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Coastal Marine Institute

Sustainable Community in Oil and Gas Country

Final Report

MMS U.S. Department of the Interior
Minerals Management Service
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LSU Cooperative Agreement
Coastal Marine Institute
Louisiana State University

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Sustainable Community in Oil and Gas Country

Final Report

Editor

Charles M. Tolbert II

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CHAPTER 1 EXECUTIVE SUMMARY

Project Personnel: Charles M. Tolbert, II, Baylor University

1.1 INTRODUCTION

This research report describes two projects that began with a focus on a small community in Southwestern Louisiana in the late 1990s. Previous research with Census data on places in coastal Louisiana had shown substantial variation in the extent of socioeconomic impact across communities (Tolbert 1995). Abbeville, a small town in rural Vermilion Parish, appeared to be particularly resistant to the income volatility generally associated with periods of increasing and decreasing oil and gas development activities. In the first of the two projects described here, we conducted a community study during 1997. From that study, we concluded that Abbeville's resiliency reflects a historical and cultural legacy rooted in rich social resources, economic development, and a distinctive local industrial structure that enables it to weather economic disruptions. Our findings suggested that, unlike most oil and gas dependent locations, Abbeville's industrial base is diverse. At the time, this industrial diversity was reflected in part by relatively large routine manufacturing, extractive (agriculture), and business and professional services sectors. This business and professional services sector was, and continues to be, largely oil and gas related, as Abbeville is a center for operations and logistics.

We concluded the community study in 1998 during a period of high offshore (deepwater) activity. Yet, Abbeville was experiencing a potentially huge negative socioeconomic shock: the closure of a Fruit of Loom textile plant which had employed as many as 1,100 employees. In this context, we began a second research project that had two objectives:

1. a follow-on community field study to explore the extent to which oil and gas industry activity might compensate for the loss of the textile plant, and
2. a Gulf-wide study of coastal places that might derive resiliency from industrial diversity based in part on a thriving business service sector.

The plant closure study yielded a richly textured depiction of the community impact that varied at the individual level by gender, race, and ethnicity. Because most of the displaced workers were female, virtually none of them found employment directly in the oil and gas industry. However, there were many signs that other household members' employment in oil and gas activities helped to sustain some displaced workers. More generally, the presence of oil and gas in the local economy added to the local industrial diversity and sustained the workers and the community through this tough episode. As we became more knowledgeable about the community and its history of ups and downs, it became clear that a remarkable resiliency prevails that enables Abbeville to sustain itself. In the annals of modern rural social science, this is a community characteristic that has been identified only rarely. On the one hand, it may be that only a handful of communities possess such resiliency. On the other hand, it may be that the Abbeville case is so instructive that it provides us with a far better inventory of characteristics of vital communities. To anticipate our conclusions in Chapter 5, all of us involved in this project strongly believe that plenty of communities exhibit at least some of Abbevilles's attributes. Development specialists who focus on cultivating Abbeville-like community strengths are building a capacity for resilience.

Our findings are elaborated in a nontechnical manner in the sections that follow immediately in this chapter. In subsequent chapters, we explain our methodologies and describe our studies in technical detail.

1.2 THE ORIGINAL ABBEVILLE COMMUNITY STUDY

1.2.1 Background

Tolbert (1995) did extensive secondary (Census) data analysis of the impact of the expansion and decline of oil and gas activity in coastal communities. In the course of their research, they found a

community that did not show the typical patterns of income volatility associated with oil and gas development. This community is the city of Abbeville, a city of 12,500 in coastal and rural Vermilion Parish. Abbeville is situated on the Vermilion River about 20 miles inland from the Gulf of Mexico. Using existing data sources, Tolbert and Shihadeh were unable to explain this anomaly. Because the apparent sustainability of Abbeville could not be explained with existing data, and because of our access to the community, we decided to conduct a multi-method case study of Abbeville. The field study was led by then LSU Research Assistant Professor Deborrah Tootle (now with the Louisiana Agricultural Extension Service) and LSU Graduate Research Assistant Linda Tobin (now on the faculty at Austin Community College).

1.2.2 Potential Explanations for Abbeville's Resiliency

One obvious explanation for Abbeville's resiliency is simply that Abbeville was not a coastal community dependent on oil and gas and therefore not seriously affected by the expansion and contraction of oil and gas activity. However, data from various sources showed this was not the case. Employment in the oil and gas industries was similar to Louisiana parishes that exhibit high levels of oil and gas involvement. Local news accounts as far back as the early 1950s routinely mentioned the importance of the oil and gas industry of Vermilion Parish. The weight of the evidence put Abbeville squarely in the oil and gas community category. Unlike many others places, however, Abbeville did not exhibit the same ups and downs associated with the industry. This led us to turn to other plausible explanations.

A second explanation for Abbeville's resiliency is industrial diversity. In the rural development literature, industrial diversity is often viewed as key to sustaining the community in nonmetropolitan America. In recent years, rural economies have become less dependent on agriculture and tend to specialize in low-wage manufacturing and service sector jobs. They also tend to be dominated by a single industry (such as mining or textiles manufacturing). Specialization tends to leave rural areas vulnerable to business cycles and foreign competition. However, diversified rural economies are more stable and produce more consistent economic growth, and they can weather sharp economic downturns. Also, the offshore oil and gas employers generally pay relatively high wages. Thus, one important objective of our community study was an assessment of industrial diversity.

A third explanation centers on the social resources (relationships, kin, friends, acquaintances) that individuals can draw on to sustain themselves through hard times. At the time of the research, the social science community was seizing on the concept of *social capital*. This term refers to a system of reciprocal expectations and obligations generated within systems of dense social networks. Many researchers—most notably the political scientist Robert Putnam—argue that social capital can bolster the socioeconomic performance of a community and therefore cushion the effects of sharp economic downturns. Social capital could very well be a key in understanding Abbeville. The community is part of Acadian Louisiana where dense social relationships (i.e., extensive kinship networks) are the norm. The community study was designed to be very sensitive to evidence of social capital among Abbeville's residents.

1.2.3 Methodological Approach

The original Abbeville community study was a multimethod study that included document and historical study and use of qualitative approaches. Our qualitative data collection technique consisted of "guided conversations" in which we met with respondents in person and asked them to discuss specific topics relating to the study. For example, we asked "how families in Abbeville responded to economic downturns." Each respondent was asked to address the same basic set of topics, but we also remained flexible and would address new issues as they emerged. To identify respondents, we relied primarily on a type of nonprobability strategy, the purposive sample, and incorporated elements of systematic selection into it where possible. We were interested in talking with people who were knowledgeable about local economic development, and oil and gas activity, as well as civic and community responses. Therefore, we talked with oil and gas stakeholders, the local business community, and local community and civic leaders and we asked respondents about other people to whom we should talk. We conducted guided conversations with almost 70 persons.

1.2.4 Findings

1.2.4.1 Geography

We learned from the locals the salience of geography in influencing settlement patterns, social relationships and economic development. Vermilion Parish had a Census 2000 population of just over 53,000 persons. The Parish is very diverse geographically, composed of a northern coastal plain ideal for agriculture and southern coastal marshes. The only incorporated place of at least 10,000 residents is Abbeville (2000 population of almost 12,000). The town and its industrial district extension, Intracoastal City, are in the center of the parish on the southernmost edge of the coastal plain. The vast majority of persons resides in the northern half of the parish.

1.2.4.2 History

Although Vermilion Parish was settled as part of the Acadian movement from Nova Scotia, it was developed rather late in the migration episode. Abbeville was designated as a city in 1850 and so named because friars were seeking a location for a cathedral in the area south of Lafayette. This rather late start may have been significant since it did not permit Abbeville to develop a plantation economy. Instead, Vermilion Parish experienced a plethora of family farming enterprises on property received from Spanish land grants. Much of this land remains in the hands of a relatively few extended families, indicated by the few surnames in area and the vast, dense complex of kinship groups. The French influence remains a hallmark of culture even today. Our review of newspapers and historical materials indicated that the area remained largely isolated through the second World War. The Acadian culture was dominant, and Abbeville was a low-income community. Articles and documents suggested that an in-migration of oil and gas workers in post-war period lessened the area's isolation. But, today the community still has rich cultural traditions and strong social capital—rooted primarily in elaborate kinship networks--that buffer it through hard times.

1.2.4.3 Micro-Level Responses to the Oil and Gas Downturn

When we asked our respondents about how they coped with the downturn of the oil and gas industry in the later 1980s, they most often reported that people in Abbeville "tightened their belts." Oil and gas industry workers tended to leave the area. But, persons with family ties stayed and gave up recreational activities and luxuries. Many people assumed second (and in some cases, third) jobs. Many women entered the labor market and contributed to a family income. Other people took advantage of the diversity of natural resources and recreational activities to earn extra income. The geography is so amenable to agriculture that there are few barriers to going into the farming business on one's family land. Vermilion is the leading beef cattle producing parish in Louisiana. Beef cattle production is especially popular for a number of reasons. Cattle raising is a method of self-provisioning, and it is relatively less labor intensive than other forms of agriculture. It can also be a profitable enterprise at times. We were also told about small-scale shrimpers who got into the business by retrofitting recreational boats. In almost all cases, residents reported relying on social relationships and family ties. Family ties are important sources of social and economic resources.

1.2.4.4 Macro-Level Responses to the Oil and Gas Downturn

The vast majority of our respondents attributed Abbeville's survival during the downturn of oil and gas activity to agriculture. As one respondent said "our economy is not built on the oil patch." Others mentioned that the city had actively recruited Fruit of the Loom which opened in 1990. The plant initially employed almost 1,000 people, 80 percent of whom lived in the parish. Parish and city officials in Abbeville (as in most of Acadiana) had also begun to promote tourism. Abbeville is a quaint city, known for its seafood restaurants. Frankly, we began to find that these macro-level definitions were not as plausible as popular sentiment would suggest. The Fruit of the Loom plant opened too late in the downturn episode to be of much help. And, though agriculture may have been an important source of industrial diversity, we think the effects were largely felt in the vast rural areas of the parish and not in the city of Abbeville proper. We also never observed much tourist activity. Respondents familiar with Intracoastal City provided perhaps the best macro explanation for local resilience. They described the industrial park as a staging area or center for logistics and operations for the oil and gas industry. Further,

several key informants argued that the oil and gas downturn was largely a cessation in exploration, not production. The many offshore facilities already in production required ongoing servicing. The services are varied and range from administrative, financial, legal, medical, transportation, catering, suppliers, and so on. The importance of services in Abbeville contrasts with neighboring St. Mary and Iberia parishes that specialize in the oil and gas exploration per se or were heavily dependent on related activities such as rig fabrication. Most importantly, Tolbert (1995) showed those parishes were harder hit during the oil and gas downturn than Vermilion.

Most rural areas have primarily consumer services. However, we realized that the Abbeville area service base is largely business and professional services. There has been a great deal of work on producer services in urban areas, where they contribute positively to the economy, but not on producer services in rural areas. Producer services are those that are linked to the underlying industrial specialization within a region, such as agriculture and oil. At this point, we believe that the producer service base is a major factor contributing to sustainability.

1.2.5 Importance of Findings

The findings of what we refer to as the "original" Abbeville community study are useful to other coastal communities because they provide insights into the social structures, economic structures, and socioeconomic processes that contribute to sustainable, as opposed to volatile, development. The logical next step was to study communities across the Gulf Coast to see if there were others like Abbeville. Realistically, we could not hope to become as intimately familiar will the nearly 1,000 communities along the coast from Texas to Florida. However, we strongly believed that we could identify probable Abbeville-like communities by searching for a similar, distinctive brand of industrial diversity coupled with strong kinship networks and enduring social ties. The aim of the new study was to identify more precisely the industrial characteristics that lead to less volatility and to seek them elsewhere.

As we were putting the finishing touches on the original study, the announcement of the closing of the Fruit of the Loom plant sent shockwaves through the community. In the 1990s, Fruit of the Loom had been a major employer in the community, and we immediately wanted to observe the effects of its closure. Was it the oil and gas industry's turn to offset a socioeconomic shock in this most interesting and resilient community? Thus, our original plans were modified into a two-objective study: a continuation of the community study with a focus on the plant closure and a more refined look at industrial diversity along the Gulf Coast.

1.3 THE FOLLOW-UP STUDY

Again with the assistance of MMS (through the LSU Coastal Marine Institute), we began a follow-up study that had two foci: 1) a continuation of the Abbeville field study with emphasis on the plant closure, and 2) an analysis of industrial diversity in communities in states that border the Gulf of Mexico. Each of these project objectives is summarized below.

1.3.1 Community Study of a Plant Closure

1.3.1.1 Background

Fruit of the Loom came to Abbeville, Louisiana, in 1990. During certain peak times of operation, the textile plant employed more than 1,000 persons. In the fall of 1997, management announced that the plant would close and that operations would be moved to the Caribbean islands. Several rounds of layoffs followed, and the plant closed in the summer of 1998. At the same time, oil and gas industrial activity was accelerating, especially in terms of deepwater development. We designed the field study to focus on the extent to which the expanding oil and gas industry activity might counter some of the socioeconomic challenges associated with the plant closure.

1.3.1.2 Substantive Issues

Job loss of any kind frequently has far-reaching and long-term effects for many in rural communities. Plant closings, especially when large numbers of workers lose their jobs in a short period of time, result in massive displacements that disrupt the community and, at times, even entire regions. Our literature review

presented in Chapter 3 led us to expect substantial negative social and economic consequences when a plant of this size closes in a small community like Abbeville. Indeed, much has been written about plant closures in the last twenty years; this particular closure is just one more example of the effects of industrial restructuring that has occurred in the United States since the early 1980's. Yet, the presence and importance of the oil and gas industry in southwest Louisiana is well-recognized and is socioeconomically significant. Numerous companies are directly or indirectly supporting, and benefiting from, oil- and gas-related activities within this community and surrounding area. Therefore we set out to study whether companies connected with the oil and gas industry in the area countered negative socioeconomic impacts experienced as consequences of the apparel plant closure.

During the national economic recession of the early 1980s, plant closings around the United States were widely reported. Severe and widespread hardships for displaced workers were noted due to lack of local availability of other jobs in manufacturing. Our primary interest in this study was to determine how and if the late 1990s economy of this community, particularly the secondary and tertiary support sectors of the oil and gas industry, absorbed displaced workers from the apparel plant. These support sectors, experiencing a period of relative prosperity at the time of the closure, fall of 1997 through spring of 1998, could have mitigated the negative effects of the plant closure by providing post-displacement employment to those laid off. This relative prosperity was due to increased deep water oil activity which is less price sensitive than coastal and land-based oil activity. We also examined whether, after plant closure, family members of displaced workers sought employment in primary, secondary or tertiary sectors of the industry, alleviating adverse consequences experienced by the family that were caused by the closure.

The original Abbeville study informed our study design and execution in numerous ways. Most importantly, we undertook the plant closure study conscious of the prevailing history of community resilience. Despite the dire predictions of literature, we suspected that the distinctive industrial diversity might buffer the community from the full effects of the plant crisis. In the sections that follow, we explain our methods for continuing the community study and give a brief synopsis of the findings.

1.3.1.3 Methodological Approach

We used a qualitative methodological foundation to answer questions about the impacts of the plant closure on the lives of displaced workers, their families, and community, and the role of the oil and gas industry in the community. Our earlier experience with this community and with at least two other projects dealing with socioeconomics of the region suggests that the best way to investigate the impact of the plant closure for this study would be to again collect data using the case study method. This study uses a “guided conversation” method which is detailed in Chapter 3. We did background work at the local library and reviewed local newspaper archives. This was an important step in understanding how the media treated the issue. The media sources also provided information about the opinions of plant employees and other community members, and about efforts to assist displaced employees.

Although providing some structure within guided conversations is important, it was not possible for one instrument to adequately address the issues in this study. Therefore, a guided conversation “format” was used with the displaced workers. It focused on the economic impacts of the plant closure on the workers and their families and on labor market experiences after displacement. The format ensured that key issues were addressed, and that key data items were noted during the discussions with respondents. A second format “guided” three other respondent groups who included representatives of companies engaged in secondary and tertiary support of the oil and gas industry, community leaders, and social service agencies. The four groups of persons—displaced workers, oil and gas representatives, community leaders, and social service professionals—were used as a basis for developing a sampling frame. We then used a combination of random seeding to develop a purposive, snowball sample of respondents. With alphabetized rosters of potential respondents, we used a random number table to choose an initial respondent in each group. We then contacted persons in list order. Guided conversations were conducted with nearly 100 persons by project personnel (graduate assistants Linda Tobin and Michelle Livermore). Field notes from these conversations were transcribed and analyzed with a coding system that is detailed in Chapter 3.

1.3.1.4 Findings

Not surprisingly, the displaced Fruit of the Loom workers reported moderate to severe disruptions in their personal lives as a result of the plant closure. Moderate impacts included postponing purchases,

other belt-tightening of household finances, reliance on other household and family members, and the necessity to begin a job search process. More severe impacts typically involved extreme financial hardship. The extent of disruption varied widely, however, according to a variety of key social and economic variables: timing of layoff or voluntary departure, race, ethnicity, and gender. The plant closure was a protracted event that lasted nearly nine months. Workers laid off early on found little in the way of social or governmental support. Many of these workers were members of racial and ethnic (primarily Vietnamese) groups. Those who quit on their own terms tended to do so because they were aware of other opportunities and fared generally well. These workers tended to be white and have strong, longstanding ties to the community. Subsequent waves of laid-off workers all found a better prepared community support infrastructure that included special job training, government and faith-based social services, and targeted educational opportunities. While the predominately female displaced workers did not find jobs directly in the oil and gas industry, they encountered a robust local employment situation fueled by the community's industrial diversity.

The industrial mix of Abbeville includes oil and gas-related industries, agriculture, service and retail establishments, and garment manufacturing. Guided conversations with respondents revealed that the closure of the Fruit of the Loom plant in Abbeville was less devastating than feared initially because other segments of the economy were quite viable. What we found was substantial job growth in this community had resulted from development of oil and gas support sectors, as well as growth in other industries that have offered alternative labor market opportunities. In spite of its notoriety as being a boom-bust industry, respondents in this study viewed the oil and gas industry as a key factor in the success of the Abbeville economy. Though this industry is recognized as the cornerstone of the economy, respondents also acknowledged the importance of industrial diversity. Most of those in the industry have learned to deal with its cyclical nature through diversification and accumulation of capital to use during slowdowns.

Most of the opportunities within the oil and gas industry itself are limited to males, and this appears to be true of Abbeville as well. There are jobs in which females can be found, for example, clerical and administrative support, but most opportunities for females within the industry are associated with larger cities. Though only one family member sought employment in the industry after the plant closure, one-third of the displaced workers we spoke with had at least one family member already employed in the industry at the time of the closure. In those instances, the income from these family members was an important factor in reducing the impact of the textile plant closure on some families.

In Chapter 3, we argue that the Fruit of the Loom closure did not devastate the city of Abbeville at least in part because of the oil and gas industry. Economic growth and general development of the region that has been attributed to the growth of the industry has created demand for labor in other industries and employment sectors that has had to be met with adequate labor supply. More employment opportunities exist today within this community and surrounding area because, indirectly, growth of the oil and gas industry has served as an impetus in creating other labor market opportunities. In this regard alone, displaced workers have benefited from oil and gas development.

1.3.2 A Study of Industrial Composition in Gulf States

1.3.2.1 Background

Our original Abbeville study suggested that its resiliency during the 1980s reflected a historical and cultural legacy that fosters rich social resources, facilitates economic development, and yields a local industrial structure that enables it to weather economic disruptions. Our findings suggested that, unlike most oil and gas dependent locations, Abbeville's industrial base is diverse. This industrial diversity is reflected in part by relatively large routine manufacturing, extractive (agriculture), and business and professional services sectors. To pursue this finding further, we conducted a study at the Center for Economic Studies, U.S. Bureau of the Census. There, we employed confidential longitudinal establishment data to analyze the distribution of coastal industrial labor over time and space. We were interested in the extent to which spatial and temporal divisions of labor within the oil and gas sectors similar to those of Abbeville exist elsewhere along the Gulf Coast. We were also interested in the socioeconomic implications of these industrial patterns for coastal communities. We improved on our measures of income volatility in coastal areas which have employed summary information from decennial

census long-form data. We did so by exploring the development of measures of establishment and employment volatility over time.

1.3.2.2 Substantive Issues

Socioeconomic conditions are primarily dependent upon patterns of industrial organization. Local economies are based on the allocation of employment across distinct industrial sectors. Each sector is associated with different working conditions, opportunities and job outcomes. In general, complex manufacturing and business and professional services are associated with higher wages and stable employment while routine manufacturing and consumer services are associated with lower wages and unstable employment. In industrialized rural areas (where much of the oil and gas activity is staged), sound socioeconomic performance is often a function of a diversified industrial structure. This diversification tends to produce more consistent economic growth. Specialized economies, on the other hand, can expand rapidly but are particularly vulnerable to local and national level swings in the economy. Because diversified local economies are not dependent on any single sector source of employment and earnings, they are better prepared than more specialized economies to weather the economic downturns associated with specific industries.

