Small Businesses as Culprits and Clients: A Comparison of Brownfield Redevelopment in Los Angeles and Kuala Lumpur

by

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TABLE OF CONTENTS

•••

Small Manufacturers as Culprits and Clients:
A Comparison of Brownfield Redevelopment in Los Angeles and Kuala Lumpur

•••

EXECUTIVE SUMMARY

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Contaminated properties or "brownfields" are simultaneous symptoms and causes of community decline that have deleterious impacts on the prosperity of small-scale industry, however past research has not given adequate attention to the intersection of these two issues in understanding community evolution. Most brownfield policies in the U.S. have been driven by a top-down regulatory focus that prescribes how governments can force the cleanup of brownfields through the assignment of legal liability and/or protection to property owners, which has often resulted in an antagonistic relationship between governments and businesses whereby businesses are made to feel like "culprits" for the brownfield problem. This alienation of businesses—particularly small businesses—complicates the brownfield solution because if businesses are made to feel like "culprits", they are much less likely to participate as "clients" in reusing former brownfields.

The primary message of this report is that the solution to the brownfields problem hinges upon the buy-in of small businesses because brownfields must be cleaned up and returned to productive reuse by small businesses and in communities that rely upon the success of small businesses to survive.[1] Because brownfields depress communities by causing blight[2]—socio-economic and environmental degradation—they are an obstacle to the survival of existing businesses and to the attraction of new businesses. This is particularly the case in communities that are or have been dominated by manufacturing industry since there has been a large-scale decline of the manufacturing sector in many U.S. cities that has left many brownfields in industrially-zoned areas.

Vacant and/or abandoned industrial parcels function as brownfields not only because they detract from the economic value of a community or pose an environmental concern, but also because they represent a *subtraction of civic vigilance value* whereby there are no people occupying the urban space who would contribute to the social capital of the neighborhood—who would be patrons of the other local businesses or act as what Jane Jacobs (1961) describes as "eyes on the street"[3] in helping to preserve community cohesion and safety. Thus, even if a brownfield is cleaned up and returned to productive economic use, it does not solve the aggregate social problem that may arise in a community with many brownfields because of the *vacancy cost* still imposed on the neighborhood via other brownfield parcels.

Most brownfield policies that target the recruitment of small businesses to brownfield sites—e.g., tax breaks, incentive zones, cleanup loans and grants—center around the economic value of the new business by providing economic incentives and encouraging economic activity; however, the social capital aspects of businesses are not engaged, e.g., existing businesses are not rewarded for long tenure in a challenged community or for identifying brownfields in their neighborhood and new businesses are not rewarded for committing to local business relationships or community organizations. Each of these social capital[4] functions of a small business may make it more valuable to its local community and serve

[1] Large brownfields often draw regulatory and investment attention because of their economies of scale; however, the majority of brownfields are small and interspersed among operating businesses.

[2] Blight is defined as "Deterioration of an area caused by physical, economic and social forces". (CRA 2003)

[3] Specifically, "storekeepers and other small businessmen are typically strong proponents of peace and order themselves; they hate broken windows and holdups; they hate having customers made nervous about safety. They are great street watchers and side-walk guardians if present in sufficient numbers." (37)

[4] In particular, the idea of social capital derives from an individual's level of participation within society through both formal and informal networks or associational linkages, which depend upon many things, notably, levels of trust and norms of reciprocity. (Fukuyama 1995, 2000; Hayashi et al. 1999) Many contemporary scholars have offered that social capital is a vital indicator of community and societal health and an important contributing factor to the creation of civil society. (e.g., Etzioni 1994; Fukuyama 2000; Putnam 2000; Selman 2001)

to reduce the vacancy cost of brownfields on the neighborhood when small businesses are engaged as clients in brownfield identification and cleanup.

This research proposes that even if economic incentive-based brownfield cleanup policies work for individual parcels, they still do not solve the larger community social cost of brownfields because they do not involve a critical community stakeholder—the small business—appropriately in the process because they ignore the *social value* of the firm. This is made clear by surveys of business owners in Los Angeles, California who demonstrate a distinct uneasiness and unfamiliarity with the brownfields cleanup process along with a lack of awareness of how to pinpoint brownfields in their communities.

The report is based upon the *stakeholder* perspective of small business owners from a variety of manufacturing sectors and their perceptions of brownfields policies. Ultimately, it provides further credence to the stigma perception of brownfields by demonstrating that small firms in Los Angeles are largely unfamiliar with brownfield policies and programs and are suspicious that those policies are likely oppressive in a manner consistent with past environmental compliance requirements. In this way, the current approach to brownfields redevelopment in Los Angeles threatens to further depress small-scale industry by (1) discouraging the turnover of the many small, industrial brownfields into productive reuse by new owners/occupants; (2) decreasing the likelihood that current businesses will become involved in identifying brownfield problems; and (3) decreasing the likelihood that current businesses will expand or relocate to former brownfields.

The stakeholder perspective illustrates that although many brownfield cleanup funding and technical assistance programs exist and are intended to facilitate public-private sector collaboration in redevelopment, most small firms are unaware of these and therefore unlikely to take advantage of them. The surveys also reveal a social detachment of operating businesses from their neighborhoods, which lends credence to a supposition that even if firms were to take advantage of these economic-based programs, the social environment of the community may not improve. The piecemeal, parcel-by-parcel turnover approach seems to have a limited social impact value and thereby does little to improve the competitiveness of Los Angeles and that of the industries within it when property values continue to decline and blight spreads.

An international comparison from the stakeholder perspective of small firms in Kuala Lumpur, Malaysia—a city with a globally powerful small-scale manufacturing sector—indicates that they are similarly unaware of brownfield policies, but do not feel antagonized as "culprits" by their local and national governments. Instead, they are treated as important "clients" in economic development and encouraged to innovate toward international environmental standards—such as ISO 14001—in order to remain globally competitive and this indirectly produces a positive-externality by improving the local community environment.

Important differences are derived from the cross-national comparison:

- The U.S. solution to the local brownfields problem is dictated by the federal government through the preemption of legislation and the U.S. Environmental Protection Agency and motivated by an interest in protecting public health and safety through the enforcement of liability and responsibility for contamination.
- The Malaysian solution to the brownfields problem is dictated by the national government through its real estate development activities and is motivated by an interest in promoting global industrial competitiveness.

- The U.S. approach results in a greater public awareness of environmental impacts on public health and a greater diversity of stakeholder involvement in brownfields policies and programs.
- The Malaysian approach results in a better local environment when firms adhere to the most innovative environmental standards—however, the better environment is usually achieved in new industrial estates since many small firms have been recently relocated from older, polluted industrial areas to these estates in undeveloped "greenfield" areas.

Through the international comparison, important similarities also emerge:

- Both cities perpetuate their problems by keeping small firms distant from the brownfield solution: in the U.S. this is because firms fear liability and in Malaysia, firms are not held accountable for pollution because of a lack of enforcement capacity in the environmental sections of the government.

The cautiousness on the part of small firms in both Los Angeles and Kuala Lumpur indicates that when they (or their peers) are treated as "culprits" and antagonized to take care of the brownfield problem, then they are much less likely to be willing "clients" in providing governments with their end goal of turning brownfields into productive reuses, free of governmental oversight. While this is currently more of a problem in the U.S., it is likely a future problem in Malaysia as its domestic environmental policy infrastructure matures. This paper will discuss in detail how the cities' differing approaches to brownfields have resulted in the above differences and similarities and how the stakeholder perspective of the small business owner in each place suggests a more human-centered approach to the cleanup of contaminated urban land.

INTRODUCTION

Brownfields, like many other local environmental issues in the U.S., receive their foundational legitimacy in federal law—they were first defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund") of 1980 (42 U.S.C. 9601) and their definition was later amended in Public Law 107-118 (H.R. 2869), the Small Business Liability Relief and Brownfields Revitalization Act of 2002. The latter now determines that brownfields are to be understood as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant". Although Superfund provides for federal jurisdiction over only the most severely contaminated sites, it dictates that brownfields fall within the purview of governments at all levels so that public health and safety may be protected:

> In the early 1990s, stakeholders expressed their concerns to EPA [the U.S. Environmental Protection Agency] about the problems associated with brownfields across the country. More than 600,000 properties that were once used for industrial, manufacturing, or other commercial uses were lying abandoned or underused due to the suspicion of hazardous substance contamination. Brownfield areas, particularly those in city centers, were contributing to blight and joblessness in surrounding communities. Unknown environmental liabilities were preventing communities, developers, and investors from restoring these properties to productive use and revitalizing impacted neighborhoods. (USEPA 2002b, 1)

Although Superfund empowered the federal government to go after large-scale private sector polluters, the enforcement power for the very small, least-polluted sites has devolved to the most local authority—the county or municipal government. Given the wide diversity of local government capacities and resources, local brownfield policies and programs vary widely; however, the brownfield problem is universal and demands at least a minimum increase in governmental capacity to manage it in accordance with federal law. Unfortunately, local incarnations of brownfield policies mimic federal policy in that they are still top-down and prescriptive—treating very small and very large sites the same way—in a manner that expects governments to dictate the cleanup and redevelopment process.

CERCLA/Superfund was passed in response to citizen concern over how chemical dumping and uncontrolled or abandoned hazardous waste sites might affect public health and the environment. Superfund created a tax on certain polluting industries and formalized Federal authority to regulate releases of hazardous substances that may endanger public health or the environment—it also established the National Priorities List of the most contaminated sites, which fall under Federal jurisdiction. Superfund was amended in 1986 via the Superfund Amendments and Reauthorization Act (SARA), which among other changes "increased State involvement in every phase of the Superfund program". (Ibid.)

The U.S. Environmental Protection Agency (USEPA) is the Federal executive institution empowered to implement brownfields legislation and it administers its policies and programs through a decentralized system of ten regional offices. The USEPA has the authority to evaluate State programs pertaining to brownfield remediation.

Approximately 35 states have implemented Voluntary Cleanup Programs (VCPs) whereby private parties that voluntarily agree to clean up a contaminated site are offered protection from future state enforcement action at the site. California's VCP was adopted in 1993 and is administered by the State Department of Toxic Substances Control (DTSC) within the California Environmental Protection Agency, which is responsible for regulating hazardous waste including cleanup of hazardous substances sites. The VCP is only applicable to sites that are not on the federal or state Superfund lists. Also, if a site falls under the jurisdiction of another entity, such as the County, State Water Resources Control Board, etc., jurisdiction must be transferred to DTSC before it can be included in the VCP.

At the local level, there are countless small sites which cities must deal with that might not be eligible for state or federal assistance. Although Los Angeles has been able to attract federal and state support for large sites, such as the 208-acre Goodyear Tract and the 232-acre Wilmington Industrial Park, there are many small sites that make the time and energy required for garnering external regulatory assistance cost-prohibitive. This has become a major challenge of the city government.

Problem Definition

Prior to 2002, the U.S. EPA defined brownfields as "Abandoned, idled, or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination", but the newer definition removed reference to industrial or commercial users. Although the older definition more directly implies the culpability of these types of land owners/occupants, the second less directly targets them—and its containment within the 2002 legislation demonstrates that government is beginning to understand the likely depressive effect of placing brownfield cleanup liability on businesses—small businesses in particular.

This is evident in the U.S. case where—as mentioned above—many cities and towns have developed programs to address brownfields, but due to lack of fiscal and staff resources, their focus has been solely on large sites that attract the most external funding and these projects can take years to complete. This process sends a message that cleanup is difficult and expensive and that small properties cannot produce economies of scale that make their cleanup worthwhile. Thus, if analyzed from the institution or programmatic level, governments are doing what they are supposed to do, but are they really solving the problem—when brownfields still proliferate, blight spreads, and the responsibility stays with government to fix it? While there are many real estate developers that are able to capitalize on the brownfields market, they focus on the properties with the greatest reuse potential—these are almost never the ones that become an issue for governments.

A particular problem is the case of smaller sites in industrially zoned areas. These sites often go unnoticed by governments not only because they pose potentially more difficult cleanup challenges, but also because there often are not any community members that will identify and bring attention to these properties when they do become brownfields. Although there could be many reasons for community reluctance to report brownfields—such as lack of information about the problem or how to report it, fewer mixed-uses in such areas that would otherwise involve more pedestrian or vehicle traffic that bring notice to a problem property, known illegal

use of the property, or hesitance on the part of a neighboring landowner for fear of the responsibility affects on him/her—the problem still persists.

Given the magnitude of the brownfields problem, it will continue to persist unless governments supplement their own capacities with others. Presently, local governments must go after landowners to investigate and cleanup brownfields—this means they must search records, locate, contact, and convince owners to participate in an environmental investigation and assessment which could identify that owner as a "responsible party" to contamination and thereby legally require him/her to pay for the property's cleanup. If the owner is unwilling to participate in these investigations, governments have the power to force their participation.[5] This is not an amicable, supportive relationship between urban landowners and city governments. Also, this requires new functions for city employees in owner investigation and communication.

When brownfields are brought to the attention of local governments and no responsible property owner can be located or if an owner is unwilling, the government must take on the responsibility for the property and either force (through litigation) the identified owner's payment for the cleanup or handle this responsibility itself. The cleanup process must adhere to strict regulatory requirements that certify a property's safety and this, too, requires a burdensome paperwork process. Again, new functions are demanded on the part of city workers in order for them to navigate emerging legal proceedings concerning brownfields.

Lastly, once a property becomes certified as "clean", it must be marketed and sold to a new owner, but the stigma associated with a formerly contaminated property makes this a difficult procedure and cities must compete with savvy real estate developers to ensure that their less-desirable properties attract responsible new owners. Taken together, the resources and tasks required of city governments in ensuring that brownfields are properly redeveloped becomes overwhelming. And, even if governments were able to expand their capacities to address brownfields adequately, this trajectory is an inefficient means of policy and program change not only because of the demands it would place on cities to become full-time real estate developers, but because it would take land stewardship rights further away from individual property owners and communities.

Since communities determine the ultimate success of a land use—by patronage or abandonment of a property—more needs to be learned about the stake of communities in brownfields and how they might supplement governmental involvement. Some brownfields policy and program research has focused on generic "community involvement", but little has been done to analyze subsets of community institutions that might be particularly affected by the brownfields problem. Thus, instead of defining the brownfields problem from the perspective of the problem identifier—government—this report rests upon the notion that the problem should be looked at from the perspective of a key solution provider or enabler—small firms that may prevent the occurrence of brownfields, identify others in their neighborhood, or relocate to a cleaned brownfield.

[5] Eminent domain and The Polanco Act (in California) are examples of this, which are discussed in more detail in the Los Angeles case.

This new approach at defining the brownfields problem is woven around a central argument that environmental policy may be usefully seen as caught between two competing visions of stakeholders—as "culprits" and "clients". For instance, small manufacturing firms are "culprits" when they are held responsible for the contamination of land. They become "clients" when they are asked to help in the problem's solution, such as when they are incentivized to relocate on a brownfield. This perspective helps show how the quest for rigorous environmental policy can in fact unleash a pathology that splinters community stakeholder groups and alienates them from longer-term social improvement. In the case of small firms, the antagonism towards past environmental compliance regulations has in turn built resistance to involvement in brownfield redevelopment. Interestingly, and perhaps counter-intuitively, this does not hold internationally partly because small firms are able to learn from the American experience and also innovate beyond it. The Kuala Lumpur case demonstrates that small firms are able to avoid land market interruptions by adhering to international environmental standards that help them remain globally competitive.

Problem Context

To date, the more obvious research findings are that brownfields contribute to urban blight and depress property values. (e.g., Wright 1997; Meyer and Van Landingham 2000) However, less well known is how environmental policies affect the establishment, growth, and redevelopment of brownfields in different urban settings and as perceived by certain stakeholders, such as small- to medium-sized manufacturers (SMMs). This report examines small manufacturing businesses' perceptions of contaminated land (brownfield) conditions and cleanup in their neighborhoods for the cases of Los Angeles and Kuala Lumpur—two cities that heavily depend upon small manufacturing for their growth and prosperity. The ultimate goal is to find out if such businesses are aware of policies and programs concerning brownfields and how they understand them.

The guiding hypothesis is that SMMs in the U.S. feel antagonized by government as "culprits" in regard to brownfields cleanup and this depresses the likelihood of their future collaboration in finding solutions to the brownfields problem. Conversely, the case of Malaysia was expected to demonstrate that similar firms do not feel antagonized by government in regard to brownfields, but instead expect market solutions to such problems.

The following is an overview of the justification for the selection of the two cases for the comparative analysis.

Why Malaysia?

