

THE SANTA BARBARA CHANNEL POST-PETROLEUM ECONOMY: ENVIRONMENTAL CONSULTING PROLIFERATES

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ABSTRACT

Through research on petroleum extraction and remediation in Santa Barbara, San Luis Obispo, and Ventura counties (the tri-counties), California, we find that one of the legacies of the petroleum industry and future growth areas in the region is environmental consulting. We hypothesized that the tri-county area's confluence of a stringent regulatory environment, a high level of environmental consciousness among its citizens (including a sizable activist contingent), and a history of extractive industry contributed to the proliferation of this kind of firm. This hypothesis was tested by creating an inventory of environmental consulting firms in the three counties, then comparing this region with areas similar along four operationalized variables: petroleum support firm density, population size, environmentalist sentiment, and industrial past. Findings suggest that the tri-counties in general and particularly the city of Santa Barbara have experienced growth in a sector of the oil economy that communities seem willing to embrace, while potentially polluting upstream segments of extraction and refining have been resisted, the hi-tech, professional, and environmentally conscious segments appear to thrive unimpeded.

INTRODUCTION

Through interviews and observations of the growing number of large and small post-petroleum remedial projects taking place around the tri-counties, we found that one of the legacies of the petroleum industry and future growth areas in the region is environmental consulting. Santa Barbara, in particular, has experienced growth in a sector of the oil economy it seems willing to embrace, while potentially polluting upstream segments of extraction and refining have been resisted, the hi-tech, professional, and environmentally-conscious segments appear to thrive unimpeded.

In addition to the permanent presence of large consulting companies (for example, Arthur D. Little, Dames and Moore), a number of smaller environmental consulting firms flourish in the tri-county region. Beyond these locally-based firms are those who have come to the region to produce environmental impact reports, apply cutting-edge environmental remedial strategies, develop new technologies for the clean-up of oil infrastructures, and aid in the abandonment of Santa Barbara Channel platforms. The use of innovative methods¹ are currently being applied to such post petroleum wastes as old oil sumps, underground spills and contamination, offshore platform abandonment, the decommissioning of refining facilities and tank farm storage units, and the survey of pipeline systems and thoroughways.

Because the area's petroleum production history is of a moderate scale compared to national and world standards, and because the population is limited, we found the proliferation of environmental consulting firms worthy of further investigation. We hypothesized that the tri-county area's confluence of a stringent regulatory environment, a high level of environmental consciousness among its citizens (including a sizable activist contingent), and a history of extractive industry, contributed to the proliferation of this kind of firm.

METHODS

To gain empirical insight into whether the density of environmental consulting was indeed a unique occurrence, we compiled an inventory of the firms that reside in cities of interest to us: Santa Barbara, Santa Maria, Ventura, and San Luis Obispo, California. Because such a list does not exist, our search for environmental consulting firms used an electronic yellow pages database which includes business Standard Industrial Classification (SIC) codes to generate one.

¹This is in juxtaposition to the traditional "dig it up and move it to a storage location." Many of the sites that have been found to need remediation—from contaminated land to ocean abandonments—are in fragile ecosystems which we now realize are easily damaged and can be slow to repair. Consequently, less stressful alternatives are being developed to produce cleanup regimes that are more benign than those that would "destroy the sites" in order to remediate them.

The codes utilized for this purpose were Environmental Engineering Firms (8711m) and Environmental Protection Organizations (8641C).²

Next, we compared our findings for these cities to cities throughout the country that match our cities at various levels: in the size of their local petroleum industry, in their community identity, in population size, and in their history with heavy industry. The cities we have used for the sake of comparison are: 1) “oil hub” cities (population less than 400,000): Bakersfield, CA; Shreveport, LA; Tulsa, OK; Oklahoma City, OK; Corpus Christi, TX; Galveston, TX; Lubbock, TX; 2) cities of similar socio-demographic, commercial character, environmental aesthetic, as well as being university towns (population less than 400,000): Santa Cruz, CA; Eugene, OR; Boulder, CO; and 3) and finally cities with industrial pasts other than oil (population less than 400,000): Flint, MI; Youngstown, OH. Our raw count of consulting firms shows Santa Barbara compares as or more strongly than both local cities and those selected for comparison (Table 1).