Because of the tendency for rural areas to specialize in routine manufacturing and consumer services, the industrial organizational and rural research literatures pay very little attention to business and professional services in rural areas. It is readily apparent that producer services in rural areas are closely associated with a dominant industrial base, such as oil and gas activity. However, it is not at all clear how these linkages develop across time and space. The Abbeville area differs from other oil activity centers because it appears to be more of a center for oil field logistics and operations than it is for oil field fabrication. Our evidence shows that the concentration of oil-related business and professional services in Abbeville is a major factor in Abbeville's resiliency to the decline in oil and gas activity. For the most part, these oil-related producer services firms remained active, albeit at a diminished rate, throughout the 1980s. However, we currently do not have the necessary spatial and temporal data to examine and compare the distribution and differential impact of oil and gas activity across time and space.

1.3.2.3 Methodological Approach

Our findings in the original Abbeville case study were sufficiently robust to recommend a hypothesis for testing on other communities. The hypothesis was based on our observation of a thriving business and professional services sector in the Abbeville economy. Are similar service sectors evident in other coastal communities? Can such sectors be shown to be statistically related to the desirable outcomes we have observed in our Abbeville research? We were especially interested in the extent to which industrial divisions of labor similar to that of Abbeville exist in other coastal communities. We identified areas with similar industrial profiles compared them to Abbeville.

To accomplish this modeling task, we sought establishment-level microdata that were outside the public domain, but accessible through an agreement with the Center for Economic Studies (CES), U.S. Bureau of the Census. CES has assembled establishment responses to various economic censuses. These data in conjunction with an age proxy available from the Census Bureau's Standard Statistical Establishment List (essentially a national business register), allowed us to study the "embeddedness" of establishments. Access to these data represented a significant step forward for socioeconomic analysis. All previous socioeconomic work under the auspices of MMS has necessarily been based on public domain-data which are often suppressed for reasons of confidentiality *and* which do not contain information on establishment age or type. By contrast, the economic census data contain no suppression and constitutes the universe of U.S. establishments. These data permitted us to formulate detailed measures of establishment formation and dissolution as well as changes in local employment levels over time and space. Measurement issues and related technical matters are detailed in Chapter 4 of this report.

1.3.2.4 Findings

We found a distinctive pattern among some oil-dependent communities with industrial and occupational attributes like Abbeville's. As we had observed in our field work, we found in our internal Census data cities, towns, and villages with concentrations of business services related to the oil and gas industry. However, the communities most similar to Abbeville (per statistical models) also shared with

the southwestern Louisiana coastal town a relatively large professional sector (banking, finance, law, medical, and public administration) also thrives in Abbeville. Many of these communities were county seats, leading us to hypothesize that the constellation of professional services and government agencies required for county administration is another potential source of resilience for such communities. We did not test this hypothesis directly in this project, but offer it for consideration in subsequent research on resilient communities.

1.3.2.5 Conclusions: Resiliency and Industrial Diversity

The second study inspired by the original Abbeville community research permitted us to extend our time in the community, deepen our detailed knowledge of the community, and extend the breadth of our original conclusions to the broader Gulf-coast region. In effect, our research projects spanned nearly five years. While there is much that is constant about the community, we are also impressed with the dynamism exhibited in its industrial diversity. To be sure, the diversity of the local business climate—including a large sector of business and professional services—continues to be a primary basis for resilient community responses to assorted downturns and crises. Our longer-term perspective on Abbeville cautions us that a key source of sustainability at one time may turn out to be problematic at another time. Conversely, a seemingly problematic aspect of the local economy may later prove to be contributor to local stability. In fact, this is the principle behind industrial diversification. As we will discuss further in Chapter 5, various sources of sustainability in the local economy have all had their recent ups and downs. These sources include the oil and gas industry, manufacturing employment, and even the once indomitable agricultural sector. The particular lesson in the Abbeville context is that shifting sectors can be underpinned by strong business services and professional sectors. From our field work, we know that the business and professional sector is rooted in a local culture that features strong kinship networks and longstanding relationships. A more general lesson is that we should be wary of cross-sectional snapshots of any particular community and its social economy. The industrial diversity we have observed in Abbeville is quite dynamic in terms of compositional sectoral shifts and realignments. Had we conducted a one-shot study, we would have missed this dynamic and quite possibly also missed the persistence underlying strength of the business and professional sector.

1.4 ORGANIZATION OF THE REPORT

This executive summary is followed by three technical chapters in which study specifics are described in detail. Chapter 2 recounts the original Abbeville community study. The follow-on community study of the Fruit of the Loom plant closure is the subject of Chapter 3. In Chapter 4, we report on our work at the Census Bureau in modeling the detailed industrial profile of Abbeville and comparing that profile to other places in Gulf-coast states. Finally, we provide a conclusion and discussion of results in Chapter 5. That chapter also includes an epilogue that brings the reader up to date on Abbeville's response to yet another crisis: a precipitous decline in rice prices. To anticipate our conclusions there, we observe yet again that the community responds in a resilient manner to a potentially devastating event.

CHAPTER 2 THE ORIGINAL ABBEVILLE COMMUNITY STUDY

Project Personnel: Deborah M. Tootle, Louisiana State University
Charles M. Tolbert, II, Baylor University

2.1 LITERATURE REVIEW

2.2.1 Socioeconomic Impact of Oil and Gas Development

If we are to understand what 100 years of oil and gas development activity has meant to coastal Louisiana in social and economic terms, we must first look at the history behind that growth. The history reveals that oil and gas development occurred unevenly across the region, both temporally and spatially. Certain communities fortuitously benefited because of their proximity to offshore activities and the acceptance by residents of such activities. With time, diffusion and integration of oil and gas industry networks and activities resulted in an almost complete envelopment of numerous coastal communities and areas and in sometimes disparate, yet more frequently, similar social and economic consequences for participating communities within the region. Thus, it can be said that uneven economic development has been a consequence of oil and gas industry involvement and expansion. Furthermore, as national and worldwide demand for oil and gas continues to grow, expectations of social, cultural, and economic impacts increase in those same areas.

2.2.1.1 History of the Oil and Gas Industry in Louisiana.

Access to coastal Louisiana drilling prospects in the early 1900's was difficult due to the marshy, swampy environment, and it was not until 1933 with the Texas Company's introduction of the submersible drilling barge that exploration of marsh and shallow coastal waters became cost efficient (Lankford 1971). The submersible barge could be towed to the drilling site and sunk, providing a stable drilling base. After drilling was completed, the barge was raised and used elsewhere. Consequently, the marine environment which held promise for further oil exploration became more accessible to exploration companies (Gramling 1996). Another dilemma arose, however, as exploration and production moved into increasingly isolated areas of coastal marshes and estuaries; the labor force necessary to perform those activities found it increasingly difficult to commute on a daily basis. Two organizational responses emerged, significantly impacting the industry's organization of work. First, because these isolated areas had no housing facilities available for the work crews, companies built and provided living quarters situated near the work site. Later on, as offshore oil activities proliferated, living quarters became part of the work site, built on top of oil platforms situated over open water. The second organizational response, that of concentrated working periods, became common. Here the division of work was frequently broken down by the week: one week at work and one week off. This type of concentrated work scheduling became the model for offshore development, increasing in importance as those activities continued to grow (Gramling 1996, 1995, 1989). Therefore, as oil industry activities have progressed farther offshore, work schedules have also been extended, with today's workers commonly staying seven, fourteen, or twenty-one days, with daily shifts of twelve hours on, twelve hours off.

This concentrated temporal scheduling of work is considered by some to have been one of the biggest impacts of offshore development and activities on individuals and families in the region. There are a number of reasons why. First, concentrated work scheduling (seven days on, seven days off, etc.) attracts employees from a larger geographical area, and diminishes the potential concentration of settlement around this economic activity, oil and gas extraction (Gramling 1989). Offshore workers may not necessarily live in the Gulf Coast region, instead choosing to make infrequent long distance commutes from their homes to whatever site they leave from for offshore. This allows families of offshore workers the flexibility of living in a traditional place of residence while the offshore worker goes where needed. Decisions concerning the site selection of offshore activities were made with less regard to existing human settlement patterns because of the large number of these long-distance commuters. In their analysis of labor survey data from East St. Mary Parish, Louisiana, an area heavily involved in offshore support activities, Gramling and Brabant (1986) found that only thirty percent of the 381 offshore workers in the sample lived within 100 miles of where they met to go offshore.

Gramling and Brabant (1986) further found that employment patterns in East St. Mary Parish prior to the offshore industry development did not emphasize this type of nontraditional work scheduling. Therefore, local residents initially appeared reluctant to work offshore in a concentrated work scheduling environment; that work was, at least initially, filled by commuters outside the area. For some, this pattern of concentrated work scheduling has now become a way of life. By working offshore, people may escape fluctuations in local or regional economies; for example, if they reside in an economically depressed area, concentrated work scheduling elsewhere allows them the possibility of escaping the local economic impacts by participating in a wider labor market. Too, there is the possibility of upward mobility without familial dislocation.

Another major impact of concentrated work scheduling is that participation in the nuclear family and its social networks is interrupted. While other family members operate on more traditional time/space schedules, the offshore worker experiences a totally different non-standardized work schedule. A 1991 study by Forsyth and Gauthier (1991) reported that families of offshore workers frequently experienced problems in maintaining integration of the family unit; only through changing their basic structure and organization could they remain viable social systems. Adaptation to that type of work scheduling remains a source of stress for individuals and families. In a later study, Austin et al. (2002) found considerable diversity in both the nature of offshore oil and gas work and the impacts of that employment on home and family life. They found, for example, that families with an multigenerational history of offshore work exhibited more savvy in choosing the type off offshore work and more adaptability to the demands of offshore work. Households without this intergenerational experience did not adjust as well.

Many coastal communities relied on maritime activities, supplemented by trapping and agriculture prior to industrialization. The transition from seafood and agriculture to industrial activity in southern Louisiana occurred at the same time that oil extraction activities progressed further offshore into the outer continental shelf. By the 1940's in south LaFourche Parish, Cajun maritime expertise was servicing platforms up and down the bayous, and enterprising shrimpers converted storage hulls of their wooden trawlers into cargo holds to haul supplies to oil rigs set up in the marshes (Wallace et al. 2001). When development extended beyond close-in state waters in the 1970s, local boaters continued to service rigs though this often meant acquiring larger vessels suited for open water.

In the 1960's and 1970's, as the oil and gas industry developed along the Gulf of Mexico, residents of communities began to enjoy the positive economic benefits associated with the rapid economic growth of that industry. Individuals began to make career decisions based on the expectation that the oil industry would stay at that high level of development. There was such a growth in oil industry activities along the Gulf Coast that highly paid jobs become available without correspondingly high levels of education. While this was a boon to an area with historically low education levels, the availability of low-skill, high-wage jobs discouraged aspirations for furthering education. Seydlitz and Laska (1994) found that greater petroleum industry activity in Louisiana parishes from 1956-1990 was associated with higher percentages of students completing high school, but lower percentages of high school graduates enrolling in college. Trade schools, in response to industry demand, taught skills that were marketable for the offshore activity (Gramling and Reilly 1980). Therefore, by taking students out of the educational system or leading them down one path instead of another, the oil and gas industry has indirectly affected the educational system by perpetuating a culture that discounts the value of education (Wallace et al. 2001).

The 1970's witnessed a dramatic increase in exploratory drilling in a climate of rising oil and gas prices. The 1973-1974 oil embargo by the Arab members of the Organization of Petroleum Exporting Countries (OPEC) served as a tremendous stimulant for further offshore development. Rapid employment growth and significant income gains were not uncommon for any community involved in oil activities; it was a time of prosperity for the region. Indeed the economic bases of the majority of coastal states (Louisiana, Texas, and to a lesser extent Alabama and Mississippi) therefore benefitted from oil activities in the Gulf of Mexico. But there were also socioeconomic problems and issues associated with this period of time. Rapid population expansions of many of the Gulf of Mexico communities could be traced to the growth in demand for oil and gas (McKenzie, et al. 1993), but these were frequently accompanied by strains on existing transportation networks, community infrastructures, and the delivery of social services. National publications brought news of employment opportunities in the Gulf Coast region, and a transient labor force arrived en masse, problematic in itself. At least initially, localities became dependent on the high-paying jobs so often associated with oil industry activities. When state and local government revenues fell in the recession, labor market problems were exacerbated. To illustrate this issue, Gramling and Freudenburg (1990) demonstrated that in terms of employment, ninety percent of

the variance found in Louisiana coastal parish local employment could be explained by national and international petroleum indicators for the period 1970 through 1988.

While the industry was rapidly developing, resources associated with human and social capital, skills, knowledge, experience, teamwork, and networks of supply and distribution and physical infrastructure began to interact and develop quickly as well (Gramling 1996). Adaptation occurred within oil and gas company organizations, while independent offshore supply companies quickly emerged. Oil and gas production companies did not, and could not, operate without a multitude of suppliers. Small businesses within the oil and gas industry moved to fill particular niches within the industry for which they felt there was a need, exhibiting a tendency toward specialization. Existing businesses adapted in a variety of ways, which might have included refitting their equipment to meet the needs of the industry. For example, there were mechanic shops that shifted attention to a new oil-related consumer base and spent considerable amounts of money on equipment to become marine diesel repair facilities. New specialty businesses opened to accommodate the growing industry's needs. These businesses, which provide supplies to the industry and use the products of the industry, generate jobs and capital. Not only must the industry find oil offshore and move it ashore, everything required to operate the over-water facility needs to be delivered to an onshore support site, and transported to the platform (Davis and Place 1983). Industry growth created a need for thousands of vendors along the Gulf Coast that derived at least a portion of their income from offshore operations, and this is still true today (Applied Technology Research Corporation 1994). An analysis of telephone directories in the early 1970's identified over 3,500 businesses in coastal Louisiana alone, directly serving the petroleum industry (Davis and Place 1983).

A huge support system has developed over time, one that essentially keeps all oil and gas operations on schedule. Fabrication yards, refineries, terminals, boat docks, airports, helicopter bases, repair facilities, shipyards, and pipe storage areas are all essential to offshore operations. Communities along the industry's corridor became bases of operation, attracting numerous types of businesses involved in meeting the needs of the onshore and offshore operators. Expansion of these support facilities stimulated the local economies and prompted an increase in residential, commercial, industrial, and utility land uses, impacting nearly every community in the region. In fact, there are those who believed it was difficult to find one community, at least in Louisiana, that had not profited by the exploration and development of the hydrocarbon reserves off the states' coast (Applied Technology Research Corporation 1994).

The development of secondary and tertiary support sectors significantly impacted the region's socioeconomic well-being. Economists generally agree that the success of a particular economic development scenario depends at least as much on the ability of the region to capture spin-off and spill-over activities, as on the primary development. These activities are more likely to generate jobs and capital that result in a more diversified form of development, essential to a community's sustainability (Lovejoy and Krannich 1982).

Applied Technology Research Corporation (1994) defines the multi-layered secondary and tertiary support sectors as those who sell goods or services directly to producing companies. In turn, each sector does business with other suppliers and contractors, who in turn do business with others, and so on. No company operates alone; the business structure within which oil and gas activities function may be centered around producing companies, but the economic impacts are widespread.

Metal fabrication, shipbuilding, and water transportation were important components of the development of secondary and tertiary industry in East St. Mary Parish (Manuel 1980). As jobs became available both in offshore oil and gas and related fields in the 1950's and 1960's, residents took advantage of the highly competitive employment opportunities surrounding offshore activities (Manuel 1983). Initially, lack of competition from outside the area affected the types of jobs available, as oil development activities required continued modifications and redesigns of equipment. The need was local, the conditions were local, therefore development of strong secondary and tertiary industrial sectors was paramount. Too, with more traditional working conditions and hours than were found in primary employment offshore, local employment rose rapidly in those support sectors (Gramling and Brabant 1986). The result was increased reliance not only upon primary oil and gas extractive activities but an even greater reliance upon the associated secondary and tertiary industries associated with oil and gas development (Manuel 1977).

2.2.1.2 Service Industry

Since the mid-1970's, service-producing industries have been the source of most employment growth in the U.S. Composed of a heterogeneous mix of industries, differing mixes of regional service employment have different development implications (Hirschl and McReynolds 1989). An example of the growth in Louisiana oil services industry can be seen when examining the states' employment from 1973-1977. Far outstripping the national growth rate in services, state employment in oil industry support services gained 65 percent (Manuel 1980); by 1974, employment in some secondary sector activities (water transportation, metal fabrication, ship and boat building and repair) had actually exceeded employment in the economic primary sector in two of the most involved parishes in Louisiana (Gramling 1996). The incentive to move into offshore support sectors was high because jobs paid well. Statewide, by 1981, the offshore oil industry in Louisiana provided direct employment to 41,781 persons. Additionally, it was indirectly responsible for the creation of 83,500 other jobs in construction, maintenance and repair, retail and wholesale trade, business services and 34 other economic sectors. For the 1970s, it was estimated that for every new job created in the Louisiana oil and gas industry, two new jobs were created in other sectors of the state's economy (Scott 1981). Thus, increased labor market opportunities by necessity follow expansion of oil and gas activities.

Producer services, sometime referred to as intermediate or input services because they are often used to further the processing of raw materials and the production and distribution of manufactured goods (Singelmann, 1978; Stanback 1979; Noyelle 1984), increase productivity through coordination and integration of services for the local manufacturing base, allowing the local manufacturing base to achieve a greater position of dominance (Goe 1994). Some argue that the producer service sector creates wealth in a local economy by exporting services to other areas (Irwin and Kasarda 1991; Lincoln 1978; Hansen 1994).

Other important services not noted in the literature reviewed thus far are professional services. These include legal and financial services provided by professionals such as lawyers and accountants. These professional services make it possible for businesses to form, operate and generate profits. They are also the type of service jobs found in other resilient oil and gas communities in the Gulf Coast region (see Chapter 4).

All other oil service sectors provide vital links in all stages of oil development activities. The list is almost endless: land, water, and air transportation; ship and boat building/repairing; fabrication; offshore catering; drilling mud service; oil field tubing; wireline; casing; surveying; geological testing; chemical and various types of specialized equipment and instrumentation companies. These are only some of the types of service companies in operation today (Gramling 1996). Without this vast assortment of services meeting the needs of companies engaged in primary activities, the industry could not function. Without an adequate supply of labor for primary, secondary, and tertiary sectors, the industry cannot grow.

2.2.1.3 Economic Advantages

Increased opportunities for the types of highly paid employment frequently associated with oil industry activities usually suggests widespread prosperity within those communities. However, not all local individuals profit from development; those with few skills or who are not willing to train for work in energy-related jobs will not benefit from the improved economic conditions (Manuel 1983). Brabant (1993) found that in four Louisiana parishes, those who were poor prior to offshore development were from the local area, uneducated, and lacked skills. With the tremendous growth in the offshore oil industry, Brabant (1993) found a significant decline in the mean number of households receiving food stamps by the mid 1970's. Not only were those poor who wanted to work able to extricate themselves from welfare rolls, they were able to earn substantial incomes even if education and earlier skills were deficient.

These types of economic advantages for labor persisted throughout the 1970's, when the emphasis in the industry was on speed, not costs. The quicker a company could supply equipment, products, or labor, the faster the industry grew. A basic rule of economics states that when the demand for a product or service is high, such as skilled labor, the result is higher wages. This was certainly the case in the growth of offshore activities. Profit margins were sufficiently high that companies did not need to be concerned with expenses or becoming expert business managers. It was a phenomenon remarked upon by one respondent in a 1992 study, "People made money in spite of themselves." (Freudenburg and Gramling 1992).

2.2.1.4 The Downturn

In the early 1980's, the economy of the Gulf Coast region went into a tailspin due to falling crude oil prices and reduced demand for petroleum products which created a crude oil glut. When there is a pullback in oil and gas prices, oil and gas activities follow suit. Companies associated with oil industry development began to lay-off significant numbers of workers. Communities involved in those activities, particularly those whose economic base was primarily connected to the industry, experienced economic downturns that would prove difficult to overcome. Across the region, job growth slowed, and unemployment rates swelled to well above the U.S. average. Gramling (1996) noted that unemployment levels in some parishes went from a low of about four percent to a high of twenty percent by the mid-to-late 1980's. The national savings and loan crisis of the late 1980's gained fuel from the oil price collapse, because banks and S&Ls with outstanding loans to oil companies, and real estate developers who borrowed to build during the oil boom, were caught short by the rapidity of economic decline. Anyone involved in the housing industry was hurt by employment declines and out migration (Laska et al. 1993). The Gulf Coast was feeling the effects of a regional recession. A 1993 study of coastal Texas, Louisiana, Mississippi, and Alabama (McKenzie et al. 1993) found that between 1982 and 1986, the number of mining industry jobs, of which oil and gas were predominant, decreased by 28.63 percent. Some who had migrated to the region left the area, and in-migration nearly ceased. A significant number of those who stayed in the Gulf of Mexico coastal regions eventually found new employment in other industrial sectors. This new employment was to have serious consequences for the industry when it eventually rebounded around the mid 1990's.

From the 1970's until the early 1980's, and then again in the mid 1990's until recently, a shortage of available workers proved to be a chronic problem in times of increasing activity. With the most recent rebound of the industry, there has again been an increasing demand for labor, but this time, it appears to be more difficult to attract workers. Many of those who worked in the oil and gas industry and experienced the slowdown of the 1980's have no desire to reenter an industry that they believe is too volatile. Interestingly, Donato et al. (1998) found that the mid-1990's shortage of skilled workers in shipbuilding was so extreme, firms offered workers from outside the area temporary housing and mimicked the practice of the offshore oil and gas industry with a seven days on/seven days off work schedule.