Kuala Lumpur is the capital city of Malaysia, with a population of approximately 1.3 million (NST 2002b) and the majority of its industrial activities undertaken by small enterprises. (UNESCAP 2002) Malaysia, much smaller than the U.S. with a land area of 328,550 sq km (roughly the size of the state of New Mexico) and a population of 22.2 million (CIA 2002) yet it is known to be "amongst the world's leading exporter of manufactured goods." (CII, undated) According to the U.S. Commercial Service, in 2000, bilateral trade between the U.S. and Malaysia was $36.6 billion with U.S. exports to Malaysia at $11 billion and U.S. imports from Malaysia at $25.6 billion—making Malaysia the United States' 11th-largest trading partner and its 17th-largest export market. (USCS 2002) Moreover, manufacturing is a significant component of this trade relationship:

> Malaysia is an attractive foreign investment destination for the petrochemical industry, for electronics and semiconductor manufacturing, and also for R&D-based investment in the Multimedia Super Corridor (MSC). The MSC is Malaysia's blueprint for developing a high-technology information-based research and manufacturing region. Investments approved for MSC status are exempt from currency exchange and expatriate employment restrictions. U.S. direct investment in Malaysia is concentrated in oil and gas and in manufacturing, primarily in companies making semiconductors and other electronic products…According to Malaysian statistics, the U.S. in 2000 continued to rank first in foreign direct investment (FDI) approved in Malaysia's manufacturing sector, with approved new manufacturing investment totaling RM7.5 billion (U.S.$1.97 billion). Principal U.S. investment approved by the Malaysian Investment Development Authority (MIDA) was concentrated in the electronics and electrical sectors. There are no major barriers to export-oriented manufacturing investment in Malaysia. Significant curbs historically hindered manufacturing investment aimed at the domestic market. The government relaxed this policy in July 1998, dropping all equity and export restrictions for new manufacturing projects approved through December 2000…[this policy was] subsequently extended…through December 2003. (Ibid.)

Industry accounts for 44 percent of Malaysia's GDP, with manufacturing accounting for 27 percent of its workforce—second only to "local trade and tourism" at 28 percent. (CIA 2002) The U.S. is Malaysia's top export market (21 percent) and second import partner (17 percent) behind Japan (21 percent). (Ibid.) As indicated via investment in its Multimedia Super Corridor, Malaysia is undergoing a technological innovation push that has helped it become extremely competitive in the international marketplace. The role of small- to medium-sized enterprises (SMEs) in Malaysia is critical in this process and the Malaysian government has concentrated its efforts through the Small and Medium Industries Development Corporation (SMIDEC) and through hosting meetings such as the Pacific Basin Economic Council annual conference, which took place in Kuala Lumpur in May 2002 and stressed the need for "capacity building among small- and medium-sized enterprises in the Pacific region" through "financing assistance…contribution to technology innovation processes, and concerted efforts to ensure no sector…was left behind". (NST 2002a)

Why Brownfields?

Brownfields are not only a problem in the U.S., but also in Malaysia where they have motivated creation of the Malaysia-Idaho Brownfields Partnership, sponsored by the U.S.-Asia Environmental Partnership and the U.S. Agency for International Development. (SEI 2002) This partnership developed because of the occurrence of illegal dumping sites in Kuala Lumpur and other Malaysian cities (Balamurugan 1998; Bard 2002), which have become brownfields. SMEs are often blamed for illegal dumping practices that create these brownfields (Bard 2002; How 2002)—and thus issues are raised concerning the solid waste management process as well as hazardous waste disposal requirements and cleanup liability. The Institute of Engineers Malaysia, together with the Malaysian Department of the Environment has been working with the State of Idaho Trade and Development Agency and the Idaho National Engineering Laboratory to develop a training program for Malaysian policymakers in enforcement practices and engineers in remediation technology and implementation. (SEI 2002) Brownfields regeneration is fast becoming a priority of the Malaysian government:

> The Government will intensify on-going efforts as well as introduce new approaches to strengthen land use planning. This will include the identification of integrated planning for environmentally sensitive areas or Kawasan Sensitif Alam Sekitar (KSAS). All states will be encouraged to identify, map and gazette environmentally sensitive areas as State KSAS, to prevent inappropriate development from encroaching into these areas. In addition, new physical planning guidelines will be developed to improve environmental quality and conserve natural resources. Among others, these guidelines will cover urban regeneration, "brownfield" development in urban areas, optimal land development and development in catchments. In addition, the Town and Country Planning Act 1976, will be reviewed to enhance the role of the relevant authorities, strengthen enforcement and clearly delineate buffer zones to control urban sprawl. (Eighth Malaysia Plan 2000)

The Comparative Analysis

Los Angeles was chosen for analysis because it not only has a strong SME base, but also has a well-developed municipal brownfield program that includes more than fifty sites in various stages of redevelopment. Kuala Lumpur was chosen because of its SME base and because it has initiated brownfields redevelopment efforts that include the Malaysia-Idaho Brownfields Partnership. The comparative analysis of brownfield redevelopment within a developed- and a developing country city is intended to establish research links between institutional environments, land degradation, and economic development and is also likely to provide insight into other contemporary international development issues, such as how understanding the experiences of small business owners in developing countries can illuminate the issues confronting immigrant entrepreneurs in the United States.

The stigma associated with brownfields threatens the survival of existing businesses and the attraction of new businesses in areas adjacent to brownfields in Los Angeles (City of Los Angeles 2002), but they are much less of a land market interruption in Kuala Lumpur (Balamurugan 1998). Indeed, the very environmental legislation that brings notice to brownfields in the United States is likely reinforcing their neglect by accentuating and institutionalizing the risks of increased liability faced by new investors. Conversely, environmental regulations are considered lax in countries like Malaysia, but increased global scrutiny has caused things to change considerably as firms anticipate a convergence of environmental standards. (Balamurugan 1998; Bard 2002; SEI 2002) One of the goals of this study is to investigate how comparisons of this kind may provide insights into institutional considerations of land policy in the face of increasingly more complex global commercial integration. This institutional analysis focuses upon the notion of preemption and the importance of understanding why and how certain issues and actors prevail in the context of each city's brownfield redevelopment process. For instance, although both cities may have similar institutional arrangements governing the enforcement of land cleanup by small businesses, the actual practice of cleanup does not occur in the same way.

In both cities, brownfields proliferate in the older industrial areas—consisting of land zoned for manufacturing use, which has been populated by dense clusters of small firms. Given that brownfield properties are often interspersed among operating enterprises, their reuse is generally restricted to other SMEs—in Los Angeles this means that small brownfields lay idle while in Malaysia this means that small firms are relocated en masse and small brownfields are assembled with other parcels for very large-scale development. Considerable governmental oversight of brownfield redevelopment in the US has resulted in significant lag times in property turnover

whereby the SME culprit is targeted for cleanup liability and a new SME client is sought to take over the property—forcing governments to be both "enforcers" and "recruiters" at different points in the brownfield redevelopment process. This has yet to materialize in Malaysia where the government's environmental enforcement capacity is over-taxed and unable to implement a consistent brownfield policy.

This report has examined whether "culprit-versus-client" paradox of the SME exists and has found that the culprit side of the paradox exists in both Los Angeles and Malaysia, but the client side may have a better chance in Malaysia because of external forces already in play.

Lessons learned suggest that Malaysia has an opportunity to innovate beyond the U.S. in regard to its brownfield policies, but it must be careful not to drive out social forces that keep communities sustainable when it engages in large-scale firm relocation. Conversely, the U.S. has a different problem altogether in needing to bring social forces back into blighted, brownfield communities. Findings indicate that to preserve firms' tenure within communities and encourage them to assist in the brownfields process, more straightforward technical as well as fiscal assistance should be made available to them. Unfortunately a legacy of experience with complex environmental compliance requirements has made this challenge more difficult.

METHODOLOGY

To construct the qualitative case study analysis, original information was required from small businesses in both Los Angeles and Kuala Lumpur. Initial telephone calls to businesses in Los Angeles indicated that many firms did not have enough time or available staff to participate in a lengthy telephone interview and site visits that involved questions of land contamination were deemed to be possibly threatening. Given these conditions, electronic versions of two in-depth survey instruments were created to facilitate the easier acquisition of responses. (See Appendix A.) While the electronic format is not always ideal given that some individuals and groups do not have equal access to computerized communication, it was appropriate for this study because of small firms' familiarity with and easy access to the Internet as a fundamental component of their business operations. Also, by hosting the survey on an Internet website, the respondents were free to complete the survey at their leisure. Moreover, the interactive format of the survey required no physical writing and only minimal typing from respondents and these factors were deemed important in assuring a more reasonable time commitment. However, the in-depth nature of the survey likely reduced the amount of potential responses because of the questionnaire length and detail contained in the questions.

The survey administration process was designed to contact as many firms as possible and to demand as little of their time as necessary to gather the data; however, the surveys were very comprehensive and provided a unique profile of each firm's role in the community. The results will be discussed following the individual case analyses.

THE LOS ANGELES CASE

Small Manufacturers in Los Angeles

Manufacturing is important to the State of California; it ranks first of all states in annual average manufacturing employment and in 2000, Los Angeles County represented nearly one-third of this total. (Kyser 2001, 16) Within the County, manufacturing employment has declined by 31 percent relative to total nonfarm employment since 1988; however, it still accounts for 15 percent of the total. (LAEDC 2002, 17) According to the US Department of Labor, the Los Angeles County region ranks second in manufacturing employment of all metropolitan statistical areas and ties for ninth when compared with state rankings. (Kyser 2001, 16) In 1999, there were approximately 28,000 manufacturing firms in Southern California, with nearly 18,000 or 63 percent of those located within Los Angeles County. Of those manufacturers, one-third were small firms with four or fewer employees, just over half had nine or fewer employees, 68 percent had 19 or fewer employees and 86 percent had 49 or fewer employees. (15) Data from 2001 shows this tendency has become more pronounced. (EDD 2001) Thus, despite a decline in overall manufacturing jobs, Los Angeles County still depends heavily upon manufacturing for its economic growth—and particularly upon smaller manufacturing firms.

In 2000, the City of Los Angeles had 360,284 people employed in manufacturing—nearly 60 percent of the County total (Rodino 2003, 13)—which indicates the level of industrial concentration and suggests the magnitude of impact industrial fluctuation has on the City. Within the County, the South Los Angeles region has the largest manufacturing workforce which "surprises people" because of its reputation as a " 'distressed' area"—obstacles in the area include a "lack of land for expansion of manufacturing" and because the area is so intensively used, the only land "available for new construction are brownfield sites." (Kyser 2001, 10)

Expanding the geographical scope of analysis to a five-county region in Southern California shows that manufacturing persists as an economic strength: the manufacturing employment of Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties combined ranks third when compared to all US states. (LAEDC 2002, 16) Moreover, the expanded scope shows that manufacturing jobs have likely migrated within this region: since 1988, while manufacturing employment declined in Los Angeles County by 28 percent, nearby Orange County only saw a nine percent decrease, while both Riverside/San Bernardino Counties and Ventura County saw huge gains of 50 and 33 percent respectively. (Ibid.) Thus, the City of Los Angeles has been losing manufacturing jobs to its neighbors.

A loss in manufacturing jobs is seen as problematic because it means the disappearance of the middle class since small manufacturing firms hire people with fewer skills and provide critical on-the-job training which helps them to "move up the income ladder" and speed "assimilation into the overall economy". (2) These firms also contribute significantly to international trade—notably in the satellite, electronic, chemical, and apparel sectors. (3)

Over the past two decades while manufacturing employment has declined in Los Angeles County, industrial vacancy rates have declined by more than half—down to 3.9 percent in 2001, which indicates stiff competition for existing space. (8) This phenomenon has persisted throughout the region and has resulted in the Los Angeles Economic Development Corporation's

(LAEDC) call for "competitive industrial sites", including quicker redevelopment of brownfields as part of its "recipe for survival" of the manufacturing sector. (13) Put in more human terms, manufacturing has played a critical role in providing life support to challenged communities in Los Angeles:

> The shrinking of the manufacturing sector has been a serious blow to the Los Angeles area not only because of the importance of manufacturing as an underpinning to the local economy, but also because of the severe effect this has had on workers in areas of the county that are heavily dependent on manufacturing firms as a source of employment. These traditional 'blue collar' communities include most of the areas affected by the civil unrest.[6] According to the 1990 Census, workers in these areas already beset by high unemployment were more likely to be working in factories than were workers in more affluent areas of the county. Also, for workers with less education, manufacturing jobs have offered a relatively high wage compared to other sectors of the economy, although this differential has been narrowing—in part because of the disappearance of many large, unionized establishments over the past several years. (EDD 1993)

Brownfields as a Solution to Job Retention and Community Renewal

Because the City of Los Angeles has seen "an erosion of its industrial base, resulting in a loss of manufacturing jobs, a reduced tax base and [creation of] idle Brownfields sites" over the last few decades, Los Angeles mayor, James Hahn, introduced the Industrial Policy Development Initiative (IDPI) in January 2003, recognizing that "Manufacturing, warehousing…distribution, and research and development activities all provide needed, well-paying jobs, oftentimes in areas near where lower-income residents reside." (MOED/IDPI 2003, MOED/IDPI Work Plan 2003, 1) The IDPI was created in response to "a reduction of the powerful and positive economic multiplier effects of industrial activity" and identifies a number of challenges it is intended to address, including job loss, a lack of suitable industrial space in the city that is causing firms to locate elsewhere and "the deterioration of outmoded industrial properties, the blight that such deterioration fosters, and reduced tax revenues from underutilized industrial land." (MOED/IDPI)

The exact condition of industrial land in Los Angeles is unclear and the first phase of the IDPI initiative entailed issue articulation and a property inventory, with later phases intended to answer questions such as how the City may reclaim brownfields sites and to identify the "problems facing existing (mostly small to medium sized) industrial businesses". (MOED/IDPI Work Plan, 3) As demonstrated here, Los Angeles continues to depend upon small to medium-sized manufacturing and is really left with no choice but to concentrate on attracting and supporting the smaller firm given the space constraints of available industrial land. Thus, how Los Angeles goes about reusing its industrial land becomes critical—and an obvious challenge in this process is the reuse of smaller brownfield sites. Historically, large brownfield sites have been the best at attracting investor interest and government grants, but Los Angeles must redirect its focus to make smaller-scale projects feasible.

As mentioned previously, brownfields pose a unique problem for communities because they are a simultaneous environmental, social, and economic problem and they require nontraditional collaboration strategies—on the part of external as well as internal stakeholders—for their

[6] This refers to the racially-charged post-Rodney King riots in May 1992.

solutions. In the City of Los Angeles, the governmental side of this equation has taken the form of a Brownfields Team that consists of the Community Redevelopment Agency (CRA), the Environmental Affairs Department (EAD), the Mayor's Office of Economic Development, the Community Development Department (CDD), City Council offices, and other departments and agencies as needed. Thus, there is no one agency that controls the brownfields redevelopment process; each agency transacts a different part. For instance, the Los Angeles Fire Department regulates the use of underground fuel storage tanks and maintains these records; however, they become critically necessary in assessing a brownfield site's potential contamination risk and therefore the LAFD is often consulted in the Team's work.

Former general manager of the EAD, Lillian Kawasaki, succinctly identified the major barriers to brownfields redevelopment in Los Angeles as "liability, funds, and city coordination" claiming that the integration of City functions implied by the last is pivotal:

> From a local government management perspective, successful brownfields programs demand a holistic approach. By itself, economic development is not new, and neither is environmental cleanup. But integrating all these objectives with job training, workforce development, and environmental justice not only is new, but also is necessary. Successful brownfields development must address the disparate impacts of the past on communities of color. It must integrate economic, environmental, and social equity objectives. (ICMA 2001, 214)

The Brownfields Team is evidence of the beginning stages of municipal integration in the approach toward land cleanup and reuse. One advantage of this approach is the ability to mobilize larger resources in attracting external attention. The Team works with various federal and state agencies.[7]

The overarching goal of the Los Angeles Brownfields Program and Team is "to develop effective strategies to enable redevelopment of brownfields throughout Los Angeles but particularly in disadvantaged communities and to incorporate these strategies into the City's normal redevelopment process". (LABF 2003a) The City's brownfields work began to be formalized in 1995 when a federal grant was received from the U.S. Environmental Protection Agency to fund a USEPA staff person to convene the Team and develop a work program.

