
- Other (Non-GCC) Middle East
- Europe
- North America
- Other Asia
- Australia or New Zealand
- Other

What is the approximate percentage share of foreign business (outside of your GCC country location) in the total annual turnover of your company?
- If your company is a bank, this question refers to the share of foreign business in the credit volume.
- If your company is an insurance firm, this question refers to the share of foreign business in the contribution volume.

Percent foreign business of total business:
- 0%
- 10%
- 25%
- 50%
- 75%
- 90%
- 95-100%
Which countries/regions represent the largest percentage share of your total foreign business? Multiple answers allowed.

- Other Gulf (GCC)
- Other (Non-GCC) Middle East
- Europe
- North America
- Australia or New Zealand
- South Asia
- Other Asia
- Other
- No foreign business

In which other countries/regions does your firm have branches or headquarters? Multiple answers allowed.

- Other Gulf (GCC)
- Other (Non-GCC) Middle East
- Europe
- North America
- Australia or New Zealand
- South Asia
- Other Asia
- Other
- None

Does your company have any relationships for research and development WITHIN THE GULF (GCC) region? Multiple answers allowed.

- Local universities in the Gulf
- Foreign universities here in the Gulf
- Locally established foreign companies or consultancies
- WLL companies or consultancies
- No, None of the above

Does your company have any relationships for research and development INTERNATIONALLY, outside of the Gulf (GCC) region? Multiple answers allowed.

- Foreign universities outside of the Gulf
- Foreign companies or consultancies outside of the Gulf
- Parent headquarters or other branch of your company outside of the Gulf (if affiliate of multinational company)
- No, None of the above