Deseran and Tobin (2003) conducted a study that examined demand for labor among coastal Louisiana oil and gas service companies. In that study, on-site managers and personnel administrators recognized problems and expressed concerns about a number of issues that were similar to those of the 1970's: the lack of available skilled or certified workers, the increasing emphasis on industry safety, the need to keep turnover rates down, and a growing frustration with new employees wanting high wages for less work. Results indicate that labor market supply and demand continues to be primary concerns for the industry, and two comments made by respondents demonstrate this. The first, made by a representative of an oil and gas service company: ". . . [our] problem finding qualified workers...has been identified as the single and most important aspect which is going to limit our growth in the future. . . " The second comment, from the manager of a ship building/repair company: " . . . with the scarcity of skilled labor that we have experienced...it makes more sense to go out and acquire another shipyard than it does to expand . . . and try to pull from the labor pool . . . ."

Labor market studies have consistently found that working conditions, opportunities, and job outcomes vary depending on the industrial sector (Lobao 1990; McGranahan 1988; Horan and Tolbert 1984). Labor market opportunities vary because some communities developed into administrative headquarters for both major and independent oil companies demanding educated labor that could be assured of high wages, while need for labor in other areas was considerably different. In the latter, highly paid jobs resulted from complex manufacturing needs of oil and gas fabrication yards where educational attainment was not necessarily important but the ability to become skilled at one's job was. This study explores how the economic context of the oil and gas industry impacted workers laid off after the closure of the Fruit of Loom apparel plant in Abbeville, Louisiana. When other sectors of the economy decline and the oil industry has a high demand for labor, the industry affects occupational selection (Wallace et al. 2001).

2.3 METHODOLOGY

We designed a multilevel, multi-method study that included document and historical study and use of qualitative and quantitative techniques. Our qualitative data collection technique consisted of an approach referred to as "guided conversations" in which we met with respondents in person and asked them to discuss specific topics relating to the study. For example, we asked how families in Abbeville responded to economic downturns. Each respondent was asked to address the same basic topics, but we also remained flexible and would discuss new issues as they emerged in the course of the conversations.

2.3.1 Sampling Design

In community studies, investigators often employ nonprobabilty sampling designs. A nonprobability sample is legitimate, and often preferable to probability sampling in small studies, especially where the probability of selecting an element from the universe is unknown, such as when the universe consists of respondents who are knowledgeable about a particular issue. In many community studies, investigators use snowball sampling, a proces in which the investigators begin with an initial list of key informants and subsequently ask each informant to name another person (or persons) that is knowledgeable about the issue in question. A problem with using the snowballing technique is that it can compromise the internal validity of a study if snowballing does not lead to a diverse enough group of respondents. To avoid this problem, we relied primarily on another type of nonprobability strategy, the purposive sample, and incorporated elements of systematic selection into it where possible.

2.3.2 Sampling Frame

We were interested in talking with people who were knowledgeable about local economic development, and oil and gas activity, as well as civic and community responses. Therefore, we wanted to talk with oil and gas stakeholders, the local business community, and local community and civic leaders. We constructed a frame for a nonprobability sample from existing lists of stakeholders; we used phone, city and parish directories and membership lists. Oil and gas stakeholders, and members of the business community were pulled from Yellow Page listings and the membership lists of the Greater Abbeville-Vermilion Parish Chamber of Commerce. We included owners, operators and managers of businesses with direct and indirect linkages to the oil and gas industry. Civic leaders are pulled from city and parish government lists (i.e., Abbeville City Council, and Vermilion Parish Police Jury). We compiled a list of community leaders from those mentioned frequently in the newspaper for the last year. Within each category of respondents we used some form of systematic selection. Because most of the stakeholders are also members of the community, our four sets of respondents are not mutually exclusive. We did ask respondents about other people to whom we should talk. This minimal amount of snowballing was useful in identifying knowledgeable community members who acted informally not so much as community leaders, but rather as "community historians". These respondents were useful in providing a basic understanding of the local social and economic setting.

2.3.3 Overview of Sample

We completed about 60 guided conversations with the oil and gas stakeholders, civic officials, community leaders, and other members of the business community (such as those in agriculture services). The respondents tended to be white males (about 80 percent). Ages ranged from 35 to 85. All had lived in the community since at least the early 1980s. A third had college degrees. The most diverse aspect of the sample was occupational diversity (oil field workers, restaurant owner, attorney, hair dresser, public safety officer, and so on).

2.4 FINDINGS

2.4.1 History, Geography, and Culture

The geography of Abbeville and surrounding Vermilion Parish affected settlement patterns, social relationships and economic development. Geographically, Vermilion Parish is very diverse. The northern part of the Parish is "coastal prairie"—flat, agricultural land. The southern part of the Parish

consists largely of wetlands. Vermilion Parish is sparsely populated (53,000 persons in 1174 square miles), but the vast majority of the population resides in the northern part of the Parish. Heading due south from Lafayette, one drives through village of Maurice to Abbeville. Erath and Delcambre are just east of Abbeville and the towns of Kaplan and Gueydan are west. Intracoastal City is due south of Abbeville and is considered to be an extension of Abbeville (Abbeville addresses, phone numbers), even though it is a half-hour drive away. Intracoastal resembles an industrial park more so than a residential area. Most of those who work in Intracoastal City live in Abbeville. Thus, Vermilion Parish consists of one city (Abbeville) and five villages and towns.

The geography of coastal Louisiana had a profound effect on its early settlement patterns and the relationships of residents to the land and natural resources. Vermilion Parish was settled as part of the Acadian movement from Nova Scotia. Historians divide settlements into east and west settlements. The eastern settlements, along Mississippi River and Lafourche Bayou, were preferable to immigrants and new settlers. Western settlements were considered to be part of the "wilderness", and Vermilion Parish, consisting of coastal prairie and wetlands that did not provide many natural materials for building shelter or making fires was settled relatively late (Ancelet et al., 1991; Brasseaux 1987). The western coastal parishes were settled primarily for farming and ranching. Abbeville was designated as a city in 1850 by an act of the state legislature and remains under state charter today. Abbeville does not appear to have developed a plantation economy. Typically in plantation economies, large and small farms and agricultural enterprises co-existed. In Vermilion Parish however, the family farms were relatively homogeneous. Families would live on and farm property they received in Spanish land grants. As families expanded, they would continue to farm in close proximity so that family-based communities developed. Many families still own and farm the same land; it is not unusual for families to retain land originally accorded by the Spanish government. As a consequence, there are relatively few surnames and a dense complex of kinship groups in the area (Brasseaux, 1987).

The *History of Vermilion Parish, Louisiana* assembled by the Vermilion Historical Society, chronicles the ethnic diversity of the community. Even though the area is multicultural, cultural identity is strongly rooted in the French heritage of the early settlers. Some of the early morning and weekend radio and TV broadcasts (even Public Radio) are still in French. Many in the older generation do not speak English. Some of our non-French speaking respondents spoke of a stigma of being "American" in community of French speakers. We learned of an undercurrent of cultural tension that persisted until the 1960s when oil and gas industry workers moved into the area in mass. This began to limit the geographic, social, and economic isolation of the area. However, our guided conversations with the locals made it clear that the changes brought about by the advent of the oil and gas industry did little to change the tradition of strong kinship networks based on a French heritage.

By the middle of the 20th century, oil and gas had come to stay. Even so, Abbeville continued to be a farming community with relatively poor residents. A survey in the *Abbeville MeridionaI* from 1960 showed that 7.4 percent of the population in Abbeville had no visible means of support and that 73 percent of white males worked irregularly. Tenant farming was common.

In our guided conversations, we talked to respondents about both individual and family (micro) level and community (macro) level responses to the volatility associated with oil and gas activity. We present findings for each of these levels in sections that follow.

2.4.2 Micro-Level Responses

2.4.2.1 Belt-Tightening and Self-Provisioning

In terms of micro level responses, our respondents most often reported that people in Abbeville "tightened their belts." Although many skilled workers left the area, residents with family ties stayed and gave up recreational activities and luxuries. Many people assumed second (in some cases, third) jobs. Many women entered the labor market and contributed to the family income. Other people took advantage of the diversity of natural resources and recreational activities to earn extra income. Those with land raised beef cattle. Ranching is less labor intensive than crop farming. It depends largely on family labor which was abundant during hard times. Others became small-scale shrimpers by adapting recreational boats. Trapping and selling furs remains a a common activity. Generally, these self-provisioning and side-income strategies are very similar to those that anthropologists studying rural development have found that rural residents in the United States use in periods of economic downturns.

2.4.2.2 The Strength of Strong Ties

Many of our respondents reported relying on social and kinship relationships. Family ties and other social relationships, as forms of social capital, are important sources of social and economic resources. Families provided economic support in terms of housing and economic assistance. As one of our respondents told us: "Everybody's going to eat." Families also provided jobs during the hard times associated with the downturn in oil and gas activity. A local service station owner told us he employed his wife, children, his brother, his in-laws, his and god-child on an "as needed" basis. These findings provide support for our supposition that social capital can soften the edges of economic hardship.

2.4.3 Macro-Level Responses

Our discussion with Abbeville residents led us to the clear conclusion that the area economy is quite diverse. It exhibits diversity across industrial sectors. Census 2000 showed employment by parish residents as follows: agriculture and fishing (4 percent) , mining—primarily oil and gas (12 percent), construction (8 percent), manufacturing (7 percent), retail trade (13 percent), finance, insurance, and real estate (6 percent), professional services (6 percent), education and health (18 percent), and public administration (4 percent). Paradoxically, in our longitudinal study, we also observed diversity in the sources of industrial diversity. The leading sector at one point in time was not necessarily the leader at a subsequent point. This rotation of leading sectors permits the economy to show an ongoing resilience. In the sections below, we briefly discuss our findings with respect to important sectors of the local economy. We return to the theme of rotating leading sectors in Chapter 5.

2.4.3.1 Agriculture and Fishing

The vast majority of our respondents attributed Abbeville's survival during the downturn of oil and gas activity to agriculture. And, this is despite the small fraction of employment directly in agriculture (4 percent in 2000). As one respondent said "our economy is not built on the oil patch." In 1963 Vermilion Parish was top rice producing parish in the state. It remains so today. The parish was fifth statewide in beef cattle production in 1963, and it is number one today. The area has long been a leader in seafood harvesting and processing. In the 1980s, crawfish farming became a major industry. Vermilion Parish has a long history of sugar cane production and is a leading parish in that commodity as well.

2.4.3.2 Manufacturing

During the oil and gas downturn, the city actively recruited Fruit of the Loom (hereafter FOL) to locate a textile plant in Abbeville. FOL opened in the early summer of 1990 and initially employed almost 1000 people, 80 percent of whom lived in the parish. Though the plant would later close, its presence indicates the important role that manufacturing plays in the local economy. One other textile plant that employs 300 persons is located in Abbeville. Chapter Three contains more information about the FOL plant closing and the community response to a potentially disastrous economic disruption.

2.4.3.3 Services

Other local economic development initiatives include the intensive promotion of Abbeville as a tourist attraction. Abbeville is a quaint and attractive city, known for its seafood restaurants and amenities. The Parish opened the port of Vermilion in 1983. Combined with the strength of the agriculture and manufacturing sectors, these factors seem to be plausible explanations for the community's resilience. Yet, when we began to examine them more closely, they did not hold up to scrutiny. Because Fruit of the Loom did not open until 1990, it had relatively little time to influence the local climate of resiliency. Similarly, Port of Vermilion did not open until 1983, and did not develop to any great extent. Today, it is still sparsely occupied. Tourism is steady but not a major stream of revenue for Abbeville. While these service operations contribute to diversity in the local economy, they were not cited by our respondents as key to the city's resiliency.

As we began spending time in Intracoastal City, it became more apparent to us that business, producer, and professional services were especially important in the local economy. Intracoastal was described by our respondents as "a staging area," or a "center for logistics and operations for the oil and gas industry." Intracoastal City, unlike other major sites of oil and gas activity, is not involved in

fabrication as much as it is involved in oil related services. As one of our respondents in a major service company related, the exploration and drilling may have stopped during the downturn, but production continued. Everything that is needed on production rigs must be transported by either boat or helicopter. This includes personnel, equipment, drilling fluids, and water. From the *Abbeville Meridional VIOLA* in April 1983, 207 industries were located in Intracoastal City and 24,000 people moved through monthly. Intracoastal City is also a major supply and distribution center for the shrimping industry.

The important role of agriculture in the local economy means that Abbeville is the home of major agricultural services. There is a large rice mill with attendant storage and transportation facilities. Steen's sugar syrups are processing and packaged in Abbeville and marketed nationally. In addition, there are numerous small seafood and other food product processing operations.

The importance of the service sector generally and the business services sector specifically is reflected by the U.S. Department of Agriculture's classification of Vermilion Parish as a service specialty county. St. Mary and Iberia parishes, in contrast, are classified as mining due to the extent of oil and gas industry activity. Usually, services in rural areas consist primarily of consumer services. But, our respondents helped us realize that the service base in this area is dependent to a large extent on what are called producer or business services. There has been a great deal of research on producer services in urban areas, where they contribute positively to the economy, but not on producer services in rural areas. Producer services are those that are linked to the underlying industrial specialization within a region, such as agriculture and oil (Glasmeier and Howland 1995). In the case of Abbeville, we view the business/ producer services sector as a key underpin of the local economy.

2.5 CONCLUSIONS

At this early point in our long community study, we concluded that the resilience exhibited by Abbeville was not reducible to a single community feature or industrial sector. The resiliency is richly textured, grounded in social and kinship structures as well as a local economy more diverse than most rural, coastal economies. The findings of this original Abbeville study are useful to other coastal communities because they provide insights into the social structures, economic structures, and socioeconomic processes that contribute to sustainable, as opposed to volatile, development. The logical next step was a project to study communities across the Gulf Coast to see if there were others like Abbeville. Realistically, we could not hope to become as intimately familiar will the nearly 1,000 communities along the coast from Texas to Florida. But, we strongly believed that we could identify probable Abbeville-like communities by searching for a similar, distinctive brand of industrial diversity that is rooted in strong kinship networks and enduring social ties. The aim of the new study was to identify more precisely the industrial characteristics that lead to less volatility and to seek them elsewhere. In policy terms, this information could well assist agencies in determining where to permit certain development activities.

As we were putting the finishing touches on the original study, the announcement of the closing of the Fruit of the Loom plant sent shockwaves through the community. In the 1990s, Fruit of the Loom had been a major employer in the community, and we immediately wanted to observe the effects of its closure. Was it the oil and gas industry's turn to offset a socioeconomic shock in this most interesting and resilient community? Thus, our original plans were modified into a two-objective study: a continuation of the community study with a focus on the plant closure and a more refined look at industrial diversity along the Gulf Coast. The plant closure is the subject of Chapter 3, and the quantitative community study is detailed in Chapter 4.

CHAPTER 3 A PLANT CLOSURE IN A RESILIENT COMMUNITY

Project Personnel: Linda A. Tobin, Austin Community College
Michelle Livermore, Louisiana State University

3.1 INTRODUCTION

This qualitative study examines the labor market implications of the downsizing and final closure of an apparel plant employing over 800 workers. This occurred in Abbeville, a southwest Louisiana community with a population of about 13,000. The community's single biggest public employer, the apparel plant closed its doors in 1998 after more than seven months of rumor, speculation, worry and lay-offs. Job loss of any kind frequently has far-reaching and long-term effects for many in rural communities, but plant closings especially, where large numbers of people lose employment over a short period of time, result in "displacement...that can be devastating for communities and regions as well as individuals" (Perrucci et al. 1988). Therefore, in this small community, one expects to find negative economic and social consequences for those directly affected, the displaced plant employees, the majority of whom are female, their families, and the community at large. Two days after the closure was announced, the local mayor estimated that total economic losses to the community could translate into as much as $6 million.

Much has been written about plant closures in the last twenty years; this particular closure is just one more example of the effects of industrial restructuring that has occurred in the United States since the early 1980's. What is unusual in this community is the considerable presence of another industry, one that could lessen those negative economic and social effects of the plant closure. That industry is oil and gas exploration and extraction. The presence and importance of the oil and gas industry in southwest Louisiana are well-recognized and are socioeconomically significant. Numerous companies are directly or indirectly supporting, and benefitting from, oil- and gas-related activities within this community and surrounding area. Therefore this study examines whether companies connected with the oil and gas industry in the area countered negative socioeconomic impacts experienced as consequences of the apparel plant closure.

During the national economic recession of the early 1980's it was widely reported that plant closings around the United States resulted in severe and widespread hardship for displaced workers because the local economies could not be expected to absorb them (Leahy and Lin 1992; C & R Associates 1978; Parnes and King 1977; Wilcock and Franke 1968). Our primary interest in this study is to determine how, and if, the late 1990's economy of this community absorbed displaced workers from the apparel plant. We focus in particular on the role of the secondary and tertiary support sectors of the oil and gas industry in buffering the community from the impact of the closure. These support sectors, experiencing a period of relative prosperity at the time of the closure (fall of 1997 through early spring of 1998), could have mitigated the negative effects by providing post-displacement employment to those laid off. This relative prosperity was due to increased deep water oil activity, which is less price sensitive than coastal and land-based oil activity. Production in deep water requires huge capital investments made possible by mergers and transactions among companies. And, the industry has formed alliances and partnerships in which obligations, responsibilities, and costs are shared (Wallace et al. 2001). We also examine whether, after plant closure, family members of displaced workers sought employment in primary, secondary or tertiary sectors of the industry, alleviating adverse consequences experienced by the family that were caused by the closure.

Expansion of the oil and gas industry has served as a catalyst for economic growth and development in Abbeville by directly and indirectly creating additional employment opportunities in other industries. Oil and gas is an export industry, producing for nonlocal markets. Along with manufacturing and agriculture, it generates a multiplier effect in rural communities which includes the development of other industrial and professional service sectors (Hirschl and McReynolds 1989; Miller and Bluestone 1988; Summers et al.1976).

Because the majority of those who were employed at the plant were women (some estimates placed it as high as 80 percent), this study in particular examines possible opportunities and constraints on labor market participation of females in the secondary and tertiary support sectors of the oil and gas industry.

Although reported expansion of primary oil and gas development activities during that time period could positively affect the labor market opportunity structures for these women within the oil and gas industry, we do not expect to see evidence of that. Rather, we expect to see displaced women from the apparel plant turn to other industries. It is likely opportunities in other industries have arisen due to the development of the oil and gas industry. As Summers (1982) notes, industrial development stimulates additional employment in other sectors.

Our interest in this event encompasses more than the actual closure of the apparel plant in this community. Displacement of over eight hundred workers occurred because a corporation made a decision to close its plant at that location and relocate overseas. Discerning initial consequences of that event entails finding out who was displaced, and what happened to them after the closure. In this community an interesting scenario exists. There is the closure of the single largest employer, the apparel plant; yet there is also the co-presence of an expanding oil and gas industry which essentially requires an available supply of labor in order to meet its needs. Both structural forces are mediated through human decision-making process, thus the effect of job loss on their lives required displaced workers and their families to make decisions. Workers had to choose a new kind of labor market activity; select a new location for labor market activity; decide whether or not to participate in job training or educational programs; and identify ways to ensure family financial survival. One factor influencing decision making is ethnicity. The values and norms of individuals from different ethnic backgrounds often differ and this affects how they respond to certain situations. Answering the aforementioned research questions contributes to an understanding of labor market supply and demand within this particular community and the individual decisions that influence them.

The closure of a branch apparel plant in this community is not an unusual occurrence nationally. As research on rural communities has shown, since the 1930s, a primary focus of local policies in the U.S. has been economic development of rural areas, with state and local governments playing an active role. Promotion of local development is usually accomplished through the issuance of municipal tax-free bonds by states which helps finance the construction of industrial plants because it allows private firms a reduction in their borrowing costs. This evolves into “public-private partnerships” through which state and local governments offer a wide variety of financial incentives to attract private investment (Moore 1996). Thus, by lowering the price of land, labor, and necessary capital, state and local governments assist communities in creating a locational advantage. This “boosterism” continues to attract companies and much-needed jobs to hard-pressed rural communities, yet little evidence exists that such subsidization of private firms reduces the long-term unemployment rate or improves the economic prospects of local residents, particularly in light of recent restructuring (Moore 1996). Rural communities are not shielded from macroeconomic forces.

Consequences of industrial restructuring in the United States, particularly since the 1980's, have been studied extensively. Plant closings and restructuring have eliminated millions of jobs in the manufacturing sector of the economy, a disinvestment in the economy that Bluestone and Harrison (1982) call “deindustrialization.” In the United States, structural unemployment has been one of the consequences of relocation to less developed nations of the production of manufactured goods by multinational firms. Manufacturing workers across this country, like the displaced workers in this study, are left behind when multinational firms relocate elsewhere, frequently to those areas of the world where labor costs are considerably less. Less diversified rural communities dependent upon manufacturing for economic sustainability are particularly vulnerable, and consequently even more negatively affected when those plants locate elsewhere. There has been a growing concern over management decisions that are being driven by international competition. From management’s point of view, cutting labor costs has been the essential strategy for meeting foreign competition; moving overseas provides the escape from high wages paid to rural workers (Fitchen 1991). In fact, cutting labor costs was the reason given by apparel plant management in this community; just after announcing plant layoffs, the local newspaper quoted a Vice President for Corporate Relations as saying, “The apparel industry’s very competitive. . .competitors have gone overseas. We had to do this sooner or later. . .we were looking to the future. Our stockholders expect that.” The layoffs announced at this plant were seen as part of a larger corporate strategy with the disclosure of plans for additional plant closings in the region.