[7] Although the USEPA is the federal agency with regulatory jurisdiction over brownfields, the City Team also works with the U.S. Department of Housing and Urban Development (HUD), which implements the Brownfields Economic Development Initiative (BEDI) that has awarded the City grants for the Goodyear Tract and Cornfield brownfield projects. Also, the U.S. Economic Development Administration (EDA) and the U.S. Army Corps of Engineers are other federal sources of support to the City regarding brownfields. In the case of the latter, as well as the USEPA, federal employees were sent to the City as part of the Intergovernmental Partnership Act (IPA) whereby they work from City offices to lend their expertise to the development of the Brownfield Program while their salaries are funded by the respective federal agencies. Two IPAs currently work for the Los Angeles Brownfields Program on behalf of the USEPA.

Another federal resource that has been involved in brownfields elsewhere is the Agency for Toxic Substances and Disease Registry (ATSDR), which was established under the federal Comprehensive Environmental Response Compensation and Liability Act CERCLA as the "principal federal public-health agency involved with hazardous waste issues and having a responsibility to prevent or reduce the harmful effects that exposure to hazardous substances has on human health and quality of life". (Zarcadoolas et al. 2001, 15) ATSDR is part of the U.S. Department of Health and Human Services.

(LABF 2003b, 1) Subsequently, in 1997 and 1998 federal grants were obtained to begin work on the large Goodyear Tract and Crown Coach sites. The Los Angeles City Council adopted a motion recognizing the Brownfields Program along with the Team in 1997. In March of 1998, the City of Los Angeles was designated as one of only 16 nationwide USEPA Brownfields Showcase Communities:

> Showcase Communities have three main goals: to promote environmental protection, economic redevelopment and community revitalization through the assessment, cleanup and sustainable reuse of Brownfields; to link Federal, State, local and non-governmental action supporting community efforts to restore and reuse Brownfields; and to develop national models demonstrating the positive results of public and private collaboration addressing Brownfields challenges. (USEPA 1998)

The Brownfields Program budget is comprised of grants from the state and federal governments along with an allocation of City funds from various sources, including part of the U.S. Department of Housing and Urban Development Community Development Block Grant (CDBG) allocations. Program funds are distributed according to six categories of site assistance that facilitate various activities such as site assessment, cleanup, economic development, capacity-building, land acquisition, and technical assistance.

In the process of its brownfields redevelopment activities, the City promotes the use of various tools such as those detailed in the following table.

City of Los Angeles: Tools for Redeveloping Brownfields
Prospective purchaser agreement: The State DTSC agrees to not pursue site mitigation enforcement against prospective purchasers, tenants, or lessors who become site owners or operators of a brownfield if all of the following conditions are met: they do not exacerbate or contribute to the existing contamination; their operation will not result in health risks to persons on the site; they allow access for, and do not interfere with, remediation activities; unauthorized disposal is not occurring on the site; and there are other viable responsible parties who are willing to conduct any necessary remediation. (DTSC 1998a)
Comfort letter: Uncertainty about potential contamination and/or Superfund liability may keep otherwise interested parties from purchasing or redeveloping brownfields; To "allay the fear of potential federal pursuit of parties for cleanup of brownfields," the EPA may provide relief or "varying degrees of comfort" by drafting in written form the agency's intentions toward a particular piece of property. Comfort may range from a formal legal agreement, including a "covenant not to sue", releasing a party from liability for cleanup of existing contamination, to policy statements concerning EPA's enforcement discretion relating to circumstances or activities of a party at a specific site. (USEPA 2003)
State Voluntary Cleanup agreements: The California program was established in 1993, and it allows DTSC to provide oversight to motivated parties to assess and/or cleanup lower-priority sites. (DTSC 1998a)[8]
Economic development tax incentives: Property owners in Federal Empowerment Zones (EZ) or Revitalization Zones, State Enterprise Zones, and/or City Renewal Zones may qualify for tax breaks. The City's Community Development Department provides information about these, but eligible residents must file with the respective agencies.
Brownfields Tax Incentive: environmental cleanup costs are fully deductible in the year they are expended (not having to be capitalized). The government estimated that although the tax incentive would cost nearly $300 million in annual tax revenue, it is expected to "leverage $3.4 billion in private investment and return 8,000 brownfields to productive use". (USEPA 2001)
Polanco Authority: The Polanco Act authority grants local redevelopment agencies qualified immunity from state or local laws if cleanup is conducted in accordance with a remedial action plan approved by DTSC, the Regional Water Quality Control Board or other local agency; liability immunity extends to property successors and lenders. (DTSC 1998b) According to the Polanco Act, the Community Redevelopment Agency (CRA) of Los Angeles may undertake property contamination assessments with or without the owner's consent. This is a powerful challenge to private property ownership rights and is one of the most aggressive pieces of law concerning brownfields.

In addition to its Polanco Act authority, the CRA may exercise *eminent domain* once the City Council approves a redevelopment plan for a project area. Eminent domain is the authority (of a government agency) "to acquire property when it can be shown that the property is acquired for a public purpose and for the public good and that the owner has received a just compensation". (CRA 2003) In conformity with the Redevelopment Law of the State of California, the CRA was established by resolution of the Los Angeles City Council in 1948 and granted with the powers to combat blight and ensure the provision of quality low-income housing; blight is defined as "Deterioration of an area caused by physical, economic and social forces". (Ibid.) The CRA is a member of the Los Angeles Brownfields Team and primarily focuses on those brownfields with housing reuse potential that fall within redevelopment project areas.

[8] Although this may be the most well-known, there are other applicable State programs, including DTSC's *Expedited Remedial Action Program*, a limited pilot voluntary cleanup program and the *Mello-Roos Community Facilities Act Amendments*, which created the "first long-term financing options for hazardous substances cleanup by empowering Community Facilities Districts to levy special taxes and issue bonds to provide funds for site cleanups". (DTSC 1998a)

Public consultation and involvement is another important component of brownfields redevelopment and is often made a contingent requirement for the disbursement of federal brownfield grant funds. The City Team involves the public in brownfield projects in a variety of ways: through notifications posted at public libraries announcing certain projects, participation in neighborhood workshops on site visioning, and in communications with Neighborhood Councils and other groups. Public involvement may be difficult to achieve especially when it requires that disparate elements of the community work together for the first time. Moreover, when the brownfield project requires private property, the owner may feel antagonized by different elements of the community. The public is often the first source of information about a brownfield site—when problem sites are reported to City departments or Council District offices. Citizens may notify the City that illegal dumping has occurred on a site or that questionable activity is taking place. Sometimes prospective purchasers call to find out if there is something wrong with a vacant property. Ultimately, the issue of trust becomes important when a property is given brownfield status because the property assumes more than just personal economic value.

Finding out if a property is a brownfield is a difficult process in itself. The State maintains a database of brownfields called "CalSites" which records the varying levels of contamination and development of properties in a wide range of programs—including Cortese sites (locations of hazardous materials releases), Voluntary Cleanup Program sites, and those sites requiring "no further action." The City's database of brownfield sites is maintained by the Environmental Affairs Department. The multi-agency Team determines whether or not to include a site in the City's list. The City may be notified about a brownfield site from a variety of sources, including the general public, City Council offices, and other departments.

Brownfield Redevelopment Procedural Elements

The California Environmental Quality Act (CEQA) requires that public agencies predict how much environmental damage might be caused by their projects—including brownfields. To comply with this expectation CEQA requires that Environmental Impact Reports (EIRs) be completed for projects.

The City itself does not conduct EIRs or Preliminary Endangerment Assessments (PEAs) or the more intensive environmental investigations that may be required at properties, such as Phase I and Phase II site evaluations, but instead contracts with other—often private—organizations. This is an important point because it shows that, concerning brownfields, much of the expertise and workforce capacity needed to fully implement redevelopment as required by law exists outside the City government itself. Not only do these functions demand a certain expertise, there often are professional certifications required for the individuals that conduct the investigations.

The contractors who perform the major site investigations do so according to very specific standards established by the American Society for Testing and Materials[9]: Since 1898 ASTM

[9] For instance, the beginning environmental analysis—the Phase I—is outlined in ASTM E1527-00: to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products . As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability: that is, the practices that constitute "all appropriate inquiry into the previous ownership and

International has become one of the world's largest voluntary standards development organizations; it is a non-profit organization ASTM that provides a mechanism for "development and publication of voluntary consensus standards for materials, products, systems, and services". (ASTM 2003) The largest global standards body is the International Organization for Standardization (ISO). ISO standards are also voluntary, but may be implemented in a mandatory way. They are increasingly important for small to medium-sized manufacturing firms to demonstrate their global competitiveness:

> As a non-governmental organization, ISO has no legal authority to enforce their implementation. A certain percentage of ISO standards - mainly those concerned with health, safety or the environment - has been adopted in some countries as part of their regulatory framework, or is referred to in legislation for which it serves as the technical basis. Such adoptions are sovereign decisions by the regulatory authorities or governments of the countries concerned; ISO itself does not regulate or legislate. However, although ISO standards are voluntary, they may become a market requirement, as has happened in the case of ISO 9000 quality management systems, or of dimensions of freight containers and bank cards. (ISO 2003)

The private sector environmental consulting industry is rapidly growing—particularly in Southern California[10]—but these changes mean that the brownfield redevelopment process is becoming increasingly more specialized, professionally dominated, and accordingly, more expensive. This scenario does not bode well for the small business that often cannot afford the extra resources for brownfield investigation—particularly when additional resources are needed to keep pace with regular environmental compliance. Compliance costs vary widely by industry and location because they depend upon such factors as the amount of hazardous materials used and disposed of during the production process as well as the impact of activities on water resources.

The State of California offers a streamlined information system for businesses in any city to find out about their general and environmental permitting requirements.[11] However, the information provided is still complex and overwhelming—for instance, an electronic/electric equipment manufacturing business in the City of Los Angeles is given 24 different reference points to secure permits.

The Predicament of Small Business

Small businesses are connected to their communities in a multitude of ways; however, they must navigate a vast regulatory system to engage in the brownfields process—either through identification, assessment, cleanup, or relocation to a former brownfield property. This is highly discouraging if attracting vibrant small businesses is to be a solution for blighted communities.

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uses of the property consistent with good commercial or customary practice" as defined in federal law. (ASTM 2000)

[10] According to Environmental Business International, Inc., three of the top ten remediation firms in terms of annual revenues are located in Southern California.

[11] CALEPA launched the California Government Online to Desktops (CalGOLD) web-based system to assist in providing businesses the information they need to comply with environmental and other regulatory/permitting requirements in 1997.

Los Angeles small businesses have many sources of support for their commercial operations; however, there is no single source of reliable information to assist them regarding their role and responsibilities concerning brownfields.

A variety of nongovernmental organizations are concerned with brownfields—Communities for a Better Environment and the Greenlining Institute are particularly concerned about brownfields' environmental justice implications. The California Center for Land Recycling (CCLR) also focuses on environmental justice, but has a wider approach to brownfields that address them as urban sprawl mitigation strategies and opportunities for open space creation. CCLR also facilitates training for municipal brownfield project managers and has organized two seminars for the City of Los Angeles. Each of these organizations is based out of the San Francisco area and does not provide comprehensive services to small businesses.

This overview of the brownfields process in the City of Los Angeles has served to demonstrate the complexity of the institutional context small businesses must operate within should they be faced with a brownfields problem. Although these regulatory and service support mechanisms are in place and much has been written about them, it is still unclear how well they are understood by the small business community. The main goal of this report is to better articulate the perspective of the small business community in regard to brownfields. This perspective—as revealed in the survey results of Los Angeles businesses—forms the basis of the ensuing discussion in the "Summary Results and Conclusions" section and provided in greater detail in Appendix D.

THE KUALA LUMPUR CASE

This case is organized around a discussion of the emergence of Kuala Lumpur within the Southeast Asian region and how its growth and development is affected by such factors as external trade and large-scale development projects. Both of these factors could potentially have a very strong impact on the city's manufacturing sector and how it is able to manage the problems associated with its industrial brownfields. Since Malaysia has yet to implement a formal brownfields program, this case highlights its industrial support programs for small to medium-sized manufacturers (SMEs) as well as its environmental policy infrastructure as an indication of the institutional framework that will influence how brownfields are managed locally.

The Regional Context of Kuala Lumpur

Malaysia is located in Southeast Asia between Indonesia, Singapore and Thailand, encompassing the Malayan Peninsula and sharing the island of Borneo with Brunei Darussalam and Indonesia.[12] (Dana 1999) Malaysia was formed in 1963 through a federation of the former British colonies of Malaya and Singapore. (CIA 2002) However, Singapore became independent two years later. Singapore had been an important trading port under British colonization and continued to rise in prominence. In Malaysia, the port cities urbanized first and Melaka in particular became a powerful world trading destination:

> The early urbanization of the Malay Peninsula was…the result of overseas entrepôt trade. Urban centers based on hydraulic peasant production never developed to any extent. It was only with the rise of mercantile capitalism that full-scale urbanization started on the Malay Peninsula. Melaka under the Portuguese and Dutch and later Penang and Singapore under the British became part of the urban colonial network that eventually extended from Bombay to Hong Kong. But even then, up to the middle of the nineteenth century, the Malay Peninsula itself produced little for international trade in comparison with neighbouring countries. It was only with the growing demand for industrial raw materials, particularly tin, that both urbanization and colonialism spread to the Malay Peninsula proper. (Evers and Korff 2000, 47)

Kuala Lumpur began its urbanization process this way—as an inland tin mining camp at the juncture of two muddy rivers; its name translated into English means "muddy confluence". (KL City Hall 2003) Kuala Lumpur continued to urbanize in accordance with its natural resource commodity-trading functions and is now Malaysia's largest city—with a population of more than 1.4 million—and the center of its government and industry. (Department of Statistics Malaysia 2000) Kuala Lumpur was declared a federal territory in 1974 to allow the capital to be administered by the federal government, and thus ceased to be part of the State of Selangor. (UNESCAP 1999, I-A)

Kuala Lumpur has lived through the same growing pains of many of its neighboring Asian metropolises—a rapid influx of population that has resulted in traffic congestion, pollution, an inadequate housing supply, overly taxed infrastructure, skyrocketing land prices, and increasing segregation of social classes:

[12] See Map in Appendix B.

> Modernization is not limited to economic growth…Especially in Thailand, Malaysia and the Philippines, and to a lesser degree in Singapore and Indonesia, strong pressures towards liberalization and democratization of the political system are being expressed…Democratization and the rise of the middle classes are also characterizers of political and social changes in the main cities…During recent years, as an effect of rapid modernization, specific quarters, based on social differentiation like the new estates of the middle classes, have emerged. (Ibid., 1, 4)

While bureaucratic employment is heavily concentrated in the city, the civil servants and other members of the middle class have been moving to new housing estates in smaller towns on the urban fringe (53). Evers and Korff (2000) have found that these members of the middle class have also begun to participate in land speculation—and are buying land on the urban periphery as an investment thereby becoming absentee landowners. (54-57) This middle class movement out of downtowns is similar to the American experience as people seek cheaper greenfield land for new development, but continue to commute to downtowns for work. As the city physically spreads outward, it is said to be following a pattern of urban sprawl, which is similar to what Los Angeles has already experienced.[13]

Not only has Kuala Lumpur begun to experience a loss of the middle class, it also is facing increased deindustrialization to its hinterlands as a result of concerted planning. Two examples of this are its participation in a three-nation trade pact and its creation of the Multimedia Super Corridor.

Since its independence from Malaysia, Singapore has become one of the world's most competitive international trade centers—it is the 12th largest trading partner of the U.S. and is one of only five other countries that have formalized free-tract pact agreements with the U.S. (Palmer 2003) Singapore's position as the dominant "financial hub of Southeast Asia" (Ibid.) and its position as one of the wealthiest nations "with per capita GDP equal to that of the leading nations of Western Europe", (CIA 2003) coupled with its strategic location at the southern end of the Malayan Peninsula, means that it has a strong influence on Malaysia and Kuala Lumpur in particular. For instance, because Singapore is a small, highly urban nation, it is increasingly looking to its "immediate geographic region for economic interaction and sustenance". (Yeung 2000, 17) Functionally, this means that it is reaching into southern Malaysia and drawing manufacturing activity from elsewhere in the country to the southern state of Johor. (Ibid.)

Singapore's aggressiveness in its reach for available land and labor has resulted in the formation of a "growth triangle" including Singapore, Malaysia, and Indonesia, which covers an extended urban corridor connecting Johor, Singapore, and Riau: "In the JSR Growth Triangle, it was largely a government initiative taken by Singapore that found favorable reception in Malaysia and Indonesia in the spirit of ASEAN cooperation. The economic logic for Singapore…was to relocate manufacturing industries to neighboring territories to remain competitive in the global market." (65) The concept of growth triangles is a largely Asian conception and a number of

[13] See, e.g., "Sprawl Hits the Wall: Confronting the Realities of Metropolitan Los Angeles" (2001), by the Southern California Studies Center (Los Angeles) and the Brookings Center on Urban and Metropolitan Policy (Washington, DC).

them have been created throughout the region, exemplifying a wider trend toward interregional trade cooperation. (Ibid.)