Table 1. Consulting and petroleum support firms.

	Environmental Engineering Firms: SIC 8711M, 8641C	Number of Petroleum Operators: SIC 7359L, 1629L, 1389	Ratio: Environmental Engineering by Oil Support Firms	U.S. Census Population	Ratio: Environmental Engineering by Population per 10,000
Tri-County Cities					
Ventura, CA	31	108	0.287	87,000	3.56
Santa Barbara, CA	48	8	6	86,154	5.57
Santa Maria, CA	11	36	0.306	67,012	1.64
San Luis Obispo, CA	14	3	4.667	42,433	3.30
Oil Hub Cities					
Bakersfield, CA	60	531	0.113	205,000	2.93
Shreveport, LA	23	249	0.092	191,558	1.20
Tulsa, OK	50	459	0.109	378,491	1.32
Oklahoma City, OK	2	22	0.091	46,985	0.43
Corpus Christie, TX	37	372	0.118	280,260	1.32
Galveston, TX	2	17	0.192	60,048	0.33
Lubbock, TX	10	52		193,565	0.52
University Cities					
Santa Cruz, CA	15	0	0	51,155	2.93
Eugene, OR	2	0	0	123,718	0.16
Boulder, CO	21	0	0	90,928	2.31
Former Industrial Cities					
Flint, MI	10	0	0	134,881	0.74
Youngstown, OH	8	0	0	87,405	0.92

As a point of comparison we then assessed the size of each of the “oil hub” cities in terms of their oil support infrastructures, hypothesizing that the larger this sector is, the greater the corresponding number of environmental consulting firms would be. To accomplish this we inventoried the oil support firms in these oil hub cities using the following SIC codes: Oil Field Equipment Supply And Rentals

(7359L), Oil Field Contractors (1629L), and Oil And Gas Field Services (1389). Using these SIC code listings, we generated a relatively reliable measure of petroleum support firms for each city. Figure 1 shows the total number of environmental consulting firms is seen side-by-side with the number of petroleum support firms in that city.

FINDINGS

As the bar graph in Figure 1 demonstrates, the cities of Santa Maria and especially Santa Barbara have their fair share of environmental consulting firms—in fact, a disproportionate share given the density of the industry in each of the cities of interest. The regional abundance of environmental engineering firms holds true even when we control for variables that might influence our results (the size of each city’s petroleum sector, population size) when we compare cities of similar socio-demographic character (university towns, environmentally conscious, tourist locations), as well as when we compared with non-petroleum industrial cities (of a similar population size). Furthermore, when we controlled for the number of petroleum support firms and population size by looking at the density of consulting firms (for example, by dividing the number of consulting firms by the city’s population and/or the number of oil support firms), the actual difference between the tri-county cities and the control groups is magnified. Figure 2 graphically represents the ratio of environmental engineering firms to the cities local petroleum support infrastructure. In Figure 3, one can see that even when the population size of these cities is accounted for, Santa Barbara has far and away the highest proportion of environmental engineering firms across cases.

This trend is also reiterated in the other tri-county cities of Ventura and San Luis Obispo, with a high proportion of consultants appearing in each. Ventura, while having fewer than Santa Barbara, still boasts more total consultants and more in proportion to its population size than similar cities used for comparison. As for the other tri-county city of interest, San Luis Obispo has the smallest share of the regions’ environmental consulting firms. Yet, given the size of its population (Figure 4), its local economy, its petroleum support sector, and proximity to Santa Barbara (which has a disproportionate share for its size), that San Luis Obispo has much of a consulting sector at all is a surprise.