In contrast to industrial restructuring as exemplified by the apparel plant closure in this community, most oil and gas activities by necessity locate where natural resources exist. Natural resource extraction, cyclical in nature, and ultimately subject to finite supply, has been and continues to be, socioeconomically significant in this area. There have been many social and economic effects of oil and gas development on

communities, families, and individuals in this Gulf of Mexico region. Though these activities have had variable impacts along the coast, direct impacts have been felt most sharply in the south Louisiana "core" (Wallace et al. 2001). Early oil and gas industry development provided new and unknown employment opportunities. The local economies, though benefiting tremendously from the industry in periods of growth, also experienced recessions during slowdowns. Communities grew rapidly while experiencing infrastructural strain due to industry needs and demands. Concentrated temporal scheduling of offshore workers, i.e. seven days on and seven days off, altered conventional family dynamics. Today, even in many coastal communities where agriculture is economically important, the oil industry permeates the economic and social systems.

For decades, increased oil and gas production and activity has piqued the interests of researchers wanting to further their understanding of the impacts this natural resource extraction have on coastal communities in Louisiana. Evolving from simple land-based exploration and production platforms to technologically sophisticated offshore structures produced significant social changes and responses over the years. The industry changed from one dependent on its own internal supply system to one dependent on a multitude of suppliers. This created a vast network of related businesses that consequently involved and impacted nearly every community within the region (McKenzie et al. 1993).

The importance of this interdependent network of suppliers and services in this economy, secondary and tertiary sector development, cannot be understated. The terms "secondary sector" and "tertiary sector" are used somewhat differently than in the economic literature. Unlike economists, sociologist Robert Gramling (personal communication: 2000) explains that the secondary sector is made up of those establishments whose activities directly support primary activities, and tertiary sector as those activities directly supporting the secondary, and thus indirectly, primary activities. Freudenburg (1992) defines secondary industries/sectors as those involving the transformation of raw materials into finished products, and tertiary industries/sectors as those involving working with humans or information rather than physical materials. Both of these sectors are not only necessary to support an economy, they are evidence of a mature economic structure; increased economic activity in a region gives rise to an increased demand for financial services and activities. We find Gramling's perspective on secondary and tertiary sectors most germane for our study of a coastal region that has experienced firsthand the phenomenal growth of the oil and gas industry and the accompanying expansion of job opportunities in the secondary and tertiary sectors. As these sectors expand they make greater socioeconomic sustainability more likely.

Growth of an important economic base activity like oil and gas should be accompanied by improvement in overall local economic conditions. Feagin (1985) found that cumulative advantages associated with oil industry development and subsequent infrastructural improvements attract additional economic activities. Linkages appear between local service industries and the export sector of oil and gas. Thus, while Miller and Bluestone (1988) found that employment growth in rural services sectors is linked to rural manufacturing, similar arguments can be made for the petroleum industry.

Because of the well-known cyclical nature of the oil industry, there is also a socioeconomic cost that the region periodically pays. When growth in the industry abates and primary extractive activities decline, it follows that secondary and tertiary sectors will be negatively affected, because much of their profitability is directly and indirectly derived from a thriving primary activity. In an attempt to ensure their survival, business will cut costs, and one of the most immediate ways to accomplish this goal is a reduction in work force. At the time of the apparel plant closure, however, primary oil and gas activities were expanding; by necessity secondary and tertiary sector activities intensified as well. Along with this expansion, an increase in demand for labor should be apparent.

In addition to the industrial characteristics of Abbeville, it is an interesting community to study because it is culturally unique. There is a strong presence within this community of those with "Cajun" ancestry. The Cajuns pride themselves as having a heritage that breeds stubbornness and toughness in times of turmoil and trouble, and who profess to enjoy close family ties that serve to bind them to the area. Unlike many other families across the U.S., Cajun family members tend to remain in the same locale year after year, and in many cases, generation after generation, thereby living in the same historical environmental context. They draw on the strength of their extended family in dealing with the problems of everyday life. These familial ties to community are thought to be socioeconomically significant, and have been shown to affect labor market outcomes. Although strong ties to family and friends may sustain workers if they become unemployed, strong ties may also make it difficult for those displaced workers to leave, instead opting for whatever substitute employment they can get locally, or within commuting distance (Fitchen 1991).

Answering multifaceted socioeconomic questions about a particular place requires an in-depth study of the social dynamics that contribute to the event in question. A community field study, traditionally an important way to obtain detailed qualitative information about the people who live there, provides the necessary data for in-depth analysis of this event. Gathering such data involves not only talking with those unemployed by the plant closure, but also with representatives of secondary and tertiary support sectors of the oil and gas industry, social service agencies, and community leaders.

This study is the second of two case studies conducted in the same rural Louisiana town. In the summer and fall of 1997, as the apparel plant was announcing and beginning to implement its layoffs, one of the authors was helping to conduct guided conversations with residents of this community and surrounding area. The purpose of that first study was to explain the socioeconomic robustness of the community that seemed to be evident when examining decennial censuses of 1950 through 1990. Economically immersed in the oil and gas industry, one would expect to see volatile income distributions that mirrored the cyclical nature of oil and gas development activities. However, family income distributions over those forty years were relatively stable in comparison to many other oil-involved Louisiana coastal communities. Analyses of conversations from that study showed that the community was reasonably economically diversified. Along with the importance of the oil and gas industry, agriculture was significant, and the community served as the parish seat. The importance of the parish (or county) seat is identified by Beggs, et al. in Chapter 4. They find that the parish (county) seats in the Gulf Coast region were more socioeconomically resilient during periods of oil and gas industry slowdown and these places have higher number of professional services workers than other parishes (counties). From the initial 1997 study, and the interest generated with the announcement of plant layoffs and closure, came this project.

Our research strategy is consistent with that suggested by the work of Lofland and Lofland (1995) in that we modified our focus as we carried out the project. As the study progressed, we discovered that examination of the primary issue, displaced workers' labor market experiences after plant closure, revealed more than we had expected. In particular, the salience of gender of the displaced workers emerged as a very telling factor. According to Meloy (1994), determining a focus in qualitative research usually involves examining and reexamining the research context, changing one's mind, and giving up preconceived notions of what is important. Other major issues that emerged in this study include the role of secondary and tertiary support sectors in providing post-displacement employment to displaced workers and the presence of other employment opportunities resulting from oil and gas expansion in the region. The questions that arose from these issues proved far more interesting than expected, and more difficult to answer.

At the time of the apparel plant's closure, the oil and gas industry was experiencing a period of expansion. Would a number of displaced workers be absorbed into the oil and gas industry, which includes secondary and tertiary support sectors, or would they find employment elsewhere? A separate question follows, though not related to the oil and gas industry per se, but rather post-displacement employment in general, concerning organizations (i.e., job training programs) funded by Trade Adjustment Assistance for Workers (TAA) of the Trade Act of 1974, and Federal Unemployment Tax Act of 1939, and responsible for training displaced workers. Would those organizations offer, or direct workers into, job training programs in which skills and/or education would be acquired that would make these displaced workers employable not only in sectors of the oil and gas industry, but perhaps others in which greater economic returns could be realized?

Next, we review the literature that has a bearing on our research focus. We begin by reviewing literature on plant closures in the United States in general, then focus on research that has addressed displaced women in the labor force. Next we examine the impact of the oil and gas industry in the region to show its social and economic importance in communities where it has evolved over the years. Providing a brief history of its development over time and space will help illuminate labor market issues that relate to a gendered work force. Then we explain how the study was designed, how we dealt with sampling issues, and how data were collected. We explain the relevance of specific questions generated both before and during the course of guided conversations with respondents. Analyses of data, including narrative, will be explained, and following Wolcott's (1990) advice, information provided in this qualitative research effort will be framed in such a way as to enable readers to reach their own conclusions about descriptions, analyses and interpretations. Finally, we link labor market experiences of displaced workers to labor market actions of the oil and gas industry, and those of job-training programs.

We examine whether sociocultural, individual, or structural factors might affect labor market outcomes and synthesize our findings.

3.2 REVIEW OF THE LITERATURE

3.2.1 Structural Unemployment

The issue of social and economic stability in American communities has been the subject of much sociological attention. Among problems noted in rural areas have been instability of employment linked to the boom and bust cycles of many natural resource industries, patterns of dramatic in and out migration, and the draining away of "human capital" (younger, highly trained people) during these periods of outmigration (Lovejoy and Krannich 1982; Bluestone and Harrison 1986; Wilkinson 1986; Krannich and Luloff 1991). Increasingly, another dilemma faced by individuals in communities across the U.S., regardless of location, has been structural unemployment. This type of unemployment occurs when workers lose their jobs, either by technological change that has made obsolete their particular job, or through relocation of capital. In contrast to cyclical unemployment due to a downturn in the normal business cycle of a market economy, structural unemployment is viewed by some as a chronic problem resulting from fundamental changes in the operation of international markets (Perrucci et al. 1988; Staudohar and Brown 1987).

This loss of employment results in displaced workers, the standard definition of which is used by government and many private researchers and developed in conjunction with the Displaced Worker Surveys, commissioned by the Bureau of Labor Statistics (BLS) in 1984. Analysts at the BLS defined displaced workers as those who, through no fault of their own, have lost jobs in which they have several years tenure and a considerable investment in skill development (Flaim and Sehgal 1985). During the 1980's, much of the displacement literature focused on plant closings and mass layoffs in the durable goods manufacturing sector and the growth of a low-wage service economy. Unemployment was viewed as a function of conscious investment decisions, with major corporations securing more profits by diversifying into new product or service lines, and new overseas ventures being made possible through the increased mobility of capital (Bluestone and Harrison 1982).

3.2.2 Plant Closures

Problems such as these found throughout the U.S. exist because the economic fate of many such communities is often in the hands of corporate entities whose headquarters are located at great distances from the locations where the consequences of their decisions will be felt (Carroll 1995). Eberts (1984:65) believed that decisions about plant locations, expansions, reductions, or closings, are made "by ...metropolitan people, institutions, and communities rather than the leadership... of local communities and control." Falk and Lyson (1988) point out that plants that opened in the rural south are "branch plants." Such plants are built at the end of a product life cycle, after the manufacturing process has been routinized to the extent that tasks can be performed by unskilled workers trained on the job to do discrete activities. Distance from product origin and innovation removes them from corporate decision-making. Fitchen (1991) argues that rural economies are increasingly losing control over the firms and the mix of firms that make up a major segment of their economic base. This loss of factories and firms has more deeply impacted rural communities in the last twenty years than has the loss of farms, because small communities were frequently losing not just one plant, but several. The term "local management" may be a misnomer in rural manufacturing, as these personnel are "local" only in that they administer the local plant, not in the sense of being of the local community.

Few would argue that in any dynamic economy, capital investments must be retired at the end of their useful lives and replaced by more productive investments. The industrial structure and its geographic distribution respond to a variety of powerful economic forces, including changes in prices, consumer preferences, production technologies, and international trade competition. The opening of new plants and closing of obsolete plants are part of this process (Farber 1996; Littman and Lee 1983); indeed, many firms have found that the way to ensure their survival is to cut labor costs, add flexibility to the production process, and reduce tax liability by moving from a particular location, or threatening to do so (Staudohar and Brown 1987). But studies also show that companies restructure in favorable as well as unfavorable economic conditions, when reaping profits as well as when experiencing losses (U.S. Department of Labor, Office of the American Workplace 1995; Farber 1996).

Historically, the movements of large firms in this country have been away from unionized and relatively better paid labor and toward places where they can take advantage of unorganized and cheaper labor (Cobbe 1979; Falk and Lyson 1988). Part of the motivation today for companies to move to sites overseas is that there are higher rates of unemployment and consequently a lower rate of labor force participation than in the U.S. A larger potential pool of workers and excess labor supply puts a downward pressure on wages (Young and Newton 1980). The global economy is now dominated by multinational corporations which have branches, subsidiaries, or joint ventures strategically located in many countries. Ease (and therefore threat) of capital mobility is additionally a powerful instrument increasingly used by corporations to exact favors from state and local governments. Fierce competition ensues when a corporation announces plans to open a manufacturing plant, and communities find themselves offering better tax incentives and infrastructural improvements in an effort to attract plants that are expected to provide local employment opportunities. Yet even after making community sacrifices to do so, there is no assurance that the company will stay (Haas 1985).

3.2.3 The Case of Abbeville

Capital flight is exemplified in this study. According to the *Meridional*, the local newspaper, the apparel plant which is the focus of this study began large-scale operations in the community in late 1990. Community and state efforts to attract the plant included specific tax exemptions, investment incentives, public grants, reduction of its utility rates, and other special benefits provided under the Louisiana Enterprise Zone Act (January 21, 1998). The facility was to be operated as an integral part of an approved economic development zone to reduce local unemployment for a significant period of time, specifically for not less than fifteen years[1]. Yet half-way through those fifteen years spokespersons for the plant announced it would cease operations. The move was necessary to reduce labor costs so the company could remain globally competitive. A local newspaper article illustrated this, reporting that sewing could be done in Honduras at a cost of 35 cents to 50 cents per hour, compared to the $10 per hour and more paid to many of the plant's Louisiana employees.

3.2.4 Manufacturing Plant Closures in the Global Economy

A primary explanation behind this phenomenon is the decline of American corporate profits due to fierce international competition in the production of manufactured goods since the 1970s. This effectively ended the United States' manufacturing hegemony in the world market it enjoyed after World War II. Technological advances and heightened competition of a more open world economy continue to change a mass production system that once guaranteed a rising standard of living, if not job security, to those it employed. Nowhere is this transformation more evident than in manufacturing, which has experienced an absolute and relative employment decline (Moore 1996). It is estimated that by 1990, more than 20 percent of the output of U.S. firms was being produced by foreign workers. This percentage has undoubtedly increased throughout the 1990's as companies continue to shift production operations overseas (Reich 1991; Schultze, 2004).

In 1986 the Office of Technology Assessment (OTA) of the U.S. Congress published a study entitled "Technology and Structural Unemployment: Reemploying Displaced Adults." Their study indicates that:

> In the past few years, millions of American workers have lost their jobs because of structural changes in the U.S. and world economies. Some of them—especially younger workers with skills in demand or the right educational background—have little trouble finding new jobs. Others—hundreds of thousands a year—remain out of work for many weeks or months, even for years. Many of the displaced are middle-aged unskilled manufacturing workers, with long and stable job histories (Perrucci et al. 1988).

The potential cost of displacement and subsequent job search is enormous. Bluestone and Harrison (1982) estimate that in the 1970's alone between 450,000 to 650,000 jobs were lost as a result of

[1] The company's failure to comply with its obligations and subsequent litigation affected the collection of some data for this study (see our discussion of the study sample).

movement of plant sites to foreign countries. Millions of blue-collar workers, mostly older white men, those with the longest tenure and in the highest paid jobs, were reported to have suffered the greatest loss of "good jobs" in that decade (Ong and Mar 1992; Harrison and Bluestone 1990; Form 1985; Bluestone and Harrison 1982). Between 1987 and 1992, 5.6 million U.S. workers lost their jobs due to plant closure or relocation, with fewer than half securing full-time reemployment by January, 1992. Nearly half of those displaced workers who found full-time reemployment did so at reduced pay, two out of three losing in excess of 20 percent (Herzog and Schlottmann 1995). Finally, it is estimated that more than 8 million workers lost their jobs between January 1995 and December 1997 because of downsizing and displacement; this despite a robust economy and a low unemployment rate (U.S. Department of Labor 1999). Therefore, it is not hard to understand how plant closings impose tremendous adjustment costs on particular economic actors: displaced workers and their families, local governments, and local businesses linked to the closing plants. The results include socioeconomic hardships for displaced workers, increased unemployment, decay of the local employment base, and fiscal distress for the community (Littman and Lee 1983).

3.2.5 Restructuring of the Textile Industry

In the labor-intensive textile industry alone, Gaventa and Smith (1991) estimate that between 1970 and 1985, 155,000 jobs were eliminated, a decline of 25 percent, as companies continued to seek lowest possible production costs. Textile and apparel production has increasingly become incorporated into peripheral areas and markets of the capitalist world economy, be they in regions of the U.S. (Bluestone and Harrison 1982) or in the Third World (Chirot 1977). Over one hundred years ago in the U.S., the rural South offered rock-bottom production costs to investors wanting to best their northern competitors. The Carolinas and north Georgia, homes to impoverished farm populations willing to serve as cheap labor (wages nearly one-third lower than that of the north), gave southern textile manufacturers the advantage they sought (Gaventa and Smith 1991). The results included either permanent closures of some northern textile producers, or the movement south by others.

After World War II, the apparel industry began its move south, joining the textile industry already there. In 1950, about two-thirds of all apparel workers in the U.S. were employed in the Northeast. By 1974, 44.2 percent of all apparel workers were in the south. New York City alone lost 28 percent of its apparel employment between 1958 and 1970. It was during the 1960's, however, that apparel and textile manufacturers set the stage for what would later make them vulnerable to international competition. While other manufacturing industries significantly increased their labor productivity through technological innovation, textile and apparel manufacturers persisted in their reliance on low-wage labor and failed to update the production process (Gaventa and Smith 1991).

Today, textile and apparel production in the newly industrializing countries of the Third World continues to rise rapidly, encroaching on markets once claimed by U.S. producers. The textile industry, once seen as salvation of rural areas in the U.S., now sounds a death knell for some southern communities. Investors from all over the world, including the United States, are attracted to textile production in many locations like Hong Kong, Korea, and Central America for some of the same reasons that entrepreneurs were once lured to the U.S. south: the availability of cheap labor, the low skill requirements, relatively small capital outlays required to begin production, and the expanding markets. The labor cost differential between the United States and less industrialized nations is significant. In 1972, clothing industry labor costs averaged $3.26 per hour in the United States, 94.3¢ in Japan, 44.4¢ in Hong Kong, 17.4¢ in Taiwan, and 12.5¢ in Colombia. The result, according to the American Textile Manufacturers Institute, is an estimate that from 1981 to 1984, 231 textile plants closed (Gaventa and Smith 1991). A New York Times article reported that in the 1980's, eight hundred textile plants disappeared (Barmash 1987). For every billion yards of fabric and apparel imported, one hundred thousand American jobs are lost, according to the Office of Technology Assessment of the U.S. Congress (1987). This major restructuring of the U.S. textile industry, due to global competition and concentration in retailing, included numerous mergers. Surviving firms employed long-delayed technological upgrades and worker downsizing to remain viable. Flexibility of production enables owners to control workers through an expanded labor pool, outsourcing, and technological advances that decrease the need for workers (Schulman and Anderson 1999).

3.2.6 Government Policy and Plant Closures

Compounding the U.S. situation, governments in developing countries typically view their domestic textile and apparel industries as a cornerstone of the industrialization process and aggressively protect them through tariffs, quotas, and in some cases outright bans on the importation of certain products (Leiter et al.1991). The existence of export processing zones in developing countries offers tax, labor, and environmental concessions for the assembly of products by multinationals with cheap Third World labor. In addition, the North American Free Trade Agreement (NAFTA) of 1993, designed to promote trade between the U.S., Mexico, and Canada is viewed by some economists as being a significant factor in the loss of U.S. jobs, the number of which is unknown. One special NAFTA unemployment program, NAFTA Transitional Adjustment Assistance (NAFTA TAA) reported that as of April 2000, more than 232,375 U.S. workers had been certified as having lost their jobs due to the agreement. This number reflects only those who meet very narrow criteria; workers who produce a product (rather than a service) that was directly affected by NAFTA can qualify.

Government policymakers largely shape the politics of plant closings in the U.S. At the national, state, and local levels, examples can be found of public policymakers intervening in a plant closing, either reactively or proactively, to shape the outcome of the adjustment process. Because a multinational corporation is less subject to local pressures and in most cases less concerned about an individual plant in a distant community, in most cases, the end policy goal will be to minimize negative consequences after the closing occurs, through reemployment centers, retraining programs, and other forms of government assistance (Portz 1990; Wendling 1984). The newly unemployed typically require job search assistance, income support, and retraining, and policymakers try to offset these problems through programs designed for the targeted group.

3.2.7 Community-Wide Effects of Plant Closure

It is evident that the impact of disinvestment and displacement affects more than individual workers and their families; many ripple effects occur in the community as well. Primary effects are felt by those closest to the production unit that ceases operations. Displaced employees lose salaries and wages, pensions; supplier firms lose contracts; government loses corporate income and commercial property tax revenue. These in turn create secondary effects including decreased retail purchases in the community, a reduction in earnings at supplier plants, and increased unemployment in other sectors. Tertiary effects in the form of increased demand for public assistance and social services, reduced personal tax receipts, and eventually layoffs in other industries are common. A shrinking tax base affects school budgets, the quality of police and fire protection, municipal support for libraries and museums, and for parks and playgrounds. Bluestone and Harrison (1982) argue that what begins as behind-closed-doors company decision to shut down a production facility often ends up affecting everyone in town.

Stories abound describing the effects of plant closures on individuals and communities. When a New Jersey cutlery manufacturer closed down in 1978, 760 manufacturing jobs were lost. Beyond that number, the state AFL-CIO estimated the city lost an additional 468 jobs in stores, banks, bus service, luncheonettes, taverns, gas stations, and other local businesses, effectively removing more than $14 million in purchasing power from the local economy. Charities suffered as well: annual employee and corporate donations from the closed manufacturer totaling $33,000 was absent from that years' charity drives (Bluestone and Harrison 1982).