For Kuala Lumpur, it is unclear what this means because it has controlled the governing bureaucracy and exists as the most populous and powerful city in Malaysia, but as indicated earlier, it is beginning to go through a period of decided industrial deconcentration. A master-planned city was designed and built on undeveloped greenfield land 25 kilometers from Kuala Lumpur and declared the new capital, Putrajaya. Putrajaya is intended to supersede Kuala Lumpur as the national administrative center and some government offices have already moved there—including the office of the prime minister. Putrajaya was designed as a "garden city" and an "intelligent" city—as a model of modernism offering the latest in infrastructure amenities. The city is an example of a trend in Malaysia for creating satellite cities and towns—in order to draw population and commerce away from Kuala Lumpur and spread them more evenly throughout the country. However, this still leaves Kuala Lumpur to deal with the problems of an industrial legacy—included degraded brownfield land.

Putrajaya is part of a larger development plan that is called the "Multimedia Super Corridor", which extends from the Petronas Twin Towers at the Kuala Lumpur city center in the north to the new Kuala Lumpur International Airport in the south; the corridor boasts a "world-class physical and information infrastructure" and is "an integrated logistics hub with rapid rail links to Kuala Lumpur, a smart highway system…[and a] high-capacity global telecommunications and logistics network built on a 2.5 – 10 gigabits digital fiber optic backbone." (MDC 2003)

Other examples of large-scale projects that are intended to functionally deconcentrate Kuala Lumpur are Cyberjaya and BioValley. Cyberjaya was officially launched by Malaysian Prime Minister Mahathir Mohamad in July 1999 as "Malaysia's first truly intelligent city". (Cyberjaya 2003) Located very near Putrajaya, it encompasses 7,000 acres and is considered "the nucleus" of the Multimedia Super Corridor. (Ibid.) The purpose of Cyberjaya is to attract information technology and other high-technology industries. BioValley is a similar project designed to attract biotechnology industries; however, this project is being overseen by the Ministry of Science Technology and the Environment, which houses the Malaysian Department of the Environment—the approximate equivalent of the USEPA. Each of these cities was designed to have mixed land uses so that industry and residences would be compatibly co-located; however they presently exist as island nodes within the Corridor because development has not yet filled in the spaces between them. They also are industry cluster specific (i.e., just information technology and just biotechnology), which goes against the grain of organic industrial development and may prove challenging in the long-run if subsectors within the clusters innovate or evolve away from one another.[14]

This top down push for land development by the national government is quite different than the U.S. experience—where cities have sprawled in haphazard fashion into their hinterlands. Instead, Malaysia is undergoing a controlled form of urban sprawl—what might be considered "smart

[14] The U.S. experience has shown that distantly separating land uses—e.g., for work, home, school, and recreation—induces sprawl and discourages community connectedness. To counter this effect, the "new urbanism" movement has flourished—promoting the idea of mixed uses in close proximity to simultaneously increase interpersonal interactions and decrease the dependence on vehicular travel.

growth"[15] but for the potentially negative sociological ramifications if it ends up creating middle-class enclaves.

Similarly, Yeung (2000) cautions that the export-industry focused growth on the urban fringe in cities throughout Southeast Asia may have hidden social consequences:

> …Bangkok, Kuala Lumpur, and Jabotabek have grown rapidly in new functions. By virtue of their traditional and newfound importance, they have become well articulated with the new global economy. However, within these urban agglomerations, it is their fringe areas that have experienced the fastest rates of growth and the most rapid physical transformation. These areas have relatively more land and somewhat less stringent regulatory controls on manufacturing-related growth and investment by TNCs [transnational corporations]. The rapid growth and transformation of these urban fringe areas are components of physical and social change that have not been adequately dealt with by the governments concerned. (38)

With these forces in play, however, it remains to be seen what will happen to the neighborhoods left behind in Kuala Lumpur. Kuala Lumpur is home to many poor people that would not benefit from living in the new cities, so they will likely remain. Presently one of the major obstacles that is constraining the development of SMEs is "the high cost of industrial land and factory space" (Abdullah 1999, 123), but although prices are currently high in the city, as demand goes elsewhere, existing businesses might also. There is concern that much of the land in Kuala Lumpur has already been earmarked for development and that the remaining available land only exists as "small pockets that do not lend themselves to large-scale development". (Ban 2003, 1) (UNESCAP 1999) This is what has happened in Los Angeles and other American cities—and developers have gone to the urban fringe where land is less expensive and available in larger quantities—with less likelihood of contamination problems. Unfortunately, the less mobile poor have been left to deal with deteriorated community conditions, including brownfields. Although this phenomenon has not yet been empirically validated in Kuala Lumpur, similar symptoms are evident and therefore warrant further investigation. This is one of the reasons why a comparison of the two cities is compelling.

Small Manufacturing in Malaysia

In Malaysia, SMEs are defined as "manufacturing companies or companies providing manufacturing related services with annual sales turnover not exceeding RM25 million [approximately $6.5 million]" and less than 150 full-time employees." (SMIDEC 2003) Seventy-six percent of all enterprises in Malaysia are SMEs and the manufacturing sector comprises 93.8 percent of those. (Abdullah and Beal 2003, 1417) There is an extensive governmental infrastructure in place to encourage the growth of SMEs, with "as many as 13 ministries and nearly 30 government agencies engaged" in a variety of SME support activities. (Abdullah 1999, 58) An example of this was the 1996 creation of the Small and Medium Industries Development Corporation (SMIDEC) within the Ministry of International Trade and Industry (MITI), "in recognition of the need for a specialised agency to further promote the development of Small and Medium Industries (SMIs) in the manufacturing sector through the provision of advisory

[15] Smart growth is a popular urban development movement that attempts to ensure "neighborhoods, towns, and regions accommodate growth in ways that economically sound, environmentally responsible, and supportive of community livability—growth that enhances the quality of life". (O'Neill 2000, 2)

services, fiscal and financial assistance, infrastructural facilities, market access and other support programmes." (SMIDEC 2003) While SMIDEC concentrates on serving manufacturers, Malaysia's Ministry of Entrepreneur Development functions as the first point of contact for small businesses from any sector.

Over the past few decades, the Malaysian government has implemented an export-oriented industrial policy that has encouraged SMEs in certain strategic manufacturing sectors—such as electronics and electrical equipment manufacturing—that provide important linkages to larger international firms. (Abdullah 1999, USCS 2001) This focus on manufacturing to spur export-led growth has been a regional phenomenon:

> … many Asian countries have adopted export-oriented manufacturing strategies with notable success. In 1993, Hong Kong and China topped the list of developing-country exporters with $135 billion and $92 billion in overseas sales, respectively, followed by Taiwan ($85 billion), South Korea ($82 billion), and Singapore ($74 billion). Malaysia, Thailand, and Indonesia constituted the second tier together with Brazil and Mexico. (Yeung 2000, 16)

For Malaysia, this focus has meant that there is a direct and powerful relationship between the national government and small manufacturing businesses that is quite different than the more decentralized system in the US. For Kuala Lumpur, this has resulted in a spatial as well as functional concentration of policy resources and firms within the city—although as discussed previously, this is beginning to change. The largest number of manufacturing firms (35.6 percent) are located in the State of Selangor, which surrounds Kuala Lumpur, and this is evidence of the dispersal of industry into the surrounding hinterland. (Abdullah and Beal 2003, p. 1418) The state of Johor has the next highest concentration at 11.8 percent. (Ibid.)

SMEs in Malaysia tend to be "family or significantly sole proprietorship businesses, utilizing relatively low levels of capital…more labour intensive, involving simple management and specialization of labour, being run largely as one-person or family tied operations and with a very simple division of labour." (Abdullah 1999, 30) They are generally short in tenure—with half of all entrepreneurs closing their businesses by the third year of operation. (Dana 1999, 119) They are also usually domestic firms producing goods primarily for the low- to middle class (Abdullah 1999) and they provide important socioeconomic linkages through their support to large firms and their employment of low-skill workers. (Abdullah and Beal 2003) Although many SMEs have operated within the informal or extralegal sector in Kuala Lumpur, according to Forbes (1996), this sector is disappearing quickly.[16] Concerning location, manufacturing SMEs tend to locate within specific "SME Zones" (Abdullah 1999) and now many are located within planned industrial estates in satellite towns outside of Kuala Lumpur.

[16] Forbes describes the informal sector in Southeast Asian cities thus: "…the poor still predominate in Southeast Asian cities, with the notable exception of Singapore. The urban informal sector underpins the survival of the urban poor…It includes the trishaw riders, the market sellers, the street-side hawkers, the prostitutes, the backyard manufacturers, the pavement coffee-shops, the sate makers…[it] is unregulated, it relies on family labour, records are kept in the owner's head and it is financed by loans from friends and colleagues…it defies the order we expect of registered businesses." (58)

To understand the situation of SMEs in Malaysia, it is important to look at the institutional context in which they operate. Policy programs created to address the needs of SMEs are an instructive way of finding out what the government and nongovernmental sector perceive are necessary to support their growth. Abdullah (1999) in his comprehensive assessment of the policy issues and challenges facing SMEs categorized the various governmental support programs into five broad categories.[17]

Even given the extensive array of assistance programs available to small manufacturers, Abdullah found that the majority of firms do not take advantage of them. He concluded that the incentives were not realistic in their time frames, that the funding available was not sufficient in most cases, that the "boundaries of responsibility, priorities and targets" were not clearly defined, and they were not relevant to domestic firms,. (183) He suggests that because the Malaysian government's incentives primarily target export-oriented firms, they are not reinforcing the stabilizing linkages that other SMEs foster in the domestic economy—thereby fueling a weakening of the domestic industrial structure. (See e.g., Abdullah and Beal 2003)

In addition to SMIDEC and the other organizations described thus far, another prominent source of support for SMEs is the Federation of Malaysian Manufacturers (FMM), a member-based organization established in 1968, and "the largest private sector economic organisation in Malaysia representing over 2,000 manufacturing and industrial service companies of varying sizes", which runs an SME Resource Center and has offices in each state. (FMM 2003)

An interview with a manager of the Selangor State Branch of the FMM revealed that most of the factories in Kuala Lumpur had been relocated to the "outskirts of the city" and that there are only about 150 "old factories" left in the city, while there are about 10,000 factories of various sizes in the state of Selangor. (Ek 2003) Major issues of concern to manufacturing firms in Kuala Lumpur are that industrial land is very expensive, there is a difficulty recruiting workers to work in the factories, and it is a challenge for firms to keep operating costs down and still remain globally competitive. (Ibid.) Concerning institutional networking, the Malaysian Industrial Development Authority and SMIDEC were cited as those that were most involved with manufacturing firms. As far as other groups that SMEs network within, the Small to Medium Sized Industry Association (SMI Association) was cited along with "many other smaller industry associations". (Ibid.) The SMI Association focuses its attention on export-oriented manufacturing firms with a mission to increase their visibility on the Internet.

Brownfields and the Environmental Policy Context in Kuala Lumpur

The Ministry of Science, Technology, and the Environment (MOSTE) is the national government agency empowered to enforce environmental laws in Malaysia. Within the Ministry, the Department of the Environment (DOE) conducts activities concerning implementation of environmental laws and coordinates its activities with the state-level offices.

The National Environmental Quality Act of 1974 is the backbone of Malaysian environmental law, but there are numerous other pieces of legislation concerning different aspects of environmental governance, which were judged "fairly comprehensive" in a 1999 United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) report concerning how

[17] These are detailed in Appendix C.

to integrate environmental considerations into economic decision-making. The UNESCAP study evaluated the institutional mechanisms of environmental policy in Kuala Lumpur and concluded that there is a necessity to better coordinate the functions of the federal, state, and city government in regards to the environment. For example, Malaysia has an Environmental Impact Assessment (EIA) process that is required for new developments, but is only enforceable by the DOE.

EIAs are prescribed for project development under the Environmental Quality Order of 1987: "Incorporating environmental dimensions in project planning and implementation by determining the implication of proposed projects and the costs of necessary environmental mitigation measures. (MIDA 2003) EIAs are required for certain industries based on their daily production capacities and therefore the burden of compliance varies widely by sector. The DOE provides a list of consultants that are able to provide EIA services; environmental consulting is a rapidly growing industry in Malaysia. According to one consultant whose company conducted the environmental investigations for the Kuala Lumpur Central Station project and who was one of the lead participants in the Malaysia-Idaho Brownfields partnership, there is no set standard for site assessment or soil and groundwater pollution" in Malaysia, but companies are still undertaking assessments of contaminated sites using a variety of different methods, such as the ASTM E1527, and the Dutch and British standards. (Balamurugan 2002)

The Malaysia-Idaho Partnership was the first high-level focus on brownfields in Malaysia and was initiated as part of the U.S. State Environmental Initiative (SEI). The SEI is a program funded by the United States Agency for International Development through the U.S. Asia Environmental Partnership (USAEP) that awards matching grants to U.S. states in order to link American expertise in environmental management, policy and technology with Asian demand for environmental improvements". (CSG 2003) In Malaysia, interest in brownfields had been initiated by the Institute of Engineers Malaysia (IEM), which was planning to host a symposium on the subject in 2002. Subsequently, IEM partnered with the Malaysian DOE to participate in the program in order to bring environmental remediation expertise and technology to Malaysia. Idaho was recruited into the project because—like Malaysia—it must deal with the legacy of pollution from a long history of mining (Bard 2002) and its Idaho National Engineering and Environmental Laboratory (INEEL) is home to experts in "risk-based environmental decision-making…[with a] track record of science research, applied engineering and technology development and hazardous waste management". (INEEL 2002)

The partnership also involved collaboration with universities, environmental technology companies and the Idaho Department of Commerce. Two reciprocal visits took place in 2002 and the partnership will result in a brownfields policy guidance paper drafted by INEEL for Malaysia as well as establishment of the Asia-Pacific Institute for Brownfields Restoration and Research. (Marshall 2001, 4) The ultimate goal of the partnership is to

> focus on Malaysia's brownfield environmental issues while providing a framework for addressing multiple environmental problems; transfer environmental science and engineering experience to Malaysia, including system training on brownfield evaluation software for site assessment, regulatory compliance, enforcement and institutional controls, information management, development of manuals and professional papers for establishing environmental quality cleanup standards. (Ibid., 3)

Part of Malaysia's motivation for involvement in the partnership was concerns for health and human safety because of prevalence illegal dumping sites. (Bard 2002) This problem arises from a lack of capacity for and coordination of enforcement activities on the part of the relevant government agencies. (UNESCAP 1999) For instance, the federal DOE jointly monitors toxic and hazardous waste with City Hall, but only the DOE can bring "offenders to prosecution". (Ibid., I-F, 1) There is also a DOE office for the Federal Territory of Kuala Lumpur (that acts as its State level agency), which monitors industrial pollution under certain mandates. At present, the environmental functions of City Hall are rather fragmented across departments. Although its solid and toxic waste management functions have recently been privatized, enforcement responsibility still falls to the City Hall and DOE and the problem persists. (Ibid.)

Kuala Lumpur City Hall exists as the primary municipality and local authority in the Federal Territory of Kuala Lumpur. City Hall's Kuala Lumpur Master Planning Department adopted a principal planning policy—the Kuala Lumpur Structure Plan or KLSP—in 1984, which guides its overall development planning program for the city. (Ibid., I-C) The KLSP contains a policy intended divert and redistribute office space and businesses to four satellite cities (Ibid.) and periodically enforces a policy that limits "the construction of new office buildings to not more than 10 storeys in order to discourage further employment generation and to prevent any further increase in the number of commuters into the city." (Ibid., I-E) City Hall has targeted polluting industries in particular, such as "the small industrial establishments [that] tend to proliferate around established industries and in densely populated areas" and "the large and polluting industries" for relocation and encourages their replacement with "non-basic industries such as vehicle workshops, repair services and food manufacturing plants which serve the city". (I-F)

The role of the public in environmental monitoring has been increasing in Malaysia and an example of this is a campaign to have the public report cases of open burning and illegal dumping. The general public, volunteer groups and the mass media are also being encouraged to either volunteer to undertake monitoring activities or to telephone City Hall to report incidences of any factories that release smoke during episodic haze situations in Kuala Lumpur. (III-A, 4) Other evidence of a need for environmental monitoring and enforcement capacity is an undated message displayed prominently on the DOE website next to its description of the environmental impact assessment process:

> YOUR SERVICES ARE NEEDED! REGISTER QUICKLY WITH THE DEPARTMENT OF ENVIRONMENT AS AN EXPERT IN REVIEWING DETAILED ENVIRONMENTAL IMPACT ASSESSMENT REPORTS (DEIA). WE NEED YOUR SERVICES EITHER AS AN EXPERT OR ACADEMICIAN IN ANY FIELD PERTAINING TO ENVIRONMENTAL MANAGEMENT. REGISTRATION IS FREE. (DOE 2003)

Such efforts to engage the public in monitoring may similarly raise the awareness of the brownfields issue in the future because of the public's increasing scrutiny of industrial behavior and how it affects communities.