²These inventories did not come without a certain amount of “lumping” of extraneous firms. Thus, we developed a three-part method to weed out those firms which did not fit our interests (our target was firms that sell their technical expertise as a product/service). First, we scanned entry names for exclusions (for instance, Landscapers Ltd.). Second, because a majority of the firms named had other SIC codes listed along with the codes targeted, we scanned those for exclusions. Firms were excluded if they included the following SIC code entries: Retail of any sort; irrigation systems; attorney services; landscape design; city and urban design; general contracting manufacture (of any type); rubbish removal; septic, sewer, drain installation and removal; asbestos removal; drilling outfits; equipment sales or rentals; fish hatcheries; hauling and trucking services; air, water, and solid waste management; specialty cleaning and sanitation; truck and car washing; pumps wholesale; machine rebuilds; if name includes “supply co.”; and real estate sales and management. Third and finally, all firms that had only one SIC code designation whose company name did not exclude them were included.

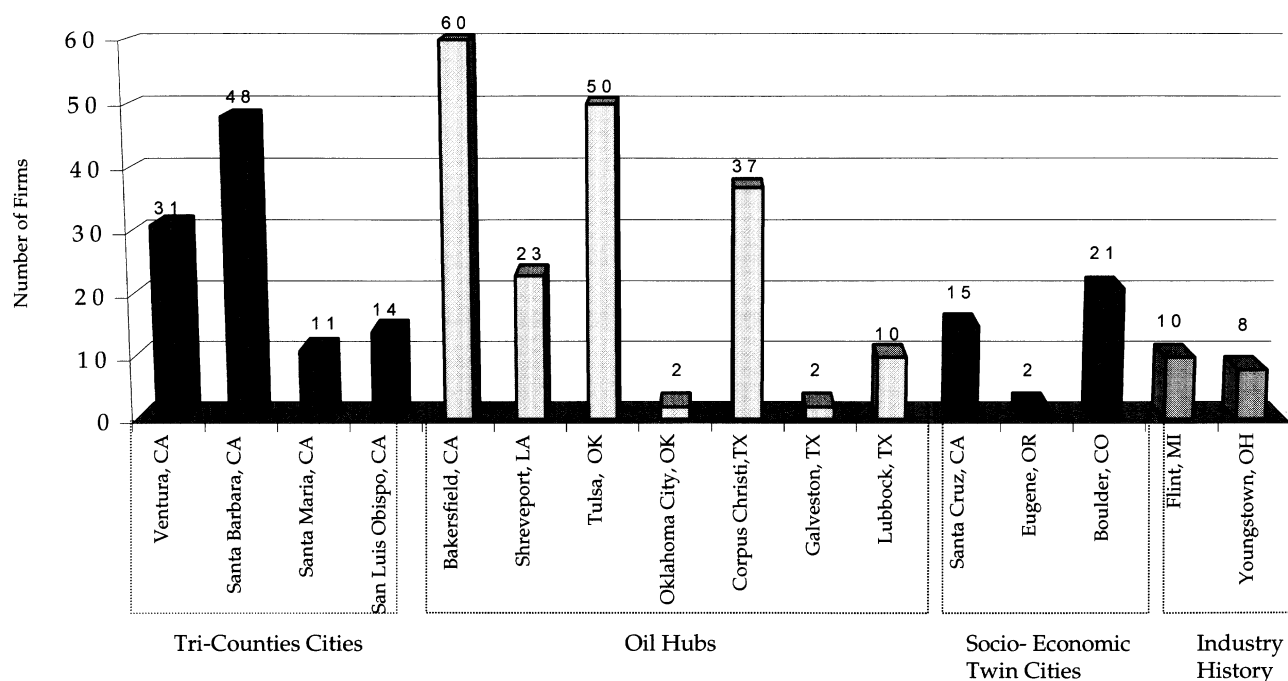


Figure 1. Environmental engineering firms.