Dowling's (1992) study on the closure of a furnace factory which shut down in the small rural town of Red Bud, Illinois, population 2,900, also demonstrates the effects such an event can have on a local economy. The local union estimated that in addition to the 800 plant employees, 1,200 support workers from suppliers to truckers lost jobs; and Knapp (1995), in his study of the effects of industrial plant closings on Pittsburg, Kansas, found strong downward ripple effects on construction and retail trade. That town's economic troubles also were associated with rising use of public assistance, increased mental health problems, and declines in population, civic philanthropy, and marriage and birth rates. Research on plant closures recognizes that some of the multiplier effects are felt immediately, while others take time to work through the economy. If the economy is expanding, some effects will quickly dissipate, while others may become a permanent part of that community, particularly if the local economy is stagnant.

3.2.8 Reemployment of Displaced Workers

One of the key elements in the plant closure debate is the reemployment experience of displaced workers. By definition, displaced workers are involuntary job losers, and many encounter a number of obstacles that limit the effectiveness of job search. If the local labor market is relatively large, as evidenced by numerous employers and therefore numerous employment opportunities, labor can be highly mobile among a number of alternatives. A small local labor market, in contrast, constrains mobility (Wendling 1984). Displaced workers are expected to adapt to changes in market conditions by concentrating their efforts to find jobs in those industries that offer the best prospects, even if it means switching industries (Fallick 1993).

Studies show that displacement reduces average earnings because substantial numbers experience spells of unemployment or long-term unemployment, or increases in part-time employment. The greater part of the earnings loss is due to lower reemployment wages. Searching for comparable new jobs after displacement in this restructuring job market is a difficult process, and some suggest that it rarely results in better opportunities (Bound and Dresser 1999; Spalter-Roth and Deitch 1999). Industrial and manufacturing jobs have disappeared, and service jobs with lower pay and less unionization have replaced them. In many rural counties/parishes, the service sector is heavily weighted toward the low-paying and insecure retail jobs rather than professional service jobs. The better service sector jobs that do exist in many rural communities are with the school districts, hospitals, and local governments because they provide desirable health and retirement benefits (Fitchen 1991).

It is understood that economic change affects various segments of the work force unevenly. Differences in color, age, gender, skill, and economic sector mean dissimilar chances of losing jobs and finding new ones. Perrucci et al. (1997) argue that for some, job loss is a temporary economic setback until a new job is found comparable to the last, but for others, long-term unemployment is the result, or significant income loss even when reemployed. The penalty for inadequate formal education can be even worse. Until a plant closes, even individuals with little education are able to bring home a good salary because of their longevity at the plant and their adequate performance there. Once displacement occurs, limited and dated education now renders them barely able to compete for decent jobs, or to perform satisfactorily if they get such a job in today's labor market (Fitchen 1991).

A 1989 closure of a manufacturer of health care products employing 500 people in rural New York state underscores this point. Plant workers lived in fifty-five communities in eleven surrounding counties, including some small and poor communities with little other employment available nearby. Most of the displaced workers were women who had worked at the plant for years, averaging about $8 an hour in wages with benefits. The reasons given for the shutdown were the usual: the need to reduce overhead costs in order to maintain a competitive position in the market. The company transferred operations to Mexico, where the company would pay female workers $1.25 an hour without benefits. A New York economic development official remarked that "There was no way the workers in New York could have given up enough pay to keep the jobs here" (Fitchen 1991). At the time of closure, the job situation outside the plant was not very good. Most of the jobs advertised in the four cities within a one hour commute would not pay enough to offset extra costs in transportation and child care. By the time of closure, those workers who had found new employment were earning considerably less than they had earned at the health care products plant (Fitchen 1991).

Pay scales of manufacturing firms that close down will probably never be duplicated, either in the remaining manufacturing or in retail and other service jobs. Research shows that there are sizable numbers of displaced workers who find new jobs, but in positions that pay considerably less and require much less in the way of education and skill (Leana and Feldman 1995). The challenge that displaced workers face, therefore, is to maximize their labor market opportunities. Just as certain negative effects resulting from downsizing or departure of manufacturing plants are predictable, so too is the reality that certain groups of people are especially vulnerable in the process. For labor markets to work well for anyone, they must provide clear and reliable methods of access to jobs and advancement through them. Ideally, entry-level employment should prepare workers for, and connect them to, future opportunities; there should be predictable, fair, and well-known methods of access to decent-paying jobs; and incremental moves and skill development on the job should allow for routine career advancement. This requires complete information on labor market opportunities, strong systems of training on the job, and a good understanding of the relationship between the skills required for one job and those required for the next (Dresser and Rogers 1998).

3.2.9 Gender and Displacement

Historically, men and women employed in manufacturing work in different industries and occupations. Men typically work as craftsmen or skilled workers in "heavy," capital intensive industries, such as the steel and auto industries and machine tools manufacturing. Women more frequently perform unskilled or semiskilled work in labor intensive, nondurable goods manufacturing, like the apparel/textile complex, and more recently in food processing and electronic assembly (Rosen 1987).

Different opportunities in labor markets determine the options that are available to men and women when they are displaced. With respect to blue-collar workers, research results indicate that the period of unemployment following job loss from a plant closing is longer for women than for men, Studies also shows that women are less likely than men to be reemployed (Perrucci et al. 1997; Congressional Budget Office 1993; Perrucci et al. 1988). Researchers have also found wage losses relative to pre-layoff wages to be greater for displaced blue-collar women than men (Spalter-Roth and Deitch 1999; Schlack 1991; Perrucci et al. 1988; Madden 1987; Podgursky and Swaim 1987).

There are two exceptions to the above studies. A study by Howland and Peterson (1988) found that among displaced manufacturing workers, women experienced less wage loss than men after controlling for age, race, education, years worked in job prior to layoff, and labor market conditions. The authors speculated that smaller financial loss for women may result either from women's lower pre-layoff wage, which may be easier to recover, or from greater likelihood of women than men to work in clerical jobs in the manufacturing sector, therefore their possession of skills would be valued in the service sector of the economy. Another study of three plant closings in Indiana in the late 1980's found that women and men did not differ in their chances of reemployment. Though both men and women suffered wage loss when they were reemployed, women lost less because of their lower absolute wage level prior to the plant closings (Perrucci et al. 1997).

One of the most important issues in this study is the potential significance of the oil and gas industry in post-displacement employment. Evaluating that role requires looking back in time at the development of the industry in the coastal region of Louisiana, and gaining an understanding of its importance to individuals, families and communities. We must look carefully at how oil and gas development activities have influenced local labor markets, not only through primary activities, but in the developing secondary and tertiary support sectors. In the next section we discuss the methodological strategy for this study.

3.3 METHODOLOGY

A principle argument for qualitative case or field study research is that it provides a way of studying human events and actions in their natural surroundings, allowing examination of social action in its most complete form. A good case study can identify actors' motives and understandings of situations that lead to specific decisions and/or events. The researcher gathers knowledge of societal processes by directly observing them. As Feagin et al.(1991:23) note, "qualitative research exemplified in the case study usually brings us closer to real human beings and everyday life."

Case study research was utilized extensively in the pre-World War II period, particularly by members of the Chicago School of Sociology; it played a central role in such classic sociological investigations as Lynd and Lynd's (1929) *Middletown*, the study by Warner and Lunt (1941) of Yankee City, and Whyte's (1943) *Street Corner Society.* After a long lapse in interest, it is again gaining some prominence in recent years (Briggs 1995).

We use a qualitative methodological foundation to answer questions about the impacts of the plant closure on the lives of displaced workers, their families, and community, and the role of the oil and gas industry in the community. Our experience with an earlier case study based on this community, and our involvement with at other projects dealing with socioeconomics of the region, suggest that the best way to investigate the impact of the plant closure for this study was to again collect data using the case study method. This study uses a "guided conversation" which is described below.

Before designing this study, we visited the local library in the community where the plant had been located, and reviewed local newspaper archives. This was an important step in understanding how the media treated the issue, and too, provided information about the opinions of plant employees and other community members, and about efforts to assist displaced employees. We discuss in more detail the actual newspaper coverage of the plant closure later in the chapter.

3.3.1 Data Collection Method: Guided Conversations

We conducted guided conversations with those people we felt were knowledgeable about the issues in this study. A guided conversation has a less structured format than what we generally consider to be an interview. Guided conversations are usually conducted face-to-face, but not always. They consist of a discussion between researcher and respondent--a discussion that has been "guided" by the researcher in an attempt to not only develop a better understanding of the issue, but to perhaps uncover other issues that at first are not apparent. Although we used open-ended questions to provide some initial structure for all respondents, the ensuing conversation was guided by the respondents to a large degree. Lofland and Lofland (1995:85) consider the guide or form ".... to be a list of things to be sure to ask about when talking to the person..." Thus, by using the same guide for all respondents, the researcher maximizes the likelihood that essential data are collected in a systematic manner.

A guided conversation is a type of "discovery" process which can prove to be invaluable to the researcher. But, it has drawbacks. As with open-ended questionnaires, one generally can expect a wealth of information, but as in all research, anticipated success may not be forthcoming. For example, no matter how carefully probed in the guided conversation, some respondents just do not seem to have a whole lot to say. Thankfully, that was seldom the case in this study because most respondents had quite a lot to say. Furthermore, recall by respondents, problematic in some studies, did not appear to be an issue in this study because the plant closure occurred less than a year prior to the start of the guided conversations.

Although providing some structure within the guided conversations is important, it was not possible for one instrument to adequately address the issues in this study with these four disparate groups, rather it required a measuring tool that varied to some extent, so that each group's perspective could be more fully understood. Therefore, a guided conversation "form" used with the displaced workers focuses on the economic impacts of the plant closure on the workers and their families, and labor market experiences after displacement. This form also contained questions necessary to collect demographic data on this group for inclusion in our analyses. A second form "guided" the remaining respondent groups in this study, those representatives of companies engaged in secondary and tertiary support of the oil and gas industry, community leaders, and social service agencies. This second form guides respondents on several issues, but the main thrust was two-fold: first, to ascertain perceptions of community impact of the apparel plant closure and resulting consequences for displaced workers; and second, to discover their perceptions of the socioeconomic importance of the oil and gas industry in the community and surrounding area.

3.3.2 Sampling Frame

Having decided a format to use to elicit information, our next decision was to determine who in this community was most informed about the plant closure. For the purpose of this study, respondents were categorized as belonging to one of several groups. The first group consisted of displaced workers. The second group was comprised of representatives of companies who are directly or indirectly linked to oil and gas development. Those in this second group consisted of oil and gas producer services that directly support primary activities, a secondary support sector, and those other local businesses or firms that were indirectly linked to that industry through tertiary support, including company owners or managers, site supervisors, or human resource directors. Community leaders are found in the third group. These people were elected officials at the local, parish, and state level, or individuals who may have been local influential business leaders. The final group that we included in this study were individuals within the social service and support agencies located in the area.

Before we discuss the rationale for the selection of each of the above group's respondents, it is important to note that these are key "stakeholder" groups. Originally, the word "stakeholder" was used to designate an individual who literally held stakes, but had no direct interest in them, as in a person entrusted with the stakes of two or more persons betting against one another and charged with the duty of delivering the stakes to the winner (Gramling, 1995). By the mid 1980's, management literature was using the concept in quite opposite meanings of this original definition. Freeman (1984:iv) defined stakeholders as "groups of individuals who affect or are affected by organizational performance." Alternatively, stakeholders have been defined as "...individuals, collections of people, or an organization that have a stake...and who may affect an organization or activity and/or be affected by such...and who are defined by their relationship to an organization or activity...." (Gramling et al. 1995). Displaced plant

employees, secondary and tertiary support sectors of the oil and gas industry, elected officials, and social service agencies, are key stakeholders who can offer insights to understanding the dynamics of the social processes that may operate in an event such as a plant shutdown.

3.3.2.1 Purposive Sampling

We used two nonprobability sampling techniques in this study, purposive and snowball sampling. Purposive sampling was used because we were interested in conducting guided conversations with different groups of stakeholders in a small community. Within these groups we planned to seek knowledgeable individuals about the issue in question. Purposive sampling is appropriate when there are one or more predefined groups from whom to sample.

We compiled part of the sample using up-to-date phone, city and parish directories, and membership lists. First we obtained names of companies and businesses with direct and indirect linkages to the oil and gas industry (secondary and tertiary sectors) from the 1997 BellSouth Yellow Page listings found in the community. Companies with direct linkages to the oil and gas industry, those that are part of the secondary support sector for the industry, include air and boat transportation; boat leasing, towing, and marine supplies; chemicals; oilfield contractors, hauling, equipment, supplies, general services, drilling mud, and pipe; and metal fabricators. Approximately sixty different listings for companies in the secondary support sector are found in the 1997 BellSouth Yellow Page directory. Representatives from indirect linkages to the industry, or tertiary support sector, included accountants, attorneys, banking personnel, realtors, and an abstracting company. Sixty-five total listings or names for those types of companies and individuals appear in the 1997 BellSouth Yellow Page directory.

To develop a list of community leaders, we referred to city council and parish police jury lists. These lists included city officials, members of the parish school board, members of the parish police jury, and the executive director of the Chamber of Commerce. An alphabetized list of oil and gas stakeholders and community leaders was made, and from this list we systematically selected names of potential respondents. For example, out of the sixty-five listings included in tertiary support, thirty-nine are attorneys. Therefore, we made the decision to sample every fifth attorney. The same decision was made in the category of "oilfield service," part of the secondary support sector. Oilfield service has eighteen different companies listed; we chose to try to sample every other company. The rest of the categories were small enough that we decided to speak to as many as we could.

A list of the third group of stakeholders, social service agencies, was again obtained from the 1997 BellSouth Yellow Pages. There were eleven social service agencies and organizations listed. They included local assistance groups, city and parish organizations and local offices of state and federal programs. Because there were only eleven, each was contacted to arrange a face-to-face guided conversation with a suitable representative. This list eventually grew to sixteen because state agencies exist outside the community that were active in offering services to displaced workers. Including the local Job Training Partnership Act (JTPA) and vocational technical school in this group provided a better understanding of the number of displaced workers who sought job re-training and re-education and the types of programs and classes that were available to them. These widely know support mechanisms within the local community add an important information source for this study. Exploring the role of organized community support, whether on a "locally-based" level, or on a state and federal level, in providing services to displaced workers and their families gives a more complete picture of the issue.

As stated earlier, purposive sampling was used for these three groups of respondents and agency representatives, because it was already generally known who (or what organization/agency) would be contacted. In the case of the organization and agency respondents, our study group was actually a census or 100 percent sample. Our knowledge of contacts was due, in part, to our presence in the community for the earlier study of Abbeville as a resilient community. As in snowball sampling, the other type of nonprobability sampling used for this study, we cannot be sure that our sample represents the population well. Of course, in the case of the agency census, our approach ensures that all organizations are represented. In addition, the limitations of nonprobability sampling impede our ability to generalize to the larger population. However, because this is an exploratory study and because our interest is more in discovering social processes associated with labor displacement than in precisely characterizing the population, such sampling techniques are appropriate.

3.3.2.2 Snowball Sampling

We use snowball sampling to select the final group of respondents, the displaced workers. This group consists of the plant workers who were notified of the apparel plant closure in August 1997, and either quit prior to the closure or who were eventually laid off (displaced) at the plant by the spring of 1998.[2] Snowball sampling is a method through which the researcher develops an ever-increasing set of sample observations that " . . . provides a means of accessing vulnerable and more impenetrable social groupings" (Atkinson and Flint, 2001). Investigators frequently choose this method when it is unknown who the appropriate respondents are for a particular issue. This was the case in this study. The apparel plant did not provide a list of employees and several inquiries made to local and state agencies about the availability of such a list had no success. As Miller (1986:24) suggests most succinctly concerning her use of snowball sampling in her analysis of female street hustlers in Milwaukee, "The justification for the technique is that, whatever its limitations, without its use the study could probably not have been done at all." Done well, a snowball sample provides the range of variation in a population if not the distribution of that variation.

Our sample began with a list of key "informants" whose names were drawn from several resources. Local newspaper coverage of the impending plant layoff provided several names. This included newspapers from August until late fall of 1997. Interestingly, the best key informants turned out to be college students attending a local university where one of the researchers was teaching. The researcher explained, in general terms, the purpose of the research. Twenty-seven students provided names of displaced workers they either knew personally, or who were known by other family members or friends. Due to the racial diversity of these students, the probability of the racially diversity of their contacts made them especially useful.

Again, the primary purpose of using these key informants was to provide names of persons who were employed at the plant when the layoff was announced. However, some of the informants themselves, those whose names we gathered from the newspaper reports, became part of the study when they offered to participate in the guided conversations. We believe that by using different resources for obtaining names of key informants, resulting in a more diverse group of respondents, strengthened the internal validity of this study. Beginning with a list of forty key informants representing various factions in the community, we began to make contact and talk with those people. We asked them to suggest names of additional people who were at the plant and who might also be willing to talk with us, thus achieving a "snowball" effect.

As guided conversations were held with displaced workers utilizing snowball sampling, we became increasingly aware that one segment of displaced workers missing from the sample were those workers of Southeast Asian, or Indochina, origin. Their presence at the apparel plant was not insignificant; other displaced workers alluded to them in the course of the conversations. It was important that they become part of the sample, but making connections in order to gather information was more difficult with this group of displaced workers. It was nearly a year after the first guided conversations held with displaced workers that we made a connection with a key informant in the Asian community. A student attending college where one of the researchers was teaching provided invaluable assistance and interpretation, enabling guided conversations with eighteen displaced workers of Asian origin. In analyses of conversations, we ascertained numerous differences and therefore make comparisons between, these two groups of displaced workers, but a couple of points are in order.

First, there is a temporal question; one groups' guided conversations took place a full twelve months after the others'. That has to be considered when assessing labor market experiences after plant closure and, too, we did not determine their citizenship status. Whether or not they are naturalized citizens may be significant in issues such as those in this study. Secondly, one should be cautious when making conclusions about data that are derived from a subsample comprised of non-native English speaking respondents. Even with the assistance of an interpreter, valuable information can be lost in translation. The questions asked of this group of respondents were posed to them in their native language, not English. Also, in two instances, our interpreter had to be assisted by someone else because he is Laotian, the two respondents were Vietnamese, and language differences required another individual to be

[2] We include those who quit the plant in this study because they chose to leave on their own volition due to the announcement made by the company. In effect, they were displaced as well.

conversant in both, although we certainly could not tell. One more point needs to be made about this group of displaced workers. For practical purposes in this study, we have grouped together Laotians and Vietnamese into one identifiable group, Asians, when making comparisons with non-Asians. Because it's such a small sample, delineating between the two groups was not practical. We realize that differences exist between these two ethnically distinct groups, and one should not treat both groups as a single entity, but any differences that exist between them are not captured within the framework of this study.

Though primarily female and residents of Vermilion Parish, the question remains whether this sample of forty-eight displaced workers is representative of the apparel plant's displaced workers. In an effort to answer that question, we attempted to obtain demographic data on this group from the Louisiana Department of Labor. A local supervisor in the Department of Labor informed us that although they could have collected those data on site, they did not do so, and furthermore this information was not supplied to them by the employer. This was confirmed by another supervisor in the state office who stated she regretted they had not collected demographic data on the displaced workers, for it would have been an invaluable database. Both agreed that the "great" majority of displaced workers at this location were female, because most of the positions entailed sewing, typically a female job. The only jobs that had a few more males than females were the dyeing operations. Overall within the plant, there "was a good mix of Caucasian, Black, and Vietnamese workers."

3.3.3 The Respondents

Table 3.1 contains information on the number of guided conversations from each of the four respondent groups. Initially, one hundred four conversations were held; five were omitted from the analysis because though they are stakeholders in the community, they are indirectly linked to the oil and gas industry and are neither part of the secondary or tertiary support sectors. Therefore, ninety-nine guided conversations remain. Of those, sixty-two were held face-to-face and thirty-seven were conducted on the telephone. Seventy-eight were completed in the summer of 1999, from June through the end of August, and three were obtained in January 2000. The other eighteen were completed in September 2000. Though we attempted to tape record the guided conversations at first, the poor quality of the resulting tape discouraged further use. Therefore, none of the conversations were taped, and instead notes were taken by hand. Upon returning from the field or completion of the telephone call, the notes were immediately deciphered and logged into a personal computer. As shown in Table 3.1, forty-eight guided conversations were completed with displaced workers (fourty-four were women), sixteen secondary support sector and fifteen tertiary support sector conversations were held, sixteen social service agencies conversations were completed, and four were held with community leaders.

Table 3.1

Categories and Numbers of Respondents

Category of Respondent	# Interviewed
Displaced Workers	48
Oil/Gas (Secondary sector)	16
Oil/Gas (Tertiary sector)	15
Social Service/Educ. Programs	16
Community Leaders	4

As an aside, when we began to contact potential respondents within the four groups, we became aware of an interesting situation regarding the plant closure; one which affected our ability to gather data from the group of community leaders. In January 1998, the city filed a lawsuit over the ownership of the property where the apparel plant had been located and the building itself. Both the city and the plant claimed ownership of the property and building; the city claiming that the plant had failed to comply with its agreement to remain in the community for not less than fifteen years. Apparently, when the plant's corporate headquarters and the city originally negotiated terms for plant location in the late 1980's, the city agreed to sell the property at a price far below market value subject to an obligation on the plant's

part to adhere to certain agreements and restrictions, part of which was the fifteen year occupancy obligation. The city filed the lawsuit against the corporate headquarters when the plant notified them that it intended to sell the facility and the surrounding land after operations ceased.