A positive externality of the export-driven industrial development in Malaysia has also raised the level of awareness of SMEs regarding environmental quality standards outside of the country. To remain internationally competitive, Malaysian firms are adopting the International Standards Organization (ISO) protocols and, in this way, benefiting their local communities via better

environmental practices and increasing their own knowledge base and awareness of what to expect from future directions in domestic environmental policy. ISO compliance has proven to be "an effective instrument for gaining cooperation from the local industries and factories in adhering to environmental regulations, in the form of ISO 9000 and ISO 14000" (UNESCAP 1999, I-F 2) and this may give Malaysia an innovative edge in dealing with brownfields without having to experience the evolutionary blight that has plagued cities in the U.S.

SUMMARY OF RESULTS AND CONCLUSIONS[18]

This comparative case study analysis framework has begun to identify why brownfields are understood differently by small-scale manufacturers in Kuala Lumpur and Los Angeles, some key issues that characterize their understanding and treatment in both cities, and how this information flows across the two cultures (in the context of increasing globalization).

In summary:

Important differences are derived from the cross-national comparison:

- The U.S. solution to the local brownfields problem is dictated by the federal government through the preemption of legislation and the U.S. Environmental Protection Agency and motivated by an interest in protecting public health and safety through the enforcement of liability and responsibility for contamination.
- The Malaysian solution to the brownfields problem is dictated by the national government through its real estate development activities and is motivated by an interest in promoting global industrial competitiveness.
- The U.S. approach results in a greater public awareness of environmental impacts on public health and a greater diversity of stakeholder involvement in brownfields policies and programs.
- The Malaysian approach results in a better local environment when firms adhere to the most innovative environmental standards—however, the better environment is usually achieved in new industrial estates since many small firms have been recently relocated from older, polluted industrial areas to these estates in undeveloped "greenfield" areas.

Through the international comparison, important similarities also emerge:

- Both cities perpetuate their problems by keeping small firms distant from the brownfield solution: in the U.S. this is because firms fear liability and in Malaysia, firms are not held accountable for pollution because of a lack of enforcement capacity in the environmental sections of the government.
- Brownfields disrupt local neighborhoods in both cities: in the U.S. this happens when idle or abandoned sites attract illegal dumping and crime—contributing to blight—and in Malaysia this occurs when firms are located in industrial estates on the urban fringe—far away from other social interactions, a separation of land uses that contributes to urban sprawl.

Ultimately, both Los Angeles and Kuala Lumpur are large metropolises facing a shortage of available industrial land and both have experienced a sprawl-like flight of more affluent residents to the urban fringe areas. This has left behind degraded land and has taxed the capacities of governments in both cities to deal with the necessary property investigation and enforcement requirements to curb the related environmental pollution and the threat to public health.

[18] For a more detailed presentation of the results, see Appendix D.

Industrial tenants have become culprits in both cities as governments have sought to cleanup urban brownfields. In the case of Kuala Lumpur, the term brownfield is less well-known, but the problem is associated with the illegal dumping of waste by existing industries.

The strategy of the government in Kuala Lumpur to relocate small manufacturing firms to greenfield industrial estates outside of the city is quite different than the American case. Malaysia still has the luxury of available land on the urban fringe and an entrenched export-oriented industrial infrastructure that makes it easier to offer small firms modern amenities nearby. Although the full ramifications of such broad-scale industrial relocation policy is not yet known, given the importance of firms' social contributions to local communities, this process is likely damaging to the existing urban social fabric in Kuala Lumpur that loses firms to the urban fringe.

The case has also highlighted an important difference between the export-oriented and domestic small firms in Malaysia and how they do not have access to the same networks of support, which, according to Abdullah (1999), is threatening to damage important linkages that domestic firms provide to local communities. While export-oriented firms have access to innovative environmental technology and are adhering to advanced international environmental standards, they are not necessarily providing benefits to the local communities. Thus, there may be a mismatch between the firms with the best environmental stewardship practices and the inability of those same firms to share that with their local neighborhoods—because of their relative social isolation in industrial satellite-city enclaves.

Both small business populations proved difficult to engage for a variety of reasons—but primarily because of the time constraints imposed on them in their regular business operations and, in the case of Malaysian firms, because of an expressed unfamiliarity with the topic at hand. While brownfields are directly relevant to firms in the Los Angeles region, they are currently less relevant to firms in Kuala Lumpur and Selangor.

The institutional analysis suggests that there is a strong multi-level governmental infrastructure in place to implement brownfields work in Los Angeles, but this system has not yet incorporated existing small business owners, who are largely unaware of the brownfield phenomenon and process. Because of the interest of policymakers in Los Angeles in redeveloping small, industrial urban brownfields, it is critical that the small firm perspective be better articulated and supported. Preliminary evidence here shows that even long-standing firms do not see the government as a source of support to them in environmental management.

Detailed comments provided by respondent firms in Los Angeles reveal that there is definitely a "culprit" sentiment present. Firms indicated that they are overwhelmed by the environmental compliance requirements placed upon them regarding air emissions, water quality, and solid waste disposal and have a fear of liability regarding brownfields. Notably, firms did not indicate a willingness to relocate to a former brownfield because of these reservations and this is important given that local policies to attract businesses to such properties will have to address this reluctance. Traditional governmental incentives do not appear to have much of an effect on small firms' land use behavior in Los Angeles, but land prices and infrastructure amenities certainly do. This implies that incentives tied to these factors might be more promising.

Although the pool of respondents in Los Angeles exhibited a much longer history in their neighborhoods, their connection to the neighborhood seems somewhat tenuous—they do not personally know many of the people in the business neighborhood, hire most workers from outside of the neighborhood and do not network with many nearby businesses. There was also a strong tendency to characterize the business neighborhoods in Los Angeles as disadvantaged, but most businesses believe that the future prospects for their neighborhoods are promising.

An important message that emerges from the analysis is that *existing* firms must be brought into the brownfields dialogue as much as future firms because they will be the neighbors of the new businesses, they have historic knowledge of the neighborhoods, they are or will become aware of environmental problems in the neighborhoods and, as early findings here show, they will remain in place. If changes are not made to the way that existing firms are engaged regarding environmental compliance, they likely will not change their stewardship behavior—they will not report possible contamination problems, they will not seek solutions to them, and they will not become involved in solving wider neighborhood blight-related problems.

These two very different cases have ultimately shown how small firms may be isolated from communities—and concomitantly from responsibility for pollution management—by physical relocation in the case of Kuala Lumpur and by insulation in the case of Los Angeles. There is certainly a complex array of social forces and government policies that have enabled this to happen in each case, but given present circumstances, it appears that a compelling way to make firms better clients in community revitalization is to incentivize and reward what is missing—their social connections and commitments to their neighborhoods.

In Los Angeles the challenge is to engage entrenched firms that have experienced a legacy of government antagonism—their perspective is critical to designing brownfield incentive programs that will really work. In Kuala Lumpur the challenge is to engage the powerful industrial network infrastructure with the domestic brownfields agenda, so that their information and technological advantages are better shared by domestic firms and local communities.

In sum, this research has begun to uncover the perspective of small firms regarding an important aspect of community renewal—redeveloping brownfields. Findings here have suggested that a culprit-versus-client paradox does exist in the way governments treat small firms and if governments intend to find receptive clients for brownfields renewal, they should redress the underlying, historic causes that first painted firms as culprits.

A strong policy implication here is that small firms in both cities do have powerful business networking capabilities through their manufacturing associations, supply-chains, private investors, institutional lenders, marketing and industrial promotion organizations, etc. Since these are already effectively functioning, local governments would do well to add their brownfields policy message to these information channels and engage the input of influential small business organizations in crafting policies that encourage small businesses to become willing clients in cleaning up their communities.

Another important implication is that firms have a critical social value to communities that is not reflected in brownfields policy that targets parcel-by-parcel cleanup. Instead, a policy that takes a community approach toward brownfields and rewards firms by their willingness to commit to a neighborhood—e.g., in length of tenure, hiring of local workers, securing contracts with local firms, expanding within the neighborhood, recruiting suppliers to relocate within the neighborhood, initiating cleanup on properties, identification and cleanup of neighboring properties, etc.—would not only encourage the firm's economic contributions via property tax revenue, but would also encourage its social responsibility thereby enhancing the competitiveness of a region, not merely a single business.

Lastly, this research contributes to a wider dialogue on the competitiveness of cities in the global urban system: given that industrially-zoned land is often in short-supply as it comes under immense development pressure to be converted to other uses, urban areas that are able to preserve and sustain clean industrial parcels—reducing the transaction costs imposed by brownfields—are more efficient and ultimately more competitive than those that do not.

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APPENDICES

Appendix A:

SURVEY IMPLEMENTATION

The Survey Instrument

The survey required respondents to provide information about seven different categories:

- Personal/Respondent
- Business
- Owner
- Site/Property
- Neighborhood
- Land use
- Operations

The personal information was requested to distinguish between respondents and to ascertain the business location. The survey was designed for business owners and managers, but was often filled out by others at the business who were able to adequately answer the questions asked. Business information helped to establish the type of business, its tenure, its organization structure, and its size. Owner information was designed to elicit information about the kind of owner relationship to the business—e.g., partnership, family, franchise, etc.—as well as to find out how close the owner lives to the business and how often he/she is physically at the business. Site information was intended to uncover the commitment level of the business to its present location and what factors most influenced its decision to choose that location. This section also introduced the brownfields concept by asking respondents to address issues of land contamination at their locations.

The neighborhood information section further elaborated on the brownfields concept by asking respondents about the condition of land in the vicinity of their businesses. Social capital issues were also addressed by asking businesses about their willingness to stay in the neighborhood and about their participation in the local community. The land use information directly addressed the brownfields concept by asking businesses to elaborate on how they understand property contamination issues are managed in their neighborhoods. Operations information was requested in order to find out if the businesses had any perspective for comparing their operations internationally and to see what kind of business networking relationships they rely upon.

The Los Angeles Survey Process

In Los Angeles, business owners were contacted by telephone to first determine their willingness to participate in the study and to obtain an electronic mail address that was then used to transmit the follow-up explanation of the study with directions concerning how to complete the survey. Almost all businesses contacted had an available e-mail address for this purpose. Many businesses claimed that they were too busy to complete the survey with some saying they were not interested or did not find that the survey was relevant to them. Of the 41 companies that provided e-mail addresses, only 29 percent actually submitted surveys and six addresses were not usable. Businesses were selected from the 2002 Directory of Business for Southern California. This data resource was chosen because the data it provides are timely and because they include

physical address, telephone number, business size, and business type categories. Approximately 110 telephone calls were made from a set of approximately 4,100 firms listed geographically in the directory as City of Los Angeles businesses. From the total number of firms, manufacturing firms were selected by their Standard Industrial Classification (SIC) codes. A few of the selected firms did not list telephone numbers, some had incorrect telephone numbers, and some had numbers that "were no longer in service".

In order to contact businesses that might be affiliated with other information networks, firms were also contacted via the "SuperPages" online directory of businesses because of the resource's well-known status and because the directory included detailed information about industry type, location, and electronic contact information. Of 158 firms contacted through the directory, 28 responded, 32 had non-working addresses and 3 declined participation because they were not located within the City or County of Los Angeles.

The most effective data source was the U.S. Small Business Administration Pro-Net database, which yielded over 800 e-mail addresses for businesses within Los Angeles County. There were a large number of nonworking e-mail addresses (approximately 65), some unwillingness to participate—two were "too busy", two were not in the geographic area of interest and one was "uncomfortable" about the sensitive nature of the issues addressed by the survey. Approximately 35 surveys were completed as a result of this transmission.

The ultimate response pool consisted of 64 surveys, including 28 respondents within the City of Los Angeles, 34 within the County of Los Angeles, one in San Bernardino County and one that could not be geographically identified. One respondent submitted his survey by facsimile and one responded in a narrative format. While this is not a statistically reliable sample of firms, it is an empirically important population because it represents never before acquired information and is adequate for a comparison of the relevant stakeholder group addressed here.

The Kuala Lumpur Survey Process

Many attempts were made to contact Malaysian firms via their individual firm websites as well as via online business directory resources, such as the "Malaysia Yellow Pages" and the American Chamber of Commerce in Malaysia; however, this process uncovered many faulty electronic addresses and resulted in no survey responses. Instead, a personal contact was made at the Federation of Malaysian Manufacturer's (FMM) Selangor branch (FMM is a high-profile industry association that has more than 2,000 members and the branch office has jurisdiction for the entire state of Selangor, including Kuala Lumpur City.). The Malaysian research associate personally contacted 80 Malaysian businesses and requested their participation in the study. This process yielded only 9 completed surveys. However, given that these firms are all members of the FMM, there is a built-in bias that they are likely similar in some important respects—in their business networking and probably in their land use information transmission. Thus, the data should be evaluated with these reservations in mind. Problems encountered in approaching the Malaysian firms were surprisingly similar to those in Los Angeles; they included: some companies were too busy, some felt the survey was too lengthy, some felt they were not comfortable enough with English to complete the survey, some felt that they did not have enough knowledge of the business operations to answer on behalf of the owner/manager, and a few did not have access to the Internet.

Appendix B:


Southeast Asia
Myanmar
Thailand
Cambodia
Vietnam
South China Sea
Philippines
Kuala Lumpur
MALAYSIA
Singapore
Indonesia
Indonesia
0 80 160 320
Miles

Appendix C:

Malaysia has an extensive variety of industrial promotion programs available to SMEs, particularly those focused on exports. Abdullah (1999) outlines some of them as follows:

1. *Financial and credit assistance*: includes special SME loan programs from commercial banks, finance companies, merchant banks, development finance institutions (DFIs) that provide loans to those traditionally unable to secure credit, modernization and automation loans, special financing programs for Bumiputera (indigenous Malays), sub-sector specific loans, exporter credit, technology or technical knowledge upgrades, new entrepreneurs, purchase of new factories/equipment or rehabilitation of those

2. *Entrepreneurial development and business management*: includes National Productivity Corporation training courses offered at regional offices, the Malaysian Entrepreneurial Development Center and the Majlis Amanah Rakyat (MARA) (both intended to assist Bumiputera in starting new businesses), university-based Small Business Development Center, Malaysian Agricultural Research and Development Institute (to encourage participation in the food manufacturing industry), SMIDEC

3. *Human resource development, technical and vocational programs*: Human Resources Development Council (employee training cost subsidies), Industrial Technical Assistance Fund (consultancy services, development grants, product or process upgrade grants, export market activity reimbursements, Center for Instructor and Advanced Skill Training, Industrial Training Institutes, and many others

4. *Locational and infrastructural facilities*: The Malaysian Industrial Estate Limited (MIEL)—a federal agency that sells and leases factories—by 1997 it had constructed 31 factory projects nationwide; The Council of Trust for Indigenous People rents out infrastructure facilities at subsidized rates to Bumiputera entrepreneurs; Technology Park Malaysia—located on 150 acres within Kuala Lumpur and serves as a business incubator for information technology, biotechnology, environmental technology and other business sectors; Free Trade Zones (FTZ) provide relief from customs duty for exporting businesses; Licensed Manufacturing Warehouses (LMW) are government owned and designed to disperse export-related industries to non-FTZ areas (in less-developed regions)

5. *Fiscal incentives*: Pioneer status (tax relief for the first 2-8 years of operation); Investment Tax Allowance and Reinvestment Allowance (businesses may be reimbursed for up to 100 percent of investments in improvement and expansion); Export Credit Refinancing (provides exporters with short-term credit); Abatement of Adjusted Income (for exporters); Double Deduction of Export Credit Insurance (encourages new markets); Double Deduction for Promotion of Exports; potential deductions for research and development, training, industrial buildings, operations, plant and machinery; Double taxation agreements with other nations so that businesses are only taxed once; relief from excise duties; and Labor Utilization Relief (businesses are allowed tax exemptions based on the number of their full-time employees)

Appendix D:

RESULTS

The following section presents the results of the qualitative survey analysis. The surveys provide insight into the experiences of individual firms within each city and serve to show whether the above-discussed institutional context surrounding the issue of brownfields is reaching the grassroots level effectively. The results also indicate the level of community connectedness of firms and shed light on their beliefs about the conditions of their neighborhoods regarding brownfields. Results from Los Angeles were richer because more information was gathered and thus more conclusions may be drawn. Results from Kuala Lumpur were more difficult to obtain, however enough information was available to inform the present enquiry.

BUSINESS and OWNER INFORMATION

- 64 small businesses responded to LA survey
- 42 of those are family businesses with 21 describing themselves as "minority businesses".[19]
- 25 of the businesses are owned by a group of two or more people
- 33 are individual ownerships and 6 are partnerships.[20]
- None of the businesses are franchises.
- 58 are manufacturers, seven are service providers and one is a retail enterprise
- The type of business varies widely—including food, electronics, plastics, glass and furniture manufacturing, a die casting company, a metal plating operation, makers of hinges, coils, and pistons as well as sign, machine, aerospace, and adhesive products
- All of the businesses are headquartered in Southern California.

These characteristics indicate that the survey did connect with its target population of a variety of small- to medium-sized manufacturing firms, however the geographic spread is wider than the City of Los Angeles, but this condition is acceptable given the large concentration of manufacturing throughout the County—in close proximity to the City—and the wider region. For some of the respondents on the outer fringes of the County of Los Angeles and for the one respondent from San Bernardino County, they were geographically located by their zip code and centrally placed within that zone. Using ArcGIS software, it was determined that 14 survey respondents were within a half-mile and 24 respondents within one-mile of a designated Los Angeles Brownfield Program site; however one area had a clustering of multiple respondents near multiple brownfield sites. This is important because it shows that the respondent businesses do have formally-recognized brownfields in their neighborhoods.

One caution emerges when reviewing the age of the businesses studied in the response pool because 25 or nearly 40 percent reported that their businesses were more than 20 years old. This implies that these businesses are not the typical case. Because they are well-established enterprises, they may be automatically more willing and able to participate in the survey, more

[19] This implies ethnic in addition to gender diversity because only 8 of the woman-owned businesses reported that they were "minority" businesses.

[20] Other ownership types mentioned were, "C Corporation" (1 respondent), "Corporation" (1), "Family Trust" (1), "LLC" (1), "S Corporation" (2), and one mentioned that is a "majority woman-owned" business.

familiar with land use information in the City, and would not reflect the opinions of the younger, more vulnerable businesses. However, it is important to document the established business perspective because of their community history and familiarity with neighborhood and policy evolution. Only six of the respondents said their businesses were less than one year old.

The youngest business reported was less than one year and the oldest was founded in 1909. The average age of the businesses that reported "more than 20 years" was 47 years—implying strong community commitment.

- 56 percent of business owners live more than 11 miles away
- Most commutes were by vehicle and were more than fifteen minutes, but less than one hour. (In Los Angeles, given the ease of freeway access, this likely means that owners live in very different neighborhoods than those where their businesses are located.)
- 20 percent spend fewer than five days per week at the business, while more than half spend at least five days there and 22 percent spend six.

The overall message implied is that most business owners do spend time in the neighborhoods where their businesses are located, but have a commuter-style relationship to the community.

Of 80 firms personally contacted to participate in the survey by a Malaysian staff person at the Federation of Malaysian Manufacturers in Selangor, only nine completed the survey, which yields a response rate of 11 percent. While this is certainly not a representative sample of the total pool of Malaysian SMEs, the in-depth nature of the survey provides some important insight into the perspective of small manufacturing firms and their understanding of brownfields in their communities.

- 7 of the Malaysian respondent businesses are from outside the Federal Territory of Kuala Lumpur in the State of Selangor, which has the largest concentration of SMEs nationwide (35 percent). The other two survey responses were from inside Kuala Lumpur itself.
- All are manufacturing firms and the range of their products include chemicals, optical discs, laboratory equipment, laminated gypsum boards, ceiling tiles, forged precision pins for electrical and electronics industries, polyurethane systems, elevators and parts, paper cutting knives, woodworking tools, and tea anti-oxidant.
- All but two firms produce for export markets, with current markets including Australia, Brunei, Canada, China, France, Indonesia, Japan, Kuwait, Papua New Guinea, the Philippines, Saudi Arabia, Singapore, Taiwan, Thailand, United Arab Emirates, the United Kingdom, and the US. Some future export destinations of the respondents are Brunei, Cambodia, Iran, Laos, Myanmar, and Vietnam. All of the businesses are headquartered in Malaysia except one whose parent company is in Helsinki, Finland. One is Japanese-owned.
- 5 are ISO certified, demonstrating their propensity to adhere to these international quality management standards. (Thus, the Malaysian sample appears to be much more internationally integrated than the Los Angeles sample. They also seem to be engaged in extensive interregional trade.)

- The age of businesses in the Malaysian sample is also much lower than those in the Los Angeles sample: an average of 12.8 years with 3 businesses five or fewer years old and no businesses older than 23 years.
- All of the businesses considered themselves small except three, but they still meet the "employee size" requirement of a small business at 66, 100-120, and 80 full-time employees respectively.
- Two of the businesses are family operations and four consider themselves minority businesses. Only one of the businesses is individually owned and the rest are either a partnership or group of more than two owners.
- Three owners live at the business, one lives less than a 15-minute drive away, two are a 16-30 minute drive away, 2 are up to an hour away, and one is more than on hour away. One lives in Japan. On average the owners spend 3.8 days at the business during the week; however, this ranged from 0 for two respondents to 6 for two others. (The small sample size restricts any reliable extrapolations from these data.)

SITE INFORMATION

- 37 or only 60 percent of the respondents in Los Angeles own the land on which the business operates; 25 said that they do not own the land and 19 of those said they are renters. This result may imply that the pool is less concerned or less aware about brownfields since much of brownfield responsibility is often tied to the property owner. Twenty-four of the LA businesses are located within "industrial estates".

- 5 of the Malaysian companies own the land on which they operate, and the other four are renters. Regarding location choice, the Malaysian firms also cited land price/rent as the most important factor. Two listed other important factors as being "familiar" with the area and that the area be "industrial".

- Governmental incentives play an almost nonexistent role in influencing the location decisions of businesses in LA. Since the brownfield process in Los Angeles is driven by governmental regulation and incentive programs, there is a decided mismatch indicated in how willing small businesses are to be involved in existing brownfield projects. The results imply that incentive programs should be linked to the other categories—but primarily linking to land price and facilities provision.

- Every LA business but one chose "land price" as an important factor in location choice.

Among the LA respondents, two references were made to governmental involvement in the "other category"—one with a negative connotation and one implying a state government influence as well. Also, utility and power were mentioned as influential factors. The City of Los Angeles Department of Water and Power does offer utility discounts to businesses in certain disadvantaged areas and given the frequent citation of "facilities or amenities such as buildings and equipment" factor, this incentive might be marketed more effectively to businesses regarding brownfields if linked in a more comprehensive way.

- The majority of respondents indicated that their businesses operate on very small parcels—with 38 or 60 percent of LA businesses on less than one-acre of land; 17 or 27 percent on 1-2 acres; and less than one percent each on properties of 3-5 acres and 9-10 acres. One metal-plating business reported that it operated on a site of 11-20 acres.
- 8 of the 9 KL respondent businesses operate on land of less than one hectare (one hectare=2.47acres) in size and one operates on a property of 3 to 5 hectares (7.4-12.3 acres). All of them operate on industrial estates.

This finding is significant for brownfields research because it implies that small to medium-sized manufacturing firms would require assistance of a certain, much smaller economy-of-scale than is traditionally attractive to private real estate developers and funders.

LAND CONTAMINATION/BROWNFIELDS

- All KL respondents said that they had never had a problem with land contamination and do not monitor soil conditions on a regular basis. Three respondents said that they had investigated the soil conditions at the time of purchase, but all of the others said they never had undertaken an investigation.

- Only 5 of 61 LA businesses that answered the question about experience with land contamination, replied in the affirmative, with 77 percent stating no experience with contamination and 16 percent claiming they did not know.[21]

- Approximately 13 percent of the LA respondents said that they monitor the soil conditions at their business on a regular basis, while 82 percent said they did not and less than one percent said they did not know.[22]

[21] Explanations of the land contamination problems were as follows:

- One company is located in the vicinity of an EPA Superfund site and the EPA tried to put the business "in the same category"
- One business stated that the previous owner poured oil/gasoline down a drain into an unmarked/unknown underground sump and the County came to check the sump, but the business had previously been unaware that it existed
- One business stated that prior to taking ownership/occupancy, the main sewer line failed, flooding the grounds contained within that section of the foundation, but the information had been disclosed by seller.
- One company is located near a Superfund site and stated "our property is clear, but [undergoing] ongoing testing"

These responses suggest that LA businesses do not think much about land contamination until it affects them directly, but once it does they understand that problems on nearby properties affect them. The instance of the unknown underground sump is an example of a problem that long-standing businesses may encounter more frequently since former property transactions likely did not involve the scrupulous attention to subsurface contamination that exists today.

[22] The reasons given for these responses were that they undertook monitoring every few years as per insurance requests, were required to very often at one point in time and now not as often, that visual inspections for abnormalities were practiced and one said that it was done preventatively for fear of liability: "We're in California, home of ten million lawyers, better safe than sued". One respondent implied a strong familiarity with regular

- 48 percent of the LA businesses said soil assessment happened at the time of purchase, less than one percent said this was done during new construction and 44 percent said this had never been done. Other answers provided were: "1 year ago", "5 years ago", during "annual water runoff testing", during laying of "cement foundation", when an underground storage tank (UST) was removed at time of purchase, to fulfill an EPA requirement, "within the State required timeframe", and "when refinanced". These findings indicate that operating businesses are not likely to be the sources of brownfield identification since soil monitoring is not commonly practiced.

- The most frequently occurring answer to how they would recognize a contaminated property is that a sign would be posted at the property; however, this is not often the case. The second most popular answer was "I don't know" followed by "Other".[23] The diverse nature of the answers implies that there is little consensus on what constitutes a contaminated site, but there is considerable suspicion that it might not be possible for a business to know if it occupies a contaminated site.

NEIGHBORHOOD INFORMATION/SOCIAL CAPITAL ASPECTS OF BUSINESS

The survey questions included in this section were intended to uncover some conditions of social capital in the neighborhoods where the participating businesses are located. Since survey respondents tend to answer toward the middle, less-radical categories, the categories have also been totaled according to all on the "agree" side versus all on the "disagree" side to see if any attitudinal patterns emerge.

- Although the KL sample was very small, it is notable that the majority of answers indicate Malaysian firms do not believe that they are located within disadvantaged neighborhoods.

- Most LA firms consider that their businesses do operate in disadvantaged neighborhoods, where crime is a notable problem. (More than 30 percent believe that there are vacant properties in their neighborhoods and more than 20 percent believe there are abandoned properties in their neighborhoods.

- 80 percent of LA firms—disagreed with the statement that "contaminated properties are a problem" in the neighborhood.

- When asked whether "abandoned, vacant, or contaminated properties" were located at a one-block distance, 69 percent disagreed and 58 percent disagreed at the half-mile mark. This implies that firms think there are troubled properties, but not very close to their

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monitoring: "Intense and extensive State regulated tests and procedures maintained constantly 7 days a week, 365 days a year".

[23] The explanations for "Other" answers were widely divergent: a letter from the city or business owner prompted by the city; ask the neighbors, if remediation equipment on site (2), lack of vegetation (2), presence of "empty drums" or containers on site (2), "slimy, oily slick on ground surface", you cannot know by sight (2), soil testing required, and if there is a smell of fumes or evidence of discharge from drains or other outlets.

businesses. However, the suggestion that more than 30 and 40 percent respectively think that these properties may exist in the neighborhoods is still of significant concern. Six of the nine Malaysian respondents (67%) disagreed that there were problem properties in the immediate vicinity of their businesses.

- 70 percent of the LA respondents disagreed with the statement that they know by name many of the residents in the neighborhood where they do business, which implies a potentially important element of social disconnect considering that many of the businesses have operated in their neighborhoods for more than twenty years.

- 54 percent agreed when asked if they know by name "many of the other people who operate businesses" in the neighborhood (However, this still indicates a less than substantial amount of face-to-face communication.)

- 67 percent of Malaysian respondents disagreed with the statements that they knew residents or other business people in their neighborhoods, but this might be explained by the fact that many of the Malaysian firms have been recently relocated to new industrial estates.

FUTURE PLANS IN NEIGHBORHOOD

- 75 percent of LA firms agreed that they would like to keep their business in the same neighborhood for the next five years; 74 percent for the next 10 years; and 66 percent agreed for the period of twenty years.
- In KL, the responses were similar with 89 percent, 78 percent, and 44 percent respectively and they also declined over time.

- In LA, 66 percent supported the statement that "conditions are improving" in the neighborhood and 72 percent disagreed with the idea that "conditions are deteriorating" in the neighborhood.

These expressions of commitment are to be expected from businesses that already have experienced a long tenure in their neighborhoods, but the wide variation in the attitudinal responses about knowing people in the neighborhood imply that the nature of the businesses' connection with the community demands further attention.

EMPLOYMENT OF LOCAL RESIDENTS

A further indication of a business' neighborhood commitment is the number of local residents that it employs. The survey results indicate that very few LA businesses employ people that live within one mile of the business.

- 43 respondents indicated that only 1 to 5 percent of their workers live within the immediate vicinity of the business. Only six businesses claimed that more than half of their workers live within one mile of the business, but 23 claimed that more than half of their workers lived within 5 miles of the business.

This may imply a commuter-style relationship between the employees and the business neighborhood as well. Although the surveyed businesses mainly operate in industrially-zoned areas, there are mixed use residential areas nearby, but these findings imply that workers do not come from such areas.

BUSINESS NETWORKING

Other indicators of community-connectedness or social capital are the amount of business networking and community outreach a firm enjoys.

- 40 percent of the businesses do not engage in regular business relationships with other firms in their neighborhood.

This is surprising given that manufacturing firms are supposed to stimulate local economies as a catalyst for other commercial growth.

- The most commonly referenced category of neighborhood participation was sponsoring or donating to neighborhood groups or causes;

A few respondents took the opportunity to discuss reasons why they did not participate more in the local neighborhood:

- Area deemed unsafe at night by Police Department.
- No interaction has been necessary
- No residences in this neighborhood—it is all industrial
- There is no neighborhood here; it is strictly zoned for industrial parks; the closest neighborhood is 2-3 miles away

These last responses shed light on some important facts regarding a business' community connectedness, which are that areas with no residences nearby or mixed land uses with varying levels of social use intensity—such as many high-rise downtown business districts—become ghost towns at night when workers go home and this not only opens the door for crime, but creates a sterile social environment that may encourage further neglect. Also, it indicates that the quality of a business' social capital contribution is certainly affected by the physical environment in which the firm operates. These kinds of answers point to problems with designing industrial estates and business parks that are not connected to the wider community.

LAND USE INFORMATION

- Nearly 70 percent of LA respondent agreed with the statement that they are knowledgeable about the land use regulations that apply to their neighborhoods; however, they were less confident that other businesses in their neighborhoods were as well-informed.
- More than 70 percent supported the idea that the land use regulations that apply to their businesses are "reasonable", but a large number (66 percent) indicated that they were "concerned about the liability" that applies to businesses regarding land cleanup in the neighborhoods where their businesses are located.

- More than 60 percent concurred that the applicable costs of complying with land use regulations are too high.
- 70 percent supported the statement that "land use regulations, including cleanup liability" would significantly influence their decision should they decide to relocate their businesses.
- More than 50 percent expressed concern that land use regulations "contribute to business failures" in the neighborhoods where they do business and more than half also supported the statements that land use regulations affect the competitiveness of their businesses locally, nationally, and internationally.
- 82 percent disagreed with the statement that businesses like theirs receive a lot of assistance in cleaning up land that may become contaminated during their operations.

For the Malaysian sample, answers to three of the land use questions were unanimous in agreement. One implication is that Malaysian SMEs find the land use regulations that apply to them to be reasonable. Given that they are relatively young businesses that operate within an estate planned for industrial land uses, this may be expected. Also, given recent changes in solid waste disposal policies and land development policy in accordance with the Environmental Impact Assessment process, it is also expected that they would concur with the statement that land use regulations, including cleanup liability would significantly influence relocation decisions as well as that reflecting concern about the liability that applies to businesses regarding land cleanup in the neighborhood where their businesses are located. The majority of KL firms (7 of 9) also disagreed with the statement that businesses like theirs receive a lot of assistance in cleaning up land that may become contaminated during their operations.