Due to the pending lawsuit, community leaders we contacted did not wish to discuss anything connected to the plant closure, with the exception of three individuals who, as we were to learn, were not closely connected to the issue. Even those who seemed to remember one of the researchers from a prior study would not agree to participate in this study. Therefore, none of the city officials that we felt would be most knowledgeable about the subject, took part in this study. The lawsuit was eventually settled in spring 2000, after which we held one last guided conversation with a community leader, an individual on the school board. Terms of the settlement were not made public.

3.3.4 Coding the Data

As stated above, the process of qualitative research is one in which the researcher constantly evaluates and reevaluates the content of the data that have been gathered. This is accomplished not just in the office, while rewriting and editing handwritten notes taken from conversations with respondents, but also while in the field, where subtle nuances relevant to the subject become known. In fact, in their guide to qualitative observation and analysis, Lofland and Lofland (1995) call for three necessary steps to be performed, the first of which is collection of data. This is then followed by "focusing"; asking social scientific questions about these data, and a prelude to the process of discovery that follows. A housekeeping form of coding emerges before analytical coding begins. The last task put forth is the development and presentation of a social science analysis of the data, an emergent product involving a process of gradual induction through analytical coding. Tables of responses according to topic are developed, which are then either subdivided or collapsed. This inherently open-ended process, according to Lofland and Lofland, can produce frustration and anxiety along the way to constructing social science order.

Analyses of these types of research efforts continually emerge from the interaction of gathered data and focusing decisions. The researcher selects topics, decides what questions to ask, and forges interest in the course of the research itself. The purpose of the process is to achieve analyses that (1) are attuned to aspects of human group life, (2) depict aspects of that life, and (3) provide perspectives on that life that are not available to, or prompted by, other methods of research (Lofland and Lofland 1995).

3.4 FINDINGS: IMPACT OF THE PLANT CLOSURE

The remainder of this chapter explores the impact of the Fruit of the Loom plant closure on Abbeville, including former employees and their families, as well as general community effects. We also outline the roles of government entities/agencies and the oil and gas industry in mediating these effects.

3.4.1 Effects on Employees

Of our respondents, former plant employees were the most directly affected by the closure. Of the 48 displaced workers who participated in this study, most of them noted that the closure had a generally negative impact, as we expected. Of these, the loss of money was the most common difficulty noted.

> "I was affected by the loss in pay. I am a single parent, and after I lost my job the father of my 2 oldest children had to become financially responsible for them. I am still the sole support of my youngest child."

This is a logical negative effect of any job loss but is especially salient given the higher than average wages paid by the plant to workers with low levels of education and few transferable skills. These industry specific skills affect the earnings ability of workers in other industries (Moore, 1996), therefore new jobs found after dislocation due to restructuring in the job market rarely result in better opportunities for workers (Spalter-Roth and Deitch 1999). This is especially true in rural areas where service sector jobs that are available are typically low-wage and insecure retail jobs, rather than professional service jobs (Fitchen 1991). Of the forty-eight displaced workers in this study, 80 percent reported being employed at the time of guided conversation (two workers are retired and two are students, therefore they are excluded from employment statistics). Of those who found post-displacement employment, 75

percent did so in service-producing industries and accepted lower wages. Interestingly, all but two of the non-Asian displaced workers were employed, while nearly half of the Asian sample was unemployed.

The loss of money was not the only difficulty reported by dislocated workers, however. Former employees also noted the primary impact of the closure on them was a loss of some of their independence from their husbands.

> "When I left [the plant], I lost some of my independence from my husband since I earn much less at my new job. Like many women today I like to be independent and do not like to ask my husband for money. Once I left Fruit of the Loom, I had to ask him for money."

Other employees discussed more affective responses to the closure such as being upset, angry or disappointed. This was in reference to a sense of betrayal felt by workers because the company did not live up to their promise to remain in the area for fifteen years, instead moving jobs overseas.

> "I was disappointed that they made the decision to go overseas."

> "I was upset and hurt when they announced the shutdown."

Not all dislocated workers saw the shutdown as negative. Some reported that they were not at all affected because of various reasons.

> "I quit my job shortly before the layoffs because my husband asked me to. Therefore, the layoff didn't affect me."

> ". . . [I] actually quit in June because I was completely burned out. [FOL] had been talking about a layoff, but rumors had gone around for a while and they had hired more workers the previous year. After I quit working at Fruit of the Loom, I stayed at home for a while."

> "Fortunately, my husband, who works at the Port of Iberia, took up the slack."

And finally, there were those who said the layoff had a positive effect on them.

> "I was actually kind of glad when it closed because after the birth of my baby they put me in a new department, which I didn't like. I didn't enjoy my last year there."

> "It was positive for me because I took advantage of everything the state had to offer."

3.4.2 Desirability of Fruit of the Loom Jobs

The type of jobs that were lost by factory workers influenced the severity of impact they expressed. Garment factory work is high pressure, task-focused work requiring very specific skills and relatively little human interaction. This type of work generally pays higher wages than the employees, often possessing very low levels of education, can earn elsewhere (Rosen 1987). We argue that the impact of the closure on employees, to a large extent, is influenced by whether, on balance, employees liked their jobs or disliked them.

To explore this, we discussed with former factory employees whether they would work at a similar plant again if given the opportunity and asked them to compare their current job (if any) to their job at the plant. One-third said they would definitely *not* work at a similar plant if given the opportunity because their jobs were physically strenuous and/or extremely stressful.

> "No! Production was too stressful. I set sleeves, and there was a lot of pressure on me. Work was hectic, and I felt like I never did enough to please the company."

> "No. There was too much stress and pressure. The people in charge there were mean. Supervisors would pull my hair if I did not meet my quota."
>
> "Things being even, no. There were a lot of things I felt uncomfortable with. Management techniques were not always ethical. I had to compromise my values to satisfy upper management and yet deal with the people who worked under me."

This negative view of garment industry work was not universal, however, as two-thirds of the respondents said they would again work at a similar plant if given the opportunity. Interestingly, all but three of the eighteen Asian respondents reported they would again work at such a plant, while only half of the non-Asian respondents would do so. The most common reason given was for the higher wages paid by the plant. This is consistent with the loss of money being the most common impact of the closure mentioned by dislocated workers.

Comparing new jobs to plant jobs also gives us insight into how the closure impacted the daily lives of those who found employment after the closure. Nearly all who found post-displacement employment said their new jobs were better than their old jobs primarily because much less stress was involved.

> "It is heaven. There is much less stress and it is a pleasant work environment. The job was a "nightmare." The managers were not at all caring. They were very hard. The managers there went to school to manage but when they implemented the ideas they learned they were ineffective. Employees were expected to work whether they were sick or not. I disliked it so much that I left early and lost vacation pay."
>
> "The cut in pay was worth my sanity. At Fruit of the Loom you were a number, not a human. But it was hard at first, taking my cut in pay (about 50 percent). The kids had to do without, but now I spend a lot of time with them, and I heard them say, "Now we have our mom back. It's worth it."

3.4.3 Perceptions of Where Fruit of the Loom Employees Went After Closure

In addition to displaced workers' discussion of the impact of the closure on their own lives, we also discussed, with all respondents, what they thought the Fruit of the Loom workers did after the closure. Many offered their opinions that displaced workers probably found jobs paying less than their jobs at the plant. Numerous places were mentioned, including the jewelry factory in Lafayette, casinos, Head Start (as teacher's aids), Wal-Mart, and fast food restaurants. This is consistent with literature that shows that unskilled and semi-skilled manufacturing workers who are laid off often end up working in low-paying service industry jobs (Fitchen 1991). In addition to those who went to jobs outside the apparel industry, some transferred to other Fruit of the Loom plants in the surrounding area, or began working at other nearby garment factories.

Many respondents also believed that former Fruit of the Loom workers took advantage of the educational opportunities offered by the state. Data from JTPA (Job Training Partnership Act) records show that "151 of the workers from the Abbeville plant received training funded by JTPA, with 141 of these individuals participating in classroom training." Classes included LPN, certified nursing assistant and computer training. Of our forty-eight displaced workers, only a few reported having participated in such a program, and of those, almost half failed to complete because they dropped out.

While the opportunity to attend school was seen by most community respondents as a positive result of the plant closure, there were those who recognized training did not always solve the problems of displaced workers, citing cases of those who attended school for a while but quit to earn money, or others that finished educational programs and still earned less than when they worked at FOL.

While a plausible response to a plant closure is moving out of the area to another job, this was insignificant in this case. According to unemployment insurance claims from other states, only a small number (less than ten) moved out of state. This is not surprising given what we already know about Abbeville, an area where familial ties are very strong. Such bonds provide support for individuals in times of socioeconomic need (Fitchen 1991), and when asked why they live in Abbeville, respondents credited family ties, love of the "community" in general and the people in the area and/or because it is simply 'home'. We should also note that a majority of our female respondents were married, and their

households had other sources of income such as the spouse's earnings. This, too, served to anchor the displace FOL workers in the community.

3.4.4 Effect on Family

In addition to effects on displaced workers, we also wanted to know how, or in what ways, were their families impacted as well. As a group, non-Asians were evenly divided on this issue; fifty percent believed their families had been affected negatively by the loss of their jobs, the other fifty percent believed they had not been affected. Non-Asian displaced workers emphasized familial responses to the effects of the plant closure as including "cutting back" and "making do," rather than receiving outside assistance of any kind.

> "The household no longer has everything I think it needs. We've had to cut way back, and it's hard to explain that to a ten year old girl."
>
> "My youngest child took it hard because she had to adjust to not getting what she wanted all the time. She would ask me, "Why did you quit?"
>
> "After I lost my job, the father of my two oldest children had to become financially responsible for them."
>
> "You learn to make do with what you have."
>
> "[My family members] weren't affected. My daughter is grown and lives away from home."

In comparison, nearly all Asian respondents reported their families were affected, and were more likely to talk about assistance received from family sources beyond normal spousal support. This is an adaptive advantage to the plant closure by allowing for the pooling of household incomes.

> "At the same time that I got laid off, my mother got laid off too...my uncle helped."
>
> "My family was very helpful. My son helps me around the house."
>
> "It didn't really affect us because everyone is working in the house."

While impacts were felt by some, the closure was not as devastating as initially predicted, and not all of the family impacts mentioned were negative. A few employees noted that their families were *relieved* when the plant closed because their jobs caused stress within the family.

3.4.5 Effects on Abbeville

Beyond workers and their families, plant closures often affect entire communities by increasing unemployment, causing a decline in the taxable employment base, and creating fiscal stress (Littman and Lee, 1983). We look at these effects on the community as a whole that respondents identified. Across all groups responses fell somewhere along a continuum, from general to specific, from "not affected at all," to "tremendous effects."

> "...It put a lot of people out of work who were from the Abbeville area."
>
> "... things worked out better than at first expected. For one thing, the benefits paid to Fruit of the Loom workers seemed to be pretty good. I know this because my wife has connections to someone at Fruit of the Loom."
>
> "... Economically it hurt. Lots of people lost jobs..."

"[The closure impacted the city] drastically. Financially, a lot of people had worked there for a long time. They didn't know anything else. It hurt a lot of people especially those with no education. I am not sure what became of them."

"Goodness, yes. I knew lots (of dislocated workers) who were single moms, and they lost their sewing jobs. They were sick with worry."

"Abbeville itself is affected because they receive no income from the site. The city owns the land and is currently in litigation over the building since it is owned by FOL."

"People are too wrapped up in the oil industry in that area. That really affects how well the community does. Oil."

While the announcement of the closure came as a shock to the community, with most community leaders and citizens expecting it to devastate the city, our respondents usually discussed the effects in very general terms, that is, "the economy" in the community had been impacted to some extent, with no specifics given. A few said they did not know how the community had been affected, or they believed there had been no effect. Some were badly misinformed, for example, the "community leader" (police juror) who told us nearly 4,000 jobs had been lost. We believe because most respondents offered only very general comments, it likely indicates a lack of understanding of specific consequences or implications.

3.5 GOVERNMENT AND COMMUNITY RESPONSES TO PLANT CLOSURE

3.5.1 Government Responses

This section includes responses to the Fruit of the Loom closure made by the government and the larger community. Discussions with stakeholders reveal three separate areas of government involvement in the plant closure. Opinions regarding the effectiveness of government action differed depending on which area of involvement was discussed. The first area concerns the involvement of city and state officials in bringing the factory to the area (Factory Recruitment Efforts) and the subsequent results of this initial contract. The second type of government involvement referred to the efforts of city and state officials to prevent the closure (Factory Retention Efforts). The third type of involvement mentioned by stakeholders dealt with efforts by the government to minimize the negative impact of the plant closure on employees and on the community as a whole (Closure Remediation Efforts). Since multinational corporations are often less subject to local pressure to remain in an area than locally owned companies, most government interventions aim to minimize the negative impacts of closures (Portz 1990; Wendling 1984).

3.5.1.1 Factory Recruitment Efforts

Stakeholders who commented on the city's factory recruitment efforts thought that bringing large manufacturing establishments to the community was a worthwhile endeavor. Advocates saw the potential for enhanced community well-being through economic development along with increased employment opportunities. However, most respondents viewed the contractual arrangements used to entice the company to Abbeville as unsatisfactory. Specifically, informants criticized the flawed negotiations, inordinate tax breaks, and subsequent contract that brought the apparel plant to the area, noting that the city was in litigation with the company over ownership of the building and land.

"The city was unable to respond quickly [to the closure announcement] because they hadn't covered their bases regarding the land the building is on. FOL was given the property for less than $100 in agreement to stay a certain number of years, but they didn't do that. The city is now in litigation over it."

"Since (FOL's) leaving had such a small impact on other businesses, it is possible that (their) entrance into the area did not have as much of a positive impact as (city officials) claimed it would. [This] leads one to question all of the perks given to them by the city.

Businesses that have been here for years and will be here in the future pay their own way while FOL was given tax breaks. It makes you ask what Abbeville got in return."

A community leader pointed out that the problem faced by Abbeville is not unique:

"Small towns keep falling for the same thing: They give large companies tax breaks and incentives to locate in their city and then the companies leave sooner than promised. These cities are in a difficult situation because they need the jobs and (they need) to have someone (occupying) the buildings."

3.5.1.2 Factory Retention Efforts

In addition to the government's role in bringing Fruit of the Loom to Abbeville, it also attempted to keep the plant from moving. Respondents' understandings of the efforts undertaken by city and state officials to convince the company to stay were limited, and responses to probes regarding this topic generally fell into two equally vague categories. Some individuals noted that the government "did all they could to keep [the factory] here" or that they "worked very hard at making them stay," while others stated that the government "did not do enough to keep them there." Others thought that the plant's departure was the inevitable result of the global economy, and a number of respondents blamed the North American Free Trade Agreement (NAFTA) for the departure of the plant.

"We gave them quite a bit, but they went where they'd find cheap labor. They didn't care about the community."

"Textile (manufacturers) began up north, moved south, and now have moved further south."

"When NAFTA first came to our attention, we were worried that it would affect us. The government told us not to worry, and then Fruit of the Loom made their announcement. The government was lying."

3.5.1.3 Closure Remediation Efforts

Finally, the government played an important role once the closure was underway. Efforts that reduced the impact of the closure included educational opportunities, job screening and placement services, and extended unemployment insurance benefits. Several pieces of legislation and numerous government and private agencies assisted displaced workers before and after the closure. The Worker Adjustment and Retraining Notification Act (WARN) requires businesses with more than 100 employees to provide employees with two months notice of closure plans. Once the factory notified the Department of Labor of their plans to close the Abbeville plant, the Department of Labor issued a WARN notice which prompted several agencies to begin offering a variety of services to employees.

The Governor's Rapid Response Team, comprised of representatives from Job Services, the Department of Economic Development, local Chamber of Commerce, and JTPA in the nine parish Acadiana area coordinated numerous interventions to assist dislocated workers. These interventions included an on-site orientation where Job Services staff assessed plant employees and assisted them in filling out applications for benefits under the Trade Adjustment Assistance (TAA), NAFTA-TAA, and the Trade Readjustment Act (TRA). These Acts provide funding for retraining and school related expenses for dislocated workers deemed eligible. Certified workers can be retrained under TAA and Job Training Partnership Act (JTPA) for occupations that are in demand. These workers can also apply for the standard 26 weeks of Unemployment Insurance and, if the TAA and TRA are approved, they can apply for up to 52 additional weeks of unemployment insurance. This allows eligible workers to receive Unemployment Insurance (UI) for up to a year and a half if they are in an approved training program.

The Governor's Rapid Response Team also held a series of meetings for workers that instructed them in how to look for work, which included writing resumes, interviewing skills, and dressing for an interview. These workshops taught workers strategies for dealing with a reduced income such as budgeting and gaining access to other community supports for those in need.

Beyond the initial orientation efforts and workshops, case managers from Job Services worked with each client to certify them for continuing unemployment insurance eligibility, and displaced workers were given the opportunity to return to school. JTPA also developed additional training programs in response to plant closures in Abbeville, Port Barre, and St. Martinville. First assessing the needs of each individual being laid off by giving them a survey regarding their interest in training, they then met with representatives of an area Vocational Technical school and shared the results of these surveys. This resulted in proposals for new training programs.

JTPA used Title III dislocated worker money to allow Louisiana Technical College-Gulf Coast Campus to provide special nursing and computer courses. Initially six month, short-term basic skills classes were offered. However, since employees were not interested in these, regular programs that typically last 2 years were offered. JTPA funds also paid for tuition and books, and child care expenses. TAA (Trade Adjustment Assistance) also offered by Job Services, paid for transportation costs associated with education if the employee had to travel over a minimum number of miles to get to school.

The result of these government activities was that former employees were offered opportunities to return to school to gain additional skills that would prepare them for new jobs.

> "The state did a good job of helping people recover before the plant actually closed. Governor's representatives met with workers and provided them with retraining opportunities. . . ."

There was, however some confusion about who was actually responsible for these opportunities. One dislocated worker thought the garment factory provided the training and an oil and gas industry representative credited the mayor with the funding of the educational programs.

Generally, there was an overall positive impression of the government's response and coordination of services. One agency representative told us:

> "[The government] coordinated activities well. Initially there were "turf" issues but these were worked through and all involved agencies worked together."

but criticisms of the government's response were heard as well. These included their inability to keep the factory in Abbeville, the inadequacy of the training provided and ineffective results when all was said and done. A city resident said:

> "[Their] response was good but it didn't work."

There were criticisms of the training program as well. First, there was incongruence with the length of programs and unemployment insurance benefits. Several of the courses offered to workers took two years to complete while extended unemployment insurance benefits last only one and a half years. This made it difficult for some to complete their programs of study while discouraging others from starting. Another criticism was directed at the types of jobs for which training programs prepared workers. While much of the rhetoric regarding educational opportunities focused on retooling workers to participate in the new, high-tech economy, the jobs they were being trained for were neither high-tech nor high-wage. Examples given to us included sales clerks and food service workers. Given our focus on the role of the oil industry in mediating the impact of the plant closure, the absence of any training related to this industry is conspicuous.

> "The mayor and Gary Forester from the Department of Labor came in to help. However, the transition to the high-tech computer jobs that they said would happen was a joke. The actual transition of the Fruit of the Loom employees was to low tier jobs such as clerks and other retail jobs."

Beyond those directly involved in training, five social service agency representatives that we spoke to noted that they offered standard services to employees but they did not fundamentally change their programs in response. Such services included transportation, paying utility bills, and emergency food.

3.5.2 Community Response

In addition to formal government responses, some general responses of the community to the closure were mentioned by respondents. Both displaced workers and social service agency workers reported that they and others boycotted products of the factory and lobbied police jury members to take action to convince them to stay. Not surprisingly, many mentioned affective community responses such as individuals being angry, upset or disappointed. Some thought Fruit of the Loom did not handle the situation properly, noting that an announcement of the closure was simply made over the intercom.

Proactive community responses to the closure include businesses in the community offering jobs to employees, lenders renegotiating loan arrangements, and increasing services offered by social service agencies.

> "Businesses in the community offered jobs to people."

> "The bank worked with the employees by extending notes and refinancing loans at lower interest rates. The bank made the decision to work with its customers in this way because it is a "community" bank."

No references to rallies, picket lines or demonstrations were noted by anyone. The only form of collective action mentioned was a product boycott which was commented upon by a few individuals. This is not surprising since some workers saw the closure as inevitable due to global economic conditions and because of the educational opportunities offered to workers. Portz (1990) argues that the presence of such feelings of inevitability, along with perceived opportunities for displaced workers, often result in a lack of collective action on the part of workers.

3.6 Oil and Gas Industry and the Impact of the Plant Closure

Finally, we arrive at the primary focus of this chapter: the role of the oil and gas industry in the aftermath of the Fruit of the Loom plant closure. As noted earlier, the oil and gas industry has the potential to benefit Abbeville in the wake of the closure in a number of ways. First, oil and gas companies could hire displaced workers directly. Second, members of Fruit of the Loom workers' families could work in the oil and gas industry. Finally, increased oil and gas industry activity could ameliorate the negative impacts experienced by displaced workers and the community as a whole through local and/or economic expansion that typically accompanies such a significant industry.