Taken together, these findings imply that businesses in both cities feel that they know enough about land use regulations, but the information they have causes them to see land use regulations as a threat in the case of discovered contamination. Further, though hypothetical in nature, the last question implies that businesses do not think they would be able to attract assistance should they discover contamination and therefore might be unwilling to disclose its discovery. This, if actualized, does not bode well for already struggling urban communities.

RELOCATING TO A BROWNFIELD

When asked if they would consider relocating their business to a former (remediated) brownfield should they decide to relocate, the answers of the LA respondents were almost evenly split among the three response categories, indicating a significant level of discomfort with brownfields.

For the KL sample this was also the case; none of the firms said that they would be willing to relocate to a brownfield—meaning that Malaysian firms may have the same reservations that American ones do regarding reuse. Comments concerned the need to know about health hazards, and the idea that employees might not feel comfortable, that employees' health might be threatened and that there is a "fear of contamination" because it might be "unseen despite clean up".

For LA, only one-third of the respondent pool would definitely be willing to relocate to a remediated brownfield. Given that much of the push in Los Angeles is to clean up contaminated

industrial land and attract new firms to such sites, these results are not promising. However, the explanations given for the answers offer some important insight about the need for firms to have assurance from external sources in order to (1) guarantee the health and safety of themselves and their workers and (2) protect themselves from liability.[24]

The detailed answers also provide information regarding the level of *trust* that businesses have in the brownfield redevelopment process—that they are unaware of "proper" levels of clean, the "proper" authorities to contact, that they need "proof" and are concerned about "possible leftovers" of contamination.

NEIGHBORHOOD BROWNFIELD SCENARIO

When asked what would happen if a contaminated property was found in the neighborhood where they do business, LA respondents were largely supportive of the owner cleaning up the property independently, but indicated that the government would become involved in the process at some point. KL respondents indicated that they expected the government to play a strong role also.

Explanations for the "Other" answers were "I don't know", "the property would be used as-is", "it is discovered after sale and then the owner has to sue the prior owner", "the government would force the current owner to clean it up at a very high expense, regardless of fault" and "I only assume the government would find out during inspection…cannot speak for businesses besides my own". Altogether these answers imply confusion on the part of small businesses regarding how contaminated properties are transacted.

- The most frequently occurring answer in both samples was that "the government" would take the lead in brownfield cleanup in both LA (33) and KL (6). The next most popular answer for the LA sample was "the business" (18) and for the KL sample it was "the community" (3).

This perspective shows a decided expectation on the part of small businesses in both cities that the government will become involved in the cleanup of contaminated properties in their neighborhood yet, as shown previously, they are largely unfamiliar with the "proper authority"

[24] There was a wide diversity of explanations for the answers in the LA sample: As long as all assurances have been made that I would not be responsible for any additional clean-up as a result of the prior owners and the property is safe to use; Employee liability; How well it was cleaned up does matter; I would be concerned about future liability; I would be too concerned about the health and well-being of my employees both short-term and long-term; I would not like to deal with other people's problems. I would not know if the contamination was properly cleaned up. I might move if I would have a geologic report that stated it was cleaned up; If I had solid proof that it had been cleaned up I would have no problem; If the price was right and area suitable; If the proper authorities inform me that the property is safe, and the price is right, I would be willing to relocate; In order to move into a once contaminated property I would need to talk with a lot of people who are familiar with this topic; Insufficient information given: how much contamination; of what kind; what was the remediation; how reliable is the remediation?; It would depend upon perceived future liability; Not "living" there, I believe any exposure would be minimal; Potential long-term health problems with employees; Potential additional clean-up costs; Providing that no health hazards were present; Why not?; Would need more information; Wouldn't want to take a chance to expose myself and my employees to possible 'leftovers' of harmful contamination

or procedures involved. One Malaysian firm stated that, "the government would fine the company and suspend the manufacturing license". Combined, this set of responses paints the government into an antagonistic role regarding its interaction with the business community concerning brownfield cleanup.

These response sets indicate that Malaysian firms also expect the government to be a main participator in brownfield cleanup, as does their indication that the government would be the first point of contact to find out if a property is contaminated (37 in LA and 6 in KL) with the property owner the next source for LA respondents (18) and consultants the next for KL respondents (5). One Malaysian response indicated that the regulatory system is not yet mature, "Do not know as there is no agency at the moment that keeps a record of contaminated land/properties".

Other LA responses offered included contacting the Air Quality Management District, neighbors and two said they did not know. Again, this reinforces the idea that businesses are unclear about how to go about dealing with brownfields; this is further reinforced by the following table that shows a lack of consensus regarding the organization to approach for assistance on brownfield cleanup:

CONTACT FOR ASSISTANCE IF CONTAMINATION DISCOVERED
(BY BUSINESS AT A NEWLY-PURCHASED PROPERTY)

	Number of Respondents	
	LA	**KL/S**
The government	25	7
Real estate agent	21	1
Consultants	20	5
Real estate developer	14	4
Other	14	3
No one	2	0

Note: Respondents could select more than one attribute.

According to the Community Redevelopment Agency in Los Angeles, it can take up to 15 years to return a brownfield to productive use because of the difficulty in determining contamination levels, identifying responsible parties, and financing redevelopment. Although private sector brownfield projects may turnover more rapidly, the private sector often does not go after small parcel projects in disadvantaged industrial neighborhoods. According to the survey responses, the firms in the respondent pool have a wide variety of expectations concerning the amount of time it takes to redevelop a brownfield, but the most popular answer for the LA sample was "7 months to 1 year" (22). Unlike the Los Angeles firms, the Malaysian firms were fairly certain that a brownfield would be returned to productive use in less than one year.

OPERATIONS INFORMATION AND NETWORKING

Only five LA respondents indicated that they had ever owned, operated or managed a similar business in another country and the countries mentioned were Mexico, Poland, Taiwan, and the United Kingdom. The respondents indicated that they perceived the land use regulations as less

strict in all of the other countries except Poland where they were described as the same. Only one business reported that land use regulations influenced its decisions regarding overseas operation.

Regarding business networking, manufacturing associations were the most commonly cited organization for this purpose, followed by Chambers of Commerce and technology groups. Few respondents indicated a direct connection with a community group, but in general there was a diverse representation across the potential networking options.

Two of the Malaysian business owners had operated firms in other countries: China, where the respondent claimed that land use regulations were "about the same" and the Netherlands where they were said to be "more strict". The second company said land use policies had influenced its decision to locate overseas and commented that regulations everywhere are getting more strict due to greater "awareness of the population". Concerning business networking, Malaysian firms also mentioned manufacturing associations most frequently. This is likely due to the fact that all nine respondents are members of the Federation of Malaysian Manufacturers and were contacted by the FMM regarding this study; however, according to the earlier discussion, such industry groups are influential support networks to SMEs in Malaysia.

The manufacturing association was the most popular business networking organization for both samples (32 in LA and 9 in KL) followed by the chamber of commerce (22 in LA and 5 in KL) and the next closest categories were the technology group (14 in LA) and the community group (4 in KL).

The LA firms also mentioned participation in distribution associations, executive forums, a Hispanic business association, a police group, trade and business magazines, and a police group.

Regarding access to land use information, a notable majority of LA firm responses indicated local government is the primary source (30, with the next closest response "newspaper" at 18), which makes sense given that they must work with the local government to secure licenses and permits related to their business operations; however, the lack of consensus concerning the understanding of the brownfields issue means that they are not receiving this kind of information in concert with the other. *This suggests an opportunity to link brownfields outreach with standard business communications between firms and the locality.*

ENVIRONMENTAL CONCERNS AND BUSINESS OPERATION

Open-ended responses tended to focus on concerns regarding compliance with regulations and their associated cost and time demands. Air quality regulations were mentioned in nine of the LA cases, Occupation Safety and Health Administration regulations were mentioned twice, but the primary compliance concerns were with the disposal of hazardous waste, which was mentioned 14 times. There was concern expressed about the difficulty of following "ever-changing" regulations and the fact that they can unnecessarily overlap across levels of government. Many of the comments distinctly underscored the notion that small manufacturers are often made to feel like culprits in regard to environmental management.[25] One respondent mentioned a

[25] These included: Effect of ever-changing government regulations affecting the products we sell (paints, adhesives, sealants, and misc. chemical products, etc.);The cost of having to purchase new process equipment and less toxic products when regulations change; It is very difficult to manufacture in California, therefore we manufacture

brownfield policy in particular—the process of obtaining a "no further action" letter from the USEPA which provides a measure of protection to a property owner against further liability claims. This individual mentioned that the process of obtaining a NFA was not expedient.

Malaysian firms mentioned recycling, water and land pollution, and disposal of hazardous chemicals as the most important environmental issue. A few firms mentioned that contaminated land issues are not a priority at this time.

The comments from the LA firms in particular are instructive examples of the way small manufacturing firms have come to feel antagonized by the governmental infrastructure concerning environmental compliance and it suggests that (1) streamlining the regulatory process is necessary and (2) in order to engage small firms in brownfield redevelopment—whether through identification, cleanup or reuse, the burden of these factors should be considered in incentive programs.

Also, although limited in its wider applicability, the information from the KL sample was helpful in providing a snapshot view of the pre-brownfields era in Malaysia. As the proposed plans and policies discussed earlier are more comprehensively implemented, it will be interesting to see what institutional forms they assume in support of their powerful SME sector and, given their internationally-focused industrial structure, if they are able to innovate beyond the brownfield policy process of U.S. localities.

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internationally via contract manufacturing resources; Mold and possibly other effects by urbanization on the deterioration of the rental buildings I own; Lack of infrastructure because as a manufacturer we must interact with materials processors and the travel and delivery times are making it very expensive to meet customer deadlines; Proper disposal of chemicals used in our manufacturing processes; Subcontractors (degreasers, platers, etc.) are limited in the processes they can use and their prices skyrocket due to environmental regulations; Taxation by all the government organizations that overlap in regulation; The discontinuation of paints and adhesives even in deminimus amounts. All the replacement products are inferior causing customer dissatisfaction & money loss; The excessive cost of permits, excessive cost of necessary equipment to assist in pollution control, excessive regulation without the necessary help to comply, the excessive power of agencies like Cal Osha which are wholly punative and not helpful for owners; The sizes of taxes levied on our company when governmental agencies decide to fund new regulations or increase current fees; The very small business owner who generates the least amount of contamination is still treated as though they are a major contaminator; Trial Lawyers, frivolous lawsuits from people looking to cash in on the anti-business sentiment in California . . . File and settle; Working with over burdensome "inspecting" agencies.
We are taxed by the city, city fire department, county and its various departments, state and its many departments, for the same environmental regulations, this clearly impacts our bottom line and in the end may force many businesses (in order to stay competitive). Manufacturing is being squeezed out of this state due to the state and local government and its agencies. It is one of the most business unfriendly states. This continuing loss of businesses creates a loss of jobs and hurts the economy. Regulatory agencies are only punative and small business owners need help and advice instead of fines which are totally excessive and not only put businesses out of business but also put American workers on the bread lines.

Appendix E:

Survey Questionnaire Instrument for Los Angeles

Note: This is a plain text version; the full color version is only available in Dreamweaver software format or on the Internet at: http://www-scf.usc.edu/~carolarm/Armstrong_LA_Survey_mod.html. In order to access the survey, respondents must first have acknowledged their understanding of university policy via a cover page that was approved by the University of Southern California Institutional Research Board, UPIRB #03-02-050.

Survey Questionnaire for
BUSINESS OWNERS AND MANAGERS
Project Title: Small Businesses and Land Use in Los Angeles

This survey questionnaire is to be completed by the individual who is either the owner, principal manager, or other executive of the business. Please submit your completed questionnaire by clicking the "Submit" button at the bottom of this page. All questions/comments about the survey should be addressed to Ms. Carol Armstrong at carolarm@usc.edu. Your participation is MOST GRATEFULLY appreciated—thank you very much!

PERSONAL INFORMATION

Please select your preferred title. Mr. Ms. Mrs. Dr.

Your Name (First, Middle, Last)

Business Name

*Street Address 1 (Number, Street, Street Type)

*Street Address 2 (Unit or Suite)

City State/Province Postal Code

*Telephone Number *FAX Number *E-mail Address *Website Address

BUSINESS INFORMATION

What is your primary type of business?
Manufacturing Services Retail Other:

What do you primarily produce/sell?

What are your business codes (if known)?
Standard Industrial Classification (SIC) Code
North American Industry Classification System (NAICS) Code

How long has your business been at its present location?
Less than one year 1-5 years 6-10 years 11-15 years 16-20 years More than 20 years Other:

In what year was your business founded?

Where is your company headquartered? (City, State/Province, Country)

Is your business a small business?
YES NO

How many employees does your business have?
Full-Time Employees Part-Time

OWNER INFORMATION
In case of multiple owners, please describe the managing partner or if there is no managing partner, please indicate the owner that lives closest to the business site.

Are you the business owner?
YES NO

Is your business a family business?
YES NO

Is your business a franchise?
YES NO

Do you consider your business a minority business?
YES NO

Describe the business owner.
Individual Ownership Partnership Group (More than 2 owners) Other:

Approximately how far away from the business does the owner live?
Owner lives at business Within walking distance Less than 15 minute vehicle commuting distance 16-30 minute vehicle commuting distance 31-60 minute vehicle commuting distance More than one hour in vehicle commuting distance
Other:

Approximately how many miles from the business does the owner live?
Less than one mile 1-2 miles 3-5 miles 6-8 miles 9-10 miles 11-15 miles 16-20 miles 21-25 miles 26-30 miles More than 30 miles
Other:

Approximately how many days a week does the owner work at the business?
0 1 2 3 4 5 6 7

SITE INFORMATION

Do the owners of your business own the land on which it operates?
YES NO If "NO", do you rent? YES NO

Do you have a long-term lease? YES NO

Is your business located in a business or industrial park complex? YES NO

What influenced your decision to locate your business where it is now?
(Please check all that apply and include any other factors in "Other".)
Land price/rent
Access to market/customers
Transportation access
Governmental incentives
Access to labor pool/workers
Facilities or amenities, such as buildings and equipment)
Other:

How important are different location factors?
(Please indicate how important these factors were to you and include any other factors in "Other".)
Land price/rent Important Not Important
Access to market/customers Important Not Important
Transportation access Important Not Important
Governmental incentives Important Not Important
Access to labor pool/workers Important Not Important
Facilities or amenities, such as buildings and equipment) Important Not Important
Other (Please type here.): Important Not Important

Approximately how large is the land parcel your business occupies?
Less than one acre 1-2 acres 3-5 acres 6-8 acres 9-10 acres 11-20 acres 21-40 acres 41-60 acres 61-100 acres More than 100 acres

Has your business ever had any problems with land contamination?
YES NO DON'T KNOW
If "YES", please describe here:

Does your business monitor land/soil conditions on a regular basis?
YES NO DON'T KNOW
If "YES", please describe how and how often here:

When was the last time you assessed the land/soil conditions at your business site?
At time of purchase During new construction Never Other:

What signs indicate to you that a property is contaminated or polluted?
(Please check all that apply.)
It is vacant
There is trash/debris on it
There is a fence around it
Signs posted at the property
I don't know
Other If "Other", please describe here:

NEIGHBORHOOD INFORMATION
Please indicate whether or not you agree with the following statements by clicking in the circle that corresponds with your opinion of each statement. Answer choices listed are: Strongly Disagree, Disagree Somewhat, Barely Disagree, Barely Agree, Agree Somewhat, Strongly Agree

My business is located in a disadvantaged neighborhood.

Crime is a problem in the neighborhood where my business is located.

Vacant properties are a problem in the neighborhood where my business is located.

Abandoned properties are a problem in the neighborhood where my business is located.

Contaminated properties are a problem in the neighborhood where my business is located.

There are abandoned, vacant, or contaminated properties located within a half-mile of my business.

There are abandoned, vacant, or contaminated properties within one block of my business.

I know by name many of the residents in the neighborhood where my business is located.

I know by name many of the other people who operate businesses in the neighborhood where my business is located.

I would like to keep my business in the same neighborhood for the next five years.

I would like to keep my business in the same neighborhood for the next ten years.

I would like to keep my business in the same neighborhood for the next twenty years.

Conditions are improving in the neighborhood where my business is located.

Conditions are deteriorating in the neighborhood where my business is located.

Approximately what percentage (%) of your employees live within ONE mile of your business? 1-5 % 6-10% 11-15% 16-20% 21-30% 31-40% 41-50% 51-60% 61-70% 71-80% 81-90% 91-100%

Approximately what percentage (%) of your employees live within FIVE miles of your business? 1-5 % 6-10% 11-15% 16-20% 21-30% 31-40% 41-50% 51-60% 61-70% 71-80% 81-90% 91-100%

With approximately how many businesses in your neighborhood do you have regular business relationships? 0 1 2 3 4 5 More than 5

In addition to my business activities, I interact with the neighborhood where my business is located by_____.

(At right, please indicate all that apply.)

Participating in neighborhood groups
Sponsoring or donating to neighborhood groups or causes
Advertising neighborhood events
Hosting local events/activities
Training local residents
Other
If "Other", please describe here:

LAND USE INFORMATION

The following questions refer to land use regulations as including zoning and other use restrictions, as well as maintenance requirements, including reporting of contamination and cleanup responsibility. Answer choices listed are: Strongly Disagree, Disagree Somewhat, Barely Disagree, Barely Agree, Agree Somewhat, Strongly Agree

I am knowledgeable about the land use regulations that apply to my neighborhood.

Other businesses in the neighborhood where my business is located are well-informed about land use regulations.

The land use regulations that apply to my business are reasonable.

If I decided to move my business to another location, land use regulations, including cleanup liability would significantly influence my decision.

I am concerned about the liability that applies to businesses regarding land cleanup in the neighborhood where my business is located.

The costs of complying with land use regulations that apply to my business are too high.

I am concerned that land use regulations contribute to business failures in the neighborhood where my business is located.

Land use regulations affect the competitiveness of my business locally.

Land use regulations affect the competitiveness of my business nationally.

Land use regulations affect the competitiveness of my business internationally.

Small businesses like my business get a lot of help to clean up land that may become contaminated during their operations.

If I decided to move my business, I would be willing to relocate to a formerly contaminated property that had been cleaned up. YES NO DON'T KNOW
Please explain your answer here:

If there were a contaminated property in the neighborhood where my business is located, what would happen?
(Please check all that apply.)
Nothing
The owner would clean it up his/herself
It would be reported to the government by the property owner
It would be reported to the government by someone in the neighborhood
The government would discover it during inspection
It would be cleaned up by the government
It would be discovered prior to resale and the owner would clean it up
It would be discovered prior to resale and the new owner would clean it up
It would be discovered after resale and the new owner would clean it up
The government would provide help to the old owner in cleaning up the property
The government would provide help to the new owner in cleaning up the property
Other If "Other", please describe here:

If there were a contaminated property in the neighborhood where my business is located, who would take the lead in making sure it was cleaned up?
(Please check all that apply.)
The business
The community
The government
Real estate developer
Consultants
Insurance company
Other If "Other", please describe here:

If you wanted to find out if a property was contaminated in your neighborhood, who would you contact?
(Please check all that apply.)
The owner of the property
A community organization
The government
Real estate agent
Real estate developer
Consultants
Insurance company
Other If "Other", please describe here:

If you purchased a new property in your neighborhood and found that it was contaminated, who would you contact to clean it up?
(Please check all that apply.)
The government
Real estate agent
Real estate developer
Consultants
No one

Other If "Other", please describe here:

Approximately how long do you think it takes for a contaminated property to be cleaned up and reused in the neighborhood where your business operates? Less than six months 7 months-1 year 1-2 years 3-5 years 6-10 years 11-15 years More than 15 years
Other (Please explain.):

OPERATIONS INFORMATION
Have you ever owned, operated, or managed a similar business in another country? YES NO
If "YES", which country/ies?:

If you responded "YES" to the question directly above, please answer questions A, B, C, and D here. If you responded "NO", please skip them.
A. Were/are the land use policies in the other country/ies as strict as they are in the US? (Please type country names and then choose the most appropriate answer at right.)
Country 1: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same
Country 2: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same
Country 3: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same
Country 4: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same

B. Do you think that the land use policies in the different countries strongly influenced your decisions to do business in the foreign locations?
YES NO

C. Do you think that the land use policies in the different countries have become more similar or less similar to the policies in California over time?
MORE SIMILAR LESS SIMILAR
Please explain your answer:

D. Have the land use policies in the other countries changed significantly over time?
YES NO If "YES", how have they changed?
MORE SIMILAR LESS SIMILAR
Please explain your answer:

In which (if any) business network groups do you participate?
(Please check all that apply.)
Chamber of commerce
Manufacturing association
Lobbying group
Community group
Government group
Technology group
University research group
Other:

Where do you receive most of your information about land use regulations and issues?
(Please check all that apply.)
Chamber of commerce

Manufacturing association
Lobbying group
Television
Internet
Newspaper
Radio
Community group

Federal Government
State government
Local government
Technology group
International sources
University research group
Trade publications (journals, etc.)
Other:
What do you consider the most important environmentally-related issue that affects the operation of your business?
Please briefly describe here:

Please use this space to communicate any additional comments:

THANK YOU VERY MUCH FOR TAKING THE TIME TO PARTICIPATE IN THIS STUDY.

This survey questionnaire is intended for academic purposes only and is in accordance with the appropriate university research policies (USC UPIRB #03-02-050).

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*The items with an asterisk were eventually taken off the survey since the information was already available in the directory from which the companies were chosen and doing this put less of a typing input burden on the respondents.

Appendix F:

Survey Questionnaire Instrument for Kuala Lumpur

Note: This is a plain text version; the full color version is only available in Dreamweaver software format or on the Internet at: http://www-scf.usc.edu/~carolarm/Armstrong_KL_Survey_mod.html. In order to access the survey, respondents must first have acknowledged their understanding of university policy via a cover page that was approved by the University of Southern California Institutional Research Board, UPIRB #03-02-050.

Survey Questionnaire for
BUSINESS OWNERS AND MANAGERS
Project Title: Small Businesses and Land Use in Kuala Lumpur

This survey questionnaire is to be completed by the individual who is either the owner, principal manager, or other executive of the business. Please submit your completed questionnaire by clicking the "Submit" button at the bottom of this page. All questions/comments about the survey should be addressed to Ms. Carol Armstrong at carolarm@usc.edu.
Your participation is MOST GRATEFULLY appreciated—thank you very much!

PERSONAL INFORMATION

Please select your preferred title. Datuk Datuk Seri Tan Sri Tun Datin Datin Seri Puan Seri Dr. Mr. Mrs. Ms. Ms.

Your Name (First, Middle, Last)

Business Name

Street Address 1 (Number, Street, Street Type)

Street Address 2 (Unit or Suite)

City Province Postal Code

*Telephone Number *FAX Number E-mail Address *Website Address

BUSINESS INFORMATION

What is your primary type of business?
Manufacturing Services Retail Other:

What do you primarily produce/sell?

*What are your business codes (If known--Please skip this question if you don't know.)?
Malaysia Industrial Classification (MIC) Code
U.N. International Standard Industrial Classification (ISIC) Code
Standard Industrial Classification (SIC) Code
North American Industry Classification System (NAICS) Code

How long has your business been at its present location?
Less than one year 1-5 years 6-10 years 11-15 years 16-20 years More than 20 years Other:

In what year was your business founded?

Where is your company headquartered? (City, State/Province, Country)

Is your business a small business?
YES NO

How many employees does your business have?
Full-Time Employees Part-Time

OWNER INFORMATION
In case of multiple owners, please describe the managing partner or if there is no managing partner, please indicate the owner that lives closest to the business site.

Are you the business owner?
YES NO

Is your business a family business?
YES NO

Is your business a franchise?
YES NO

Do you consider your business a minority business?
YES NO

Describe the business owner.
Individual Ownership Partnership Group (More than 2 owners) Other:

Approximately how far away from the business does the owner live?
Owner lives at business Within walking distance Less than 15 minute vehicle commuting distance 16-30 minute vehicle commuting distance 31-60 minute vehicle commuting distance More than one hour in vehicle commuting distance
Other:

Approximately how many kilometers from the business does the owner live?
Less than one kilometer 1-2 km 3-5 km 6-8 km 9-10 km 11-15 km 16-20 km 21-25 km 26-30 km More than 30 km
Other:

Approximately how many days a week does the owner work at the business?
0 1 2 3 4 5 6 7

SITE INFORMATION

Do the owners of your business own the land on which it operates?
YES NO
If "NO", do you rent? YES NO

Do you have a long-term lease? YES NO

What influenced your decision to locate your business where it is now?
(Please check all that apply and include any other factors in "Other".)
Land price/rent
Access to market/customers
Transportation access
Governmental incentives
Access to labor pool/workers
Facilities or amenities, such as buildings and equipment)
Other:

How important are different location factors?
(Please indicate how important these factors were to you and include any other factors in "Other".)
Land price/rent Important Not Important
Access to market/customers Important Not Important
Transportation access Important Not Important
Governmental incentives Important Not Important
Access to labor pool/workers Important Not Important
Facilities or amenities, such as buildings and equipment) Important Not Important
Other (Please type here.): Important Not Important

Approximately how large is the land parcel your business occupies?
Less than one hectare 1-2 hectares 3-5 hectares 6-8 hectares 9-10 hectares 11-20 hectares 21-40 hectares 41-60 hectares 61-100 hectares More than 100 hectares

Is your business located on an industrial estate?
YES NO

Has your business ever had any problems with land contamination?
YES NO DON'T KNOW
If "YES", please describe here:

Does your business monitor land/soil conditions on a regular basis?
YES NO DON'T KNOW
If "YES", please describe how and how often here:

When was the last time you assessed the land/soil conditions at your business site?
At time of purchase During new construction Never Other:

What signs indicate to you that a property is contaminated or polluted?
(Please check all that apply.) It is vacant
There is rubbish/trash/debris on it
There is a fence around it
Signs posted at the property
I don't know
Other
If "Other", please describe here:

NEIGHBOURHOOD INFORMATION
Please indicate whether or not you agree with the following statements by clicking in the circle that corresponds with your opinion of each statement. Answer choices listed are: Strongly Disagree, Disagree Somewhat, Barely Disagree, Barely Agree, Agree Somewhat, Strongly Agree

My business is located in a disadvantaged neighbourhood.

Crime is a problem in the neighbourhood where my business is located.

Vacant properties are a problem in the neighbourhood where my business is located.

Abandoned properties are a problem in the neighbourhood where my business is located.

Contaminated properties are a problem in the neighbourhood where my business is located.

There are abandoned, vacant, or contaminated properties located within a half-kilometer of my business.

There are abandoned, vacant, or contaminated properties within one street block of my business.

I know by name many of the residents in the neighbourhood where my business is located.

I know by name many of the other people who operate businesses in the neighbourhood where my business is located.

I would like to keep my business in the same neighbourhood for the next five years.

I would like to keep my business in the same neighbourhood for the next ten years.

I would like to keep my business in the same neighbourhood for the next twenty years.

Conditions are improving in the neighbourhood where my business is located.

Conditions are deteriorating in the neighbourhood where my business is located.

Approximately what percentage (%) of your employees live within ONE kilometer of your business? 1-5 % 6-10% 11-15% 16-20% 21-30% 31-40% 41-50% 51-60% 61-70% 71-80% 81-90% 91-100%

Approximately what percentage (%) of your employees live within FIVE kilometers of your business? 1-5 % 6-10% 11-15% 16-20% 21-30% 31-40% 41-50% 51-60% 61-70% 71-80% 81-90% 91-100%

With approximately how many businesses in your neighbourhood do you have regular business relationships? 0 1 2 3 4 5 More than 5

In addition to my business activities, I interact with the neighborhood where my business is located by_____.
(At right, please indicate all that apply.)
Participating in neighbourhood groups
Sponsoring or donating to neighbourhood groups or causes
Advertising neighbourhood events
Hosting local events/activities
Training local residents
Other
If "Other", please describe here:

LAND USE INFORMATION
The following questions refer to land use regulations as including zoning and other use restrictions, as well as maintenance requirements, including reporting of contamination and cleanup responsibility. Answer choices listed are: Strongly Disagree, Disagree Somewhat, Barely Disagree, Barely Agree, Agree Somewhat, Strongly Agree

I am knowledgeable about the land use regulations that apply to my neighbourhood.

Other businesses in the neighbourhood where my business is located are well-informed about land use regulations.

The land use regulations that apply to my business are reasonable.

If I decided to move my business to another location, land use regulations, including cleanup liability would significantly influence my decision.

I am concerned about the liability that applies to businesses regarding land cleanup in the neighbourhood where my business is located.

The costs of complying with land use regulations that apply to my business are too high.

I am concerned that land use regulations contribute to business failures in the neighbourhood where my business is located.

Land use regulations affect the competitiveness of my business locally.

Land use regulations affect the competitiveness of my business nationally.

Land use regulations affect the competitiveness of my business internationally.

Small businesses like my business get a lot of help to clean up land that may become contaminated during their operations.

If I decided to move my business, I would be willing to relocate to a formerly contaminated property that had been cleaned up. YES NO DON'T KNOW
Please explain your answer here:

If there were a contaminated property in the neighbourhood where my business is located, what would happen?
(Please check all that apply.)
Nothing
The owner would clean it up his/herself
It would be reported to the government by the property owner
It would be reported to the government by someone in the neighbourhood
The government would discover it during inspection
It would be cleaned up by the government
It would be discovered prior to resale and the owner would clean it up
It would be discovered prior to resale and the new owner would clean it up
It would be discovered after resale and the new owner would clean it up
The government would provide help to the old owner in cleaning up the property
The government would provide help to the new owner in cleaning up the property
Other
If "Other", please describe here:

If there were a contaminated property in the neighbourhood where my business is located, who would take the lead in making sure it was cleaned up?
(Please check all that apply.)
The business
The community
The government
Real estate developer
Consultants
Insurance company
Other
If "Other", please describe here:

If you wanted to find out if a property was contaminated in your neighbourhood, who would you contact?
(Please check all that apply.)
The owner of the property
A community organization
The government
Real estate agent
Real estate developer
Consultants
Insurance company
Other
If "Other", please describe here:

If you purchased a new property in your neighbourhood and found that it was contaminated, who would you contact to clean it up?

(Please check all that apply.)
The government
Real estate agent
Real estate developer
Consultants
No one
Other
If "Other", please describe here:

Approximately how long do you think it takes for a contaminated property to be cleaned up and reused in the neighbourhood where your business operates? Less than six months 7 months-1 year 1-2 years 3-5 years 6-10 years 11-15 years More than 15 years
Other (Please explain.):

OPERATIONS INFORMATION

Have you ever owned, operated, or managed a similar business in another country? YES NO
If "YES", which country/ies?:

If you responded "YES" to the question directly above, please answer questions A, B, C, and D here. If you responded "NO", please skip them.
A. Were/are the land use policies in the other country/ies as strict as they are in Malaysia? (Please type country names and then choose the most appropriate answer at right.)
Country 1: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same
Country 2: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same
Country 3: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same
Country 4: Please choose: More strict land cleanup policies Less strict land cleanup policies About the same

B. Do you think that the land use policies in the different countries strongly influenced your decisions to do business in the foreign locations?
YES NO

C. Do you think that the land use policies in the different countries have become more similar or less similar to the policies in Malaysia over time?
MORE SIMILAR LESS SIMILAR
Please explain your answer:

D. Have the land use policies in the other countries changed significantly over time?
YES NO If "YES", how have they changed?
MORE SIMILAR LESS SIMILAR
Please explain your answer:

In which (if any) business network groups do you participate?
(Please check all that apply.)
Chamber of commerce
Manufacturing association
Lobbying group
Community group
Government group
Technology group
University research group
Other:

Where do you receive most of your information about land use regulations and issues?
(Please check all that apply.)
Chamber of commerce

Manufacturing association
Lobbying group
Television
Internet
Newspaper
Radio
Community group
National Government
Provincial government
City government
Technology group
International sources
University research group
Trade publications (journals, etc.)
Other:

What do you consider the most important environmentally-related issue that affects the operation of your business? Please briefly describe here:

Please use this space to communicate any additional comments:

THANK YOU VERY MUCH FOR TAKING THE TIME TO PARTICIPATE IN THIS STUDY.

Terima kasih!

This survey questionnaire is intended for academic purposes only and is in accordance with the appropriate university research policies (USC UPIRB #03-02-050).

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*The items with an asterisk were eventually taken off the survey since it was not critical to understanding the location of the businesses and doing this put less of a typing input burden on the respondents. The code questions were removed as per the advisement of Tan Teng Ek at the Selangor Branch of the Federation of Malaysian Manufacturers (FMM) who implied that most companies would not know their codes and might be reluctant to answer the survey when faced with such questions that they could not answer. Their type of business was ascertained elsewhere in the survey or via the FMM member directory.