When we talked to all ninety-nine respondents about the prevalence of oil and gas companies hiring former Fruit of the Loom workers, few noted that they thought that this occurred. The most common view held by respondents was that oil and gas companies did not hire these displaced workers, and many stated that they had not heard of any apparel plant workers hired by oil and gas industry establishments, simply did not know or were not sure. Those who held the opinion oil and gas companies did not hire former workers believe those workers possessed different skills than were needed in the oil and gas industry:

> "Those workers do not have the skills necessary."

> "Others may not have been hired because they have different skills. Their skills are sewing and knitting, oil and gas-related companies require different skills."

> "[I] did not think that those workers have skills that are transferable to the oil and gas industry. They were mostly women with sewing skills."

This reference to gender is indicative of another type of response that doubts oil and gas industry companies hired these displaced workers because most former apparel plant employees are female. Some noted that women generally lack the skills necessary to work in the industry, while others thought women would not be interested in the work.

> "The majority of the employees were women with an average age probably early 30s. Their physical and technical skills wouldn't be adequate for work in the oil industry."

> "If [some women] did [work in the oil and gas industry], it was probably very few. The majority [of employees] were women who wouldn't want to work in the oil field..."

> "[I] do not think that [oil and gas companies hired Fruit of the Loom employees] because these companies hire different kinds of workers. Most of the workers were women and most of the oil and gas jobs are offshore. Its not that employers would not hire women. Some women do work off shore, but women usually do not want to work off shore."

> "...those jobs in the industry that require few skills are not the kinds of jobs one sees women doing. [For instance,] you don't see female roustabouts."

Some expressed optimism that the oil and gas industry would have provided more jobs to displaced workers if the industry had not been experiencing a slowdown at the time of the closure.

> "Oil and gas companies have experienced a slowdown over the last 14 months or so, and things were looking bad even at the time of the layoffs. Oil and gas got rid of those positions requiring few skills first, so it's unlikely that the workers were hired at those companies."

In general, whether or not workers are actually hired for any particular job depends both on workers seeking jobs in the industry and the willingness of employers to hire them. What we found from our discussions with displaced workers is that, with the exception of four individuals, they *did not* seek jobs in the oil and gas industry. Those who did had family connections and were successful.

There were many reasons given by displaced workers for not seeking employment in such a dominant local industry, including the following.

> "No, I didn't have the skills or the desire to look there."

> "I don't have the training to make a decent salary. No oil company is going to hire anyone without some skills."

> "I don't speak English well. They won't hire me."

> "I don't think they'll hire women."

> "I don't think females fit in that field. I see and know of males working there only."

> "I was already working part-time at Godfather's Pizza, so once we were let go, they gave me more hours."

As the above excerpts show, reasons given by workers included lack of interest in seeking employment in the oil and gas industry; having a job already lined up or knowing what kind of job they wanted to seek; and concern they lacked the skills, education, or credentials necessary for employment.

Our conversations with oil and gas industry representatives also probed whether their companies hired or made overtures toward hiring former factory employees in any positions. Only four out of the total of thirty-one companies reported they hired displaced plant workers; two of them prior to the actual closure, and the other two hired displaced workers after those individuals completed vo-tech training. Many of them reported that at the time of the plant closure, they either weren't hiring, or they hire infrequently all of the time. Chief among their responses to our probes are those addressing gender, skills, experience and education.

> "Most of the employees there were women. Most of our jobs are offshore. Women either do not want these jobs or are not allowed to work them"

> "Even if those workers had applied for a job here, they probably would not have had the necessary skills. [My] business does sandblasting and painting for oil field companies. These jobs require specific skills. "
>
> "I wanted to hire some...workers but no one applied for a job. Even if they had applied, they probably wouldn't have had the necessary skills."
>
> "Our company is located in Intracoastal, for starters. Secondly, most of our employees are men. Women....usually don't want to work outside in the yard. It's rough and sometimes dangerous work."

Jobs in the oil and gas industry, as in any other industry, vary by occupation. Some jobs, such as roustabouts and other production work, require physical strength, stamina and little skill. Other jobs, such as executives, administrators and clerical workers require job- specific skills. Geologist, engineering and management jobs require high level of specified education. Since most of the displaced workers were women with little education and garment industry-specific skills, and since none of the training programs developed for them focused on teaching them these skills, they were unqualified for many of the high paying jobs in the oil and gas industry. What is evident from our conversations with displaced workers and oil and gas industry representatives is that sex segregation in the workplace continues to affect the employment opportunities of women in the oil and gas industry.

The failure of women to enter the lower skilled production jobs is related to gender stereotyping and occupational sex stereotypes held by employers and employees. On the labor demand side, sex role stereotyping is evidenced in statements made by employers such as "women...would not want to work in the oil field." Occupational sex labels were also used by employers: "You don't see female roustabouts." The fault does not lie with employers alone, however. Displaced workers also reflected these views, thus affecting worker supply. One worker noted that "The majority of Fruit of the Loom employees were women . . . their physical and technical skills would not be adequate to work in the oil industry."

We asked each respondent in the oil and gas industry how their company usually hires new employees, an important issue in determining possible constraints or opportunities confronting not only displaced workers, but the supply of labor in general. We found that those companies in the secondary support sector of the industry relied on networking: "word-of-mouth;" "through the grapevine;" and, "contacts of employees with others." There were only a few who reportedly hired new employees through newspaper ads, radio, or what they referred to as "walk-ins." In contrast, companies in the tertiary support sector generally felt networking was not significant in hiring: they advertise in newspapers, recruit when need arises at area schools, and accept "walk-ins." However, many of these firms also commented that they seldom hire, in fact one bank reported it had not hired anyone in 10 years.

What is apparent from the data is that, for the most part, oil and gas employers and former Fruit of the Loom employees view the local labor marked as 'split' (Bonacich, 1976). While Bonacich presents a labor market in which whites and blacks worked in two distinct labor markets, the split in this case is based on gender. In the eyes of oil and gas industry employers, community leaders, social service agency representatives and displaced workers, female Fruit of the Loom employees are not seen as the "type" of workers hired by the oil and gas industry (Bonacich 1976).

These findings do not, however, mean that the oil and gas industry played no role in mediating the effect of the closure. The oil and gas industry could potentially lessen the impact of the shutdown by employing other members of displaced workers households. In fact, fully one-third of the forty-eight respondents answered in the affirmative, including four workers who themselves successfully obtained employment in the industry. Other than these four, only one other displaced worker offered that a household member, a son who had quit school to work at the Port of Iberia to pay car notes, had actively sought employment in the industry after the plant closure. Note that the income generated by spouses was mentioned as an important factor that eased the impact of the closure on some families.

Beyond directly affecting workers and their families, the oil and gas industry could indirectly help the community in the wake of plant closure by bringing a substantial amount of money into the local economy through wages and demand for goods and services. The effect of the 1998-1999 oil and gas industry slowdown on Abbeville demonstrates the importance of this industry on the overall economy. A majority of those we talked to thought that the slowdown in the oil and gas industry had a negative impact on Abbeville, several noting simply that oil and gas problems always affect areas like Abbeville.

"Anytime you have an important part of the economy hurting, the community hurts too. People realize that about the oil business."

A variety of specific reasons for the effect of the slowdown on Abbeville were given. Those impacts discussed during our conversations can be categorized into two types. Some respondents focused on factors affecting individuals in the city such as job loss or wage decreases, while others focused on more aggregate effects such as declines in tax revenues and decreased money flow affecting all area businesses.

"More people are on the street instead of working and business is not picking up in the oil field. Many people are drawing unemployment insurance, while others are cutting grass."

"People were working less. However, the impact has been lessened by other industries (seafood, cattle)."

"[The slowdown is a] growing concern to all. There have been some layoffs, but the industry seems to be picking up again."

"[The slowdown] has affected those companies that are less diversified than ours since they rely on the oil and gas industry more [than we do]."

"The slowdown is more devastating than the factory shutdown because primary earners are losing jobs in the oil and gas slowdown. Whereas, Fruit of the Loom workers were mostly women with husbands who were also working..."

"In general, there are no jobs in the area. One has to travel to Lafayette or New Iberia for work. Basically the only jobs available in the Abbeville-Kaplan area are at rice mills and at WalMart. Most of the oil and gas industry work is in Intercostal City. You have to leave the area to get a good job."

We found that respondents generally agreed the impact of a slowdown in the oil and gas industry was greater than the plant closure since primary wage earners are more likely to lose their jobs (as opposed to secondary sources of income earned by females). Negative effects reach well beyond those directly employed in the industry to other businesses in the community (and thus the economy in general).

"When residents earn less they have less to spend."

"Overall it has affected the city since people spend less money everywhere when they are earning less money."

"[I]t has affected Abbeville because people have less money to spend. Less money coming into the community means less spent on housing, clothing, and food. It also means more incidences of bankruptcy."

"The school board has been hurt due to less income from oil leases."

"We are collecting $6-7 million less in revenues now from oil/gas..."

"It has not been as bad as it was in 1983. That was a disaster. The slowdown affected banks because people spent money and lived high while the money was good. They were not prepared for the slowdown. People lost homes and businesses closed because they were not being run correctly. Today, businesses are more cautious as are banks. Banks are also more diversified... However, Abbeville will survive both the slowdown in the oil and gas industry and the shutdown."

These excerpts are indicative of the importance the industry is perceived to have in the community. Respondents believe a slowdown in primary oil development activities has negative consequences that filter down to secondary and tertiary support sectors, and other industries as well

3.7 CONCLUSION

Our primary objective of this study was twofold. First, we assessed the socioeconomic impact of the closure of a Fruit of the Loom apparel plant in Abbeville, Louisiana, on displaced workers, their families and the community at large. We then examined whether companies connected with the oil and gas industry in the community and surrounding area mitigated negative impacts experienced as consequences of the apparel plant closure. This could be possible in several ways: first, by providing post-displacement labor market opportunities for displaced workers; secondly, oil and gas companies could provide employment for former Fruit of the Loom workers' families; or finally, increased oil and gas industry activity could ameliorate the negative impacts experienced by displaced workers and the community as a whole through economic expansion that typically accompanies such a significant industry.

The industrial mix of Abbeville includes oil and gas-related industries, agriculture, service and retail establishments, and garment manufacturing. Guided conversations with respondents revealed that the closure of the Fruit of the Loom plant in Abbeville was less devastating than feared initially because other segments of the economy were quite viable. What we found was substantial economic growth in this community has resulted from development of oil and gas support sectors, as well as growth in other industries that have offered alternative labor market opportunities. The oil and gas industry has fulfilled its promise to the region as one capable of bringing unparalleled prosperity during periods of industry expansion. Service linkages, marketing linkages, and production linkages are important in an expanding oil and gas industry, as they are in manufacturing. In such an agglomeration economy, demand for labor is created (Daniels 1985).

In spite of its notoriety as being a boom-bust industry, respondents in this study view the oil and gas industry as a key factor in the success of the Abbeville economy. Though this industry is recognized as the cornerstone of the economy, respondents also acknowledge the importance of economic diversity. Most of those in the industry have learned to deal with its cyclical nature through diversification and accumulation of capital to use during slowdowns.

Most of the opportunities within the oil and gas industry itself are limited to males, and this appears to be true of Abbeville. There are jobs in which females can be found, for example, clerical and administrative support, but most opportunities for females within the industry are associated with larger cities. Analyses of conversations indicate only four displaced workers in our study sought and found employment in the industry. Representatives of oil and gas companies emphasize the importance of job-specific skills and training and physical strength and dangerous work in the hiring process. These are skills and attributes displaced apparel plant workers lack.

Though only one family member sought employment in the industry after the plant closure, one-third of the displaced workers we spoke with had at least one family member already employed in the industry at the time of the closure. We believe that the income from these family members is an important factor in reducing the impact of the closure on some families.

We argue that the Fruit of the Loom closure did not devastate the city of Abbeville as expected at least in part because of the oil and gas industry. As noted, economic growth and general development of the region that has been attributed to the growth of the industry has created demand for labor in other industries and employment sectors that has had to be met with adequate labor supply. More employment opportunities exist today within this community and surrounding area because indirectly, growth of the oil and gas industry has served as an impetus in creating other labor market opportunities. In this regard alone, displaced workers have benefited from oil and gas development.

CHAPTER 4 INDUSTRIAL DIVERSITY ALONG THE U.S. GULF OF MEXICO COAST

Project Personnel: John J. Beggs, Louisiana State University
Charles M. Tolbert, II, Baylor University
Troy Blanchard, Mississippi State University
Russell Davis, Louisiana State University

4.1 INTRODUCTION

This research continued a project that began with a focus on a small community in Southwestern Louisiana. With funding from the U.S. Minerals Management Service, we expanded the scope of our initial work to test hypotheses derived from the community study. We found Abbeville to be something of a hybrid community—one that does not fit the presumptive rural or urban dichotomy. Our findings in our field work suggested that, unlike most oil and gas dependent locations, Abbeville's industry base is diverse. This industrial diversity is reflected in part by labor-intensive manufacturing, extractive (agriculture), and professional and business services sectors. This business services sector is largely oil and gas related as Abbeville is a center for operations and logistics. Accompanying these industry-specify services is a relatively large collection of professional services establishments organized in ways that reflect the community's status as a county seat. This is reflected in substantial numbers of medical, legal, government, and other professional and white-collar offices.

In this analysis conducted at the Census Bureau's Center for Economic Studies, we employed confidential longitudinal establishment data to analyze the distribution of coastal industrial labor over time and space. We were interested in the extent to which divisions of labor similar to those of Abbeville exist elsewhere along the Gulf Coast. We were also interested in the socioeconomic implications of these industrial patterns for coastal communities. These findings will contribute to a better understanding of the role of oil and gas activity vis a vis other industrial activity in local coastal communities.

4.2 LITERATURE REVIEW

Socioeconomic conditions are primarily dependent upon patterns of industrial organization. Local economies are based on the allocation of employment across distinct industrial sectors. Each sector is associated with different working conditions, opportunities and job outcomes (Lobao, 1990). Industrial organization theory generally divides industries into extractive, manufacturing and service categories. The manufacturing and service sectors can be further divided into four more discrete sectors, defined on the basis of the magnitude of the complexity of their operations and earnings/benefits of workers: complex and routine manufacturing, and business and consumer services (McGranahan, 1988). In general, complex manufacturing and business/professional services are associated with higher wages and stable employment while routine manufacturing and consumer services are associated with lower wages and less stable employment.

In rural areas (where much of the oil and gas activity is staged), sound economic performance is often a function of a diversified economy. This diversification tends to produce more consistent economic growth. Specialized economies, on the other hand, can expand rapidly but are particularly vulnerable to local and national level swings in the economy. Because of a division of labor across space, most rural areas tend to specialize in low wage routine production and consumer service sector jobs. Typically dominated by a single industrial sector, these communities are especially vulnerable to business cycles and foreign competition which encourage capital flight (Bluestone and Harrison, 1982; McGranahan, 1988).

Because diversified local economies are not dependent on any single sector source of employment and earnings, they are better prepared than more specialized economies to weather the economic downturns associated with specific industries (Killian and Hady, 1988). This includes economic shocks such as the shutdown of large-scale textile production facilities throughout southwestern Louisiana (Acadiana). Abbeville, unlike many of the communities in Acadiana, is not solely dependent upon such

large-scale production facilities. Oil and gas activity is an integral part of its industrial structure and helps counter the economic downturns associated with the flight of routine production facilities offshore by either absorbing some surplus labor or increasing local household earnings (see Chapter 3).

Because of the tendency for rural areas to specialize in routine manufacturing and consumer services, the industrial organizational and rural research literatures pay very little attention to business and professional services in rural areas. It is readily apparent that producer services in rural areas are closely associated with a dominant industrial base, such as mining (Glasmeier and Howland, 1995). However, it is not at all clear how these linkages develop across time and space. The Abbeville area differs from many other oil activity centers because it is more of a center for oil field logistics and operations than it is for oil field fabrication. Our field work shows that the concentration of oil-related business and professional services in Abbeville is a major factor in Abbeville's resiliency to the decline in oil and gas activity. For the most part, these oil-related producer services firms remained active, albeit at a diminished rate, throughout the 1980s. However, the necessary spatial and temporal data to examine and compare the distribution and differential impact of oil and gas activity across time and space do not exist in the public domain. To address this data deficiency, we were permitted to access internal, confidential household and economic data at the U.S. Census Bureau, Center for Economic Studies. We describe our exploratory work with these data in this chapter.

4.3 METHODOLOGICAL APPROACH

4.3.1 Analysis of Enterprise Data

Our findings in the Abbeville case study were sufficiently robust to support a hypothesis for testing on other communities. The hypothesis was based on our observation of a thriving producer, business, and professional services sector in the Abbeville economy. Are similar service sectors evident in other coastal communities?

To adequately assess the development of a producer services sector in Abbeville and other coastal communities, we developed models of the coastal division of industrial labor, comparing socioeconomic outcomes for coastal areas with varying industrial compositions over time. We were especially interested in the extent to which industrial divisions of labor similar to that of Abbeville exist in other coastal communities.

To accomplish this modeling task, we needed data on the specific location of business establishments and detailed industry classifications. These data requirements surpass such readily available data sources as *County Business Patterns* or published versions of data from the Economic Censuses. Although these data compendia are generally very useful, confidentiality concerns dictate that they frequently do not report data for small areas and small numbers of establishments. Although these establishment-level microdata are not in the public domain, they can be accessed through an agreement with the Center for Economic Studies (CES), U.S. Bureau of the Census.

The CES has assembled establishment responses to various economic censuses. These data in conjunction with an age proxy available from the Census Bureau's SSEL (essentially a national business register), allowed us to study the "embeddedness" of establishments. It is necessary to have access to sub-county geography to evaluate local or community effects. This is not available from public sources. In the public-use microdata (PUMS) from the decennial (household) census, no sub-county information is available if the county population is less than 100,000. It is available, however, in the restricted access data files at CES. Still, these restricted access files at CES do not always provide a solution to the sub-county geographic identification problem. For example, this level of geographic detail is not reported for multi-establishment enterprises in the Census of Minerals because of the reporting methodology employed in this Census. The geographic detail in the 1990 Census of Population and Housing did prove very useful to us as we illustrate below.

The economic census data at CES also provide detailed industrial classification (four- and five-digit SIC codes) and establishment type (single-unit vs. multiple location) information. Public data makes no distinction between multi and single unit enterprises. Publicly released files for four-digit industrial group with few employees may have limited or suppressed information (employment, revenues, etc) so researchers may have to use two- or three-digit industry group information. All previous socioeconomic work under the auspices of MMS has necessarily been based on public domain data that are often suppressed for reasons of confidentiality *and* that do not contain information on establishment age or type. By contrast, the economic census data files at CES contain no suppression. We will use these data

to develop a longitudinal database on coastal oil and gas producer services. We analyze data from all states adjacent to the Gulf of Mexico.

We aimed to explore the extent to which the Abbeville case is unique or whether there are other, similar areas whose industrial mix might buffer them from episodes of increasing and decreasing oil and gas industry activity.

4.3.2 Exploratory Study of Establishment Formation and Dissolution

Previous research at the Center for Economic Studies has focused for the most part on manufacturing establishment formation, dissolution, and survival. An increasing interest at the Center is the replication of such studies, to the extent possible, for sectors outside of manufacturing. As part of our study, we hoped to contribute to and learn from such efforts by exploring the role of establishment formation, dissolution, and survival in manufacturing and nonmanufacturing sectors of our research sample.

4.3.3 Exploratory Analysis of Decennial Long-Form Household Microdata

In previous research, we have relied on published summary income information to assess volatility in income distributions. This approach is less than satisfactory because we are unable to assess detailed dispersion in income distributions. When we turned to available decennial household microdata (PUMS files), we found an unacceptable absence of geographic detail and top-coding of income amounts reported on person records. In addition to use of establishment microdata at CES, we used long-form household microdata from the 1990 Census. This permits a detailed and far more precise assessment of income distributions for Gulf Coast states.

4.3.4 Units of Analysis

This analysis employs data for roughly 80,000 persons who work in approximately 900 incorporated places in the states of Texas, Louisiana, Mississippi, Alabama, Florida, and Georgia. All the incorporated places have populations of at least 2,500 persons. This permits us to match the place geography on the 1990 decennial information with the place geography found in the Economic Census of 1987 and 1992. Classifying individuals by their place of work—not by their place of residence—is an important departure from earlier work. The detailed internal Census data permit us to do this. This would not be possible with public data.

4.4 FINDINGS

In describing our findings, we first provide information on the inadequacy of a widely used public source of establishment data (*County Business* Patterns). Then, summarizing data to the incorporated place level, we analyze the attributes of Gulf Coast places with industrial compositions like that of Abbeville and compare them to places less similar to our focal community. Our principal conclusion is that there are indeed other places along the Gulf Coast that feature a comparable mix of business and professional services. While disclosure constraints prevent us from naming those incorporated places, it does appear that status as a county seat conveys much of the same information.

4.4.1 Limitations of Publicly Available Establishment Data

This section of our presentation consists of a cautionary note about public data sources based on economic census data collection procedures such as the widely used *County Business Patterns*. In our work at the Census Bureau with the *Census of Minerals*, we have discovered that sub state geographies (e.g., metropolitan area, county, place) are not available. They are available neither in public data nor in the confidential establishment microdata that we employ at CES. Upon further investigation, we have learned that there are circumstances for which the Bureau does not collect or retain information other than state of operation. This is particularly the case for large enterprises that may have establishments in multiple locations.

We were the first to use of *Census of Minerals* data at CES for research purposes. We transformed raw ASCII data files into SAS files suitable for analysis. Our setup and initial exploration of the minerals data is thus an important benefit to the Census Bureau. We attempted add geographic identifiers from the

Census Bureau's national establishment register known as the *Standard Statistical Establishment List* (SSEL). By using the SSEL, we were to identify geography for most single minerals establishments. But, the SSEL does not contain much in the way of sub-state geography for enterprises composed of multiple establishments. We met with staff at the Census Bureau who oversee data collection for the *Census of Minerals*. They reported that, in order to minimize burden on businesses, multi-establishment enterprises are permitted to file one report for all establishments within a state.

This problem regarding information on minerals industries is further compounded by the Bureau's suppression of certain data in published reports such as *County Business Patterns*. Suppression is done to ensure the confidentiality of data for specific establishments. Most often, suppression is used to avoid disclosing data on a single, dominant firm in an area. But, there are other reasons that data are suppressed. Suppression flags appear in data fields of the *County Business Patterns* for establishment employment and payroll. More often than not, the flag references a range of possible data values (say, 500-1000 employees). Experienced users know to observe the suppression flags in public versions of the data and will typically derive an estimate of employment or payroll by using the midpoint of the interval.

Table 4.1 illustrates how these two data problems interact to limit substantially the inferences that can be made from such published data sources as *County Business Patterns*. Each of the columns represents one of the Gulf-coast states that are the focus of our ongoing work. The data for Alabama indicate that 23 Alabama counties are identified as having one or more minerals industries establishments. In 20 of those 23 counties, however, employment and/or payroll data are suppressed. There are minerals establishments in other counties of Alabama, but the counties are not identified (the balance of the data are grouped into a single residual geographic category—code 999). Because establishment counts are not suppressed, we can report 90 minerals industry establishments for which counties are identified and 41 establishments in the non-identified geographic unit. This sums to the 131 found in the state total section. Payroll and total employment are suppressed for the generic geographic category in Alabama. What do we miss because of this? Because the state total payroll (in $1,000s) is $67,792 and the identified county payroll is $10,357, we do not have sub state geography for $57,435, which is 85 percent of Alabama's minerals industries' payroll. Similarly, we cannot identify a location within the state for 84 percent of the employment in the industry. We know only that the place of work is somewhere in Alabama. Although Alabama may be the extreme case, there is substantial unaccounted information for all states in Table 4.1. In Louisiana, 58 percent of the payroll and 49 percent of the employment information is not identified at the county level (county code = 999) and another 15 percent of payroll and 19 percent of employment information is suppressed at the county level. Thus there is no county level identification for 73 percent (58 + 15) of payroll and 68 percent (49 + 19) of employment information. For Texas, 46 percent of payroll and 47 percent of employment information has no county-level identification.

Among the datasets available to us at Census is the underlying establishment microdata for *County Business Patterns*. Because there is no suppression in these data, we are able to work with precise figures rather than estimates. This enables us to resolve the suppression problem. But, we have yet to resolve the geography problem in the minerals data. Thus, using the restricted access establishment microdata, we can identify county level information for the 15 percent of suppressed payroll and 19 percent of suppressed employment data for Louisiana. But we are not able to identify county-level information for the 58 percent of payroll and 49 percent of employment data for Louisiana that has county coded "999."

To get a better estimate of local involvement in the oil and gas industries, we turned to the restricted-access internal microdata files from the 1990 decennial census long form questionnaire. These data have place of work coded at a sufficient level of geographic specificity (i.e., place of work as in city, township, village, etc.). Combining this information with the labor force status, occupation, and industry of respondent we were able to derive a reliable community-level estimate of oil and gas industry employment activities. We constructed a percentage share of total employment for oil and gas employment as our indicator of community involvement in the oil and gas industry. Currently, this is our best answer to our static question that compares communities across space on their level of oil and gas involvement. This solution does not provide us with such establishment-level information as size of establishment (based on employment, payroll, or revenues), form of establishment (multi- establishment firm, ownership structure), and other information in the establishment microdata from the economic census.

Table 4.1

Limitations of County Business Patterns Data on Mining

	Alabama	Florida	Louisiana	Mississippi	Texas
State Totals					
Number of Identified Counties (Valid FIPS) With Mining Establishments	23	27	54	34	205
Number of Identified Counties (Valid FIPS) With Suppressed Mining Data	20	22	28	26	119
State Total Payroll in Mining	67,792	16,229	1,551,169	95,173	3,913,068
State Total Employment in Mining	2,016	501	42,696	3,539	104,151
State Total Establishments	131	101	1,451	345	6,714
Identified Counties (Valid FIPS Code)					
Total Payroll in Mining	10,357	1,280	409,970	21,151	2,113,276
Total Employment in Mining	322	58	13,828	743	56,021
Number of Establishments	90	85	1,284	284	6,487
Total Information in Unidentifiable Geographic Unit (State Total-Identified)					
Payroll (% of State Total in Unidentifiable Geographic Units)	57,435 (85%)	14,949 (92%)	1,141,199 (73%)	74,022 (78%)	1,799,792 (46%)
Employment (% of State Total in Unidentifiable Geographic Units)	1,694 (84%)	443 (88%)	28,868 (68%)	2,796 (79%)	1,664 (47%)
Non-Identified Counties (999)					
Total Payroll in Mining	X	6898 (43%)	902,555 (58%)	36,233 (38%)	X
Total Employment in Mining	X	191 (38%)	20,776 (49%)	1,132 (32%)	X
Number of Establishments	41	16	167	61	227
Suppressed Information (State Total-(Identified+Non-Identified))					
Payroll (% of State Total Unaccounted for by County Data)	57,435 (85%)	8,051 (50%)	238,644 (15%)	37,789 (40%)	1,799,792 (46%)
Employment (% of State Total Unaccounted for by County Data)	1,694 (84%)	252 (50%)	8,092 (19%)	1,664 (47%)	1,664 (47%)

X=Total Data Suppressed in County Business Patterns
FIPS=Federal Information Processing Standard

We used this information about local area oil and gas activity in several ways. We used factor analysis on measures of industrial and occupational share of employment to identify key underlying dimensions of the local economy. In this analysis, we made special note of industries identified in previous work as being directly tied to oil and gas or indirectly tied through multiplier effects.

4.4.2 Analysis of Industrial and Occupational Composition

A key question for us was: Can we identify characteristics of oil- and gas-involved communities that may mitigate the level of volatility in their economies? To address this, we conducted a series of factor and cluster analyses, using detailed industry and occupation information from household and establishment censuses. Because our units of analysis were roughly 900 incorporated places along the Gulf Coast (some quite small), we are unable to present coefficients from those models. We do summarize our analyses, however, in Table 4.2. In the table, a set of places like Abbeville are labeled "significant professional" and are contrasted with places we label "smaller professional." Due to disclosure limitations, we are not permitted to give an exact accounting of these places. We can say that the significant professional group represents about 10 percent of the 900 places in our analysis.

The first thirteen rows of Table 4.2 report comparisons of selected industrial sector factors that were created through a factor analysis of our industrial share of employment data from the 1990 census microdata. Because of disclosure considerations, we are not able to report precise figures for these comparisons but we are able to report direction and statistical significance. The Abbeville-like set of communities with significant professional complexes exhibit higher factor scores on wholesale trade, professional services, military and public administration, and lower scores on refineries and ship-related activities. There are no statistically significant differences between the two groups of communities in terms of metropolitan status or population size. The final nine rows refer to detailed industries within the broader sectors described in the upper portion of the table. The significant professional communities have higher factor scores on legal services, insurance, banks, medical services, and public administration.

Based on this avowedly exploratory analysis of data from various sources, we concluded that the presence of significant professional service and public administration sectors in a community could mitigate the volatility that may occur in communities with significant oil and gas involvement just as our field work suggests it has in Abbeville. In particular, the presence of significant legal, financial, and medical services along with public administration appears to be key. This is an important finding that this study lends to the overall research focus on Abbeville. Our field work suggests rather strongly that the underlying community industrial diversity was grounded in oil and gas business services. The Census data show also show that Abbeville and similar communities also have expansive professional service sectors. Though disclosure rules prevent us from providing a roster of these Gulf Coast communities, they do exist in reasonable numbers. Interestingly, the attributes these significant professional communities share are quite consistent with those of county seats. Pending detailed analysis that evaluates this further, we hypothesize that the agglomeration of professional and business services in county seats may indeed be an agent that buffers the community from external economic forces.

Table 4.2

T-Test for Differences in Means for Significant Professional Service Sector and Smaller Professional Service Sector Places with Significant Oil and Gas Involvement

Measures of Occupation and Industry Structure	Significant Professional	Smaller Professional
Business Services Factor	Higher	Lower
Wholesale Factor *	Higher	Lower
Real Estate, Hotels Factor	Higher	Lower
Professional Services Factor *	Higher	Lower
Retail Factor	Higher	Lower
Refineries Factor *	Lower	Higher
Ship Related Factor +	Lower	Higher
Transportation Factor	Lower	Higher
Agriculture/Personal Services Factor	Lower	Higher
Welder Factor	Higher	Lower
Military/Public Administration Factor *	Higher	Lower
Education and Testing Factor	Lower	Higher
Construction Factor	Lower	Higher
Population, 1990	Higher	Lower
Proportion Nonmetro	Lower	Higher
Legal Services *	Higher	Lower
Insurance *	Higher	Lower
Banks *	Higher	Lower
Medical Services *	Higher	Lower
Engineering, Architectural, and Surveying	Higher	Lower
Accounting, Auditing, Bookkeeping	Higher	Lower
Management and Public Relations	Higher	Lower
Public Administration *	Higher	Lower
Oil and Gas Extraction	Lower	Higher

+ indicates $p<.05$, one-tailed test
* indicates $p<.05$ two-tailed test

4.5 CONCLUSION

In this project, we explored the Census of Minerals as a source of information about local area oil and gas involvement and discovered that we could not complete geographic information for local areas. The geographic identification is available for single unit enterprises but not for multi-unit enterprises. These multiunit enterprises combine information on a number of establishments in their census reports. While these establishments are all within one state, they are not in the same local area (place or county).

We then examined to the 1990 decennial census as a possible source of information about oil and gas involvement of local areas. Using information about industry, occupation, work status, and place of work, we were able to construct share measures of local area economic activity. It was necessary to conduct this research at the Center for Economic Studies (CES), or at one of the regional data centers affiliated with CES, because we can only create the appropriate measures with information available in the restricted access internal micro data files. For the decennial data we have the 16 percent sample rather than a 1 percent or 5 percent sample and we have information on local geography rather than Public Use microdata Areas (PUMAs). The 16 percent sample permits us to get accurate estimates of oil and gas information for small areas such as the incorporated places we used (cities, towns, villages, etc.). For the economic censuses, we can identification codes for establishments in both 1987 and 1992 and local area (place) geographic identification.

There is other information in these restricted access internal microdata files which we hope to analyze in future projects. The economic censuses can be linked over time to identify establishment formations, dissolutions, and survivors. In addition to linking establishments over time, there is information on employment, wages, and sales/revenues. There is also a long form for multi-unit enterprises and a sample of single-unit enterprises.

There is also great geographic detail available in these files. In the economic census there are geographic codes for incorporated places with 2500 or more population, zip codes, county, and state. In the decennial files, there is geographic information for place of residence, place of work, and place of residence 5 years ago. These codes have detail about census tract, place, county, and state. There is information about block and block group also but a lot of this information is allocated for place of work and place of residence 5 years ago. These files also contain a great deal of socio-economic detail on individuals and households.

Using the geographic identifiers to link records, we can attach contextual information from the economic censuses to the decennial records. We can also summarize information from the decennial census data and link it to economic census records to supplement the information in those records or to provide context for analysis in which the individual establishment or enterprise piece is the unit of analysis.

Lastly, these data resources do shed important light on a major theme of this set of studies on Abbevile. It is clearly the case that other communities along the Gulf Coast exhibit characteristics similar to those of Abbeville. We will return to this important finding in the concluding chapter.

CHAPTER 5 COMMUNITY RESILIENCE AND THE OIL AND GAS INDUSTRY: LESSONS FOR RURAL DEVELOPMENT

Project Personnel: Charles M. Tolbert, II, Baylor University
Deborah M. Tootle, Louisiana State University

5.1 RECAPITULATION

This research report has described two projects that began with a focus on a small community in Southwestern Louisiana in the late 1990s. Previous research with Census data on places in coastal Louisiana had shown substantial variation in the extent of socioeconomic impact across communities (Tolbert 1995). Abbeville, a small town in rural Vermilion Parish, appeared to be particularly resistant to the income volatility generally associated with periods of increasing and decreasing oil and gas development activities. Described in Chapter 2, the first project was a community study during 1997 and 1998. From that study, we concluded that Abbeville's resiliency reflects a historical and cultural legacy rooted in rich social resources, economic development, and a distinctive local industrial structure that enables it to weather economic disruptions. Our findings suggested that, unlike most oil and gas dependent locations, Abbeville's industrial base is diverse. At the time, this industrial diversity was reflected in part by relatively large routine manufacturing, extractive (agriculture), and business and professional services sectors. Our field work suggested that this business and professional services sector was, and continues to be, largely oil and gas related as Abbeville is a center for operations and logistics. But, our work at the Census Bureau underscored the salience of a corollary sector of professional services (banking, finance, law, medical, and public administration) that also thrives in Abbeville. Many of these establishments and agencies locate there for parish administration as well as doing business with the oil and gas industry.

We concluded the community study in 1998 during a period of high offshore activity, especially in terms of deepwater development. Yet, Abbeville was experiencing a potentially huge negative socioeconomic shock: the closure of a Fruit of Loom textile plant which had employed as many as 1,100 employees. In this context, we began a second research project that had two objectives:

1) a follow-on community field study to explore the extent to which oil and gas industry activity might compensate for the loss of the textile plant (see Chapter 3), and
2) a Gulf-wide study of coastal places that might derive resiliency from industrial diversity based in part on a thriving business and professional service sectors (see Chapter 4).

The plant closure study yielded a richly textured depiction of the community impact that varied at the individual level by gender, race, and ethnicity. Because most of the displaced workers were female, virtually none of them found employment directly in the oil and gas industry. However, there were many signs that other household members' employment in oil and gas activities helped to sustain some displaced workers. More generally, the presence of oil and gas in the local economy added to the local industrial diversity and sustained the workers' households and the community through this tough episode. As we became more knowledgeable about the community and its history of ups and downs, it became clear that a remarkable resiliency prevails that enables Abbeville to sustain itself.

In the annals of modern rural social science, this is a community characteristic that has been identified only rarely. On the one hand, it may be that only a few communities possess such resiliency. On the other hand, it may be that the Abbeville case is so instructive that it provides us with a far better inventory of characteristics of vital communities. Our aim in this concluding chapter is to revisit the sources of this resilience and to assess the likelihood that other communities might be similarly resilient. Indeed, all of us involved in this project strongly believe that there are plenty of communities that exhibit at least some of Abbeville's attributes. Development specialists who focus on cultivating Abbeville-like community strengths are building a capacity for resilience.

5.2 SOURCES OF RESILIENCE

We believe the industrial diversity of the Vermilion area is the primary key to the sustainable local economy and to the resilience that Abbeville has exhibited. But, there are other related factors that have contributed as well. Before discussing industrial diversity in some detail, we turn to fundamental cultural and social attributes that together with the economic diversity are important sources of community resilience. These socio-cultural factors are preconditions for effective responses to industrial diversity as it plays out in the particular constellation of the Vermilion economy.

5.2.1 Culture, Ethnicity, and Social Networks

There can be little doubt that the distinctive cultural heritage of southwestern Louisiana plays a major role in Abbeville's capacity to weather economic ups and downs. Deeply rooted in the culture of Acadiana are strong kinship ties, large families, the French tradition, and values of self-reliance, and norms of self-provisioning. The social capital embedded in the social networks of long-time residents is another important factor in sustaining the community. These social-cultural characteristics predispose the population to take advantage of the prevailing economic diversity. In discussing the community with residents, we continue to be impressed at the versatility and flexibility they exhibit in their livelihood strategies. Members of farm families shift to wage employment as necessary. Those with land resort to self-provisioning by raising beef cattle. Many take advantage of nearby abundant seafood resources. Proprietors hire more relatives and friends than they really need to staff retail operations. Gardeners and small-scale farmers rely at times on direct sales at the thriving town-square farmers market. Though these livelihood options are made possible by industrial diversity, they are facilitated by the social and cultural traditions of the area.

5.2.2 Dynamic Economic Diversity

While agriculture is a mainstay of the local economy, we believe it is the presence of a variety other sectors that underpins industrial diversity in Abbeville and the surrounding area. The manufacturing, retail, and services—especially business and professional services--are sufficiently robust as to be able to offset downturns in the agricultural economy. For example, rice production has been down in Vermilion for the last few years. As we were completing our study, depressed rice prices were just beginning to show signs of recovery. Just as we have observed in the context of the oil and gas sector, the agricultural sector's problems have not collapsed the local social economy. The same was true for the manufacturing sector in the wake of the Fruit of the Loom closure. The local economy exhibits a dynamic diversity in which the shifting strengths of various sectors compensate for periodic weaknesses in other sectors. Many rural communities must rely on a single sector—typically agriculture or manufacturing. Abbeville's great strength is its multiplicity of active economic sectors. Though each is prone to downturns and volatility, the sectors together provide a solid basis for sustainability in the socio-cultural context that typifies Abbeville.

To appreciate these compensating sectors, one must have a longitudinal perspective on local industrial diversity. Spanning four years, these two projects have permitted just that. Our continuous community presence has also made us attentive to developments that might further enhance the local economic diversity. One relatively recent development is suburban neighborhoods on the north side of Abbeville. These areas of new home construction give the appearance that Abbeville is becoming a bedroom community for nearby and much larger Lafayette. While it is too early for Census 2000 detailed data that might confirm the bedroom community thesis, these new, upscale subdivisions are clearly home to white collar workers who prefer to reside in Abbeville. Even if they commute the 20 minutes to Lafayette, they will bring their earnings back into a community, add further robustness to the local economy, and become part of the social and cultural traditions that distinguish the area.

5.3 RESILIENCE BEYOND ABBEVILLE

The analysis in Chapter 4 tells us that there are more than a handful of communities with diverse local economies and, especially, well developed professional and business services sectors. What we cannot tell from that analysis is the extent to which the distinctive socio-cultural patterns like Abbeville's manifest themselves elsewhere. That requires in-depth knowledge of communities that is best gained through

intensive community studies like the ones described here. While we would very much like to say that our results are a prescription for community resilience, we caution that a great deal of local familiarity is required for planned intervention. The versatility in livelihood strategies that we observed in Abbeville was apparent only in detailed conversations with residents. Outreach efforts should be geared to gaining this sort of in-depth local knowledge and building on the socio-cultural and industrial diversity strengths that a community possesses.

As surely as we believe there are other vital communities out there, all of us continue to be impressed with the resilience and sustainability of Abbeville. It is an exemplary community.

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APPENDIX A

Guide to Conversations on Plant Closings

A1.1 Questions (for all respondents EXCEPT displaced workers)

(Questions 1-3 for oil and gas stakeholders only)

1. Did your company/business make any overtures toward hiring former Fruit of the Loom (FOL) employees?

   (Probe—contacting the FOL company, advertising for available jobs that targeted FOL employees)

2. Did your company/business hire any former Fruit of the Loom employees after it was announced the plant would close down in fall of 1997?

   (Probe if no) Why do you think you didn't?

   (If yes) In what positions did you hire those former FOL employees?

3. Do you think (other) oil-and gas-related companies might have hired some of those FOL employees?

   (Probe: oilfield service companies, etc.)

   Why or why not?

   (Go to question 6 and continue from there)

(Questions 4-5 for SOCIAL SERVICE/AGENCIES ONLY)

4. Did the Fruit of the Loom closure affect your agency/services?

   In what ways?

5. How did your agency respond?

(ALL RESPONDENTS ANSWER THESE QUESTIONS)

6. Did the Fruit of the Loom shutdown affect Abbeville? How did the community respond?

   (If yes: In what ways?)

   (If no: Why not?)

7. (If not already answered) How do you think city, parish, or state government responded?

8. After Fruit of the Loom employees lost their jobs, where do you think those former employees went?

   (Probe-other jobs elsewhere, unemployment, school, welfare, relocate)

9. Has the recent slowdown in the oil and gas industry affected Abbeville/business?

   How has it/ have you responded?

A1.2 Questions (Displaced Workers Only)

A. Background

1. Date of birth
2. Sex
3. Race
4. Length of residence
5. Education
6. Length of employment at FOL
7. Marital Status
8. Description of family

B. How were you affected by the FOL plant closure? How did you respond?

C. How was your family affected? How did your family respond?

D. Did the FOL closure affect Abbeville? How did the community respond?

E. How do you think the city, parish, or state government responded?

F. After losing their jobs, where do you think most of the former FOL employees went?

G. Do you think that oil and gas industry- related companies hired any of the FOL employees? Why or why not?

H. If you again had the opportunity to work in a manufacturing plant similar to FOL, would you? Why or why not?

I. Has the recent slowdown in the oil and gas industry affected Abbeville? How has the community responded?

J. Why do you live and/or work in Abbeville?

K. Other people?

The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Minerals Revenue Management** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.

MMS Securing Ocean Energy & Economic Value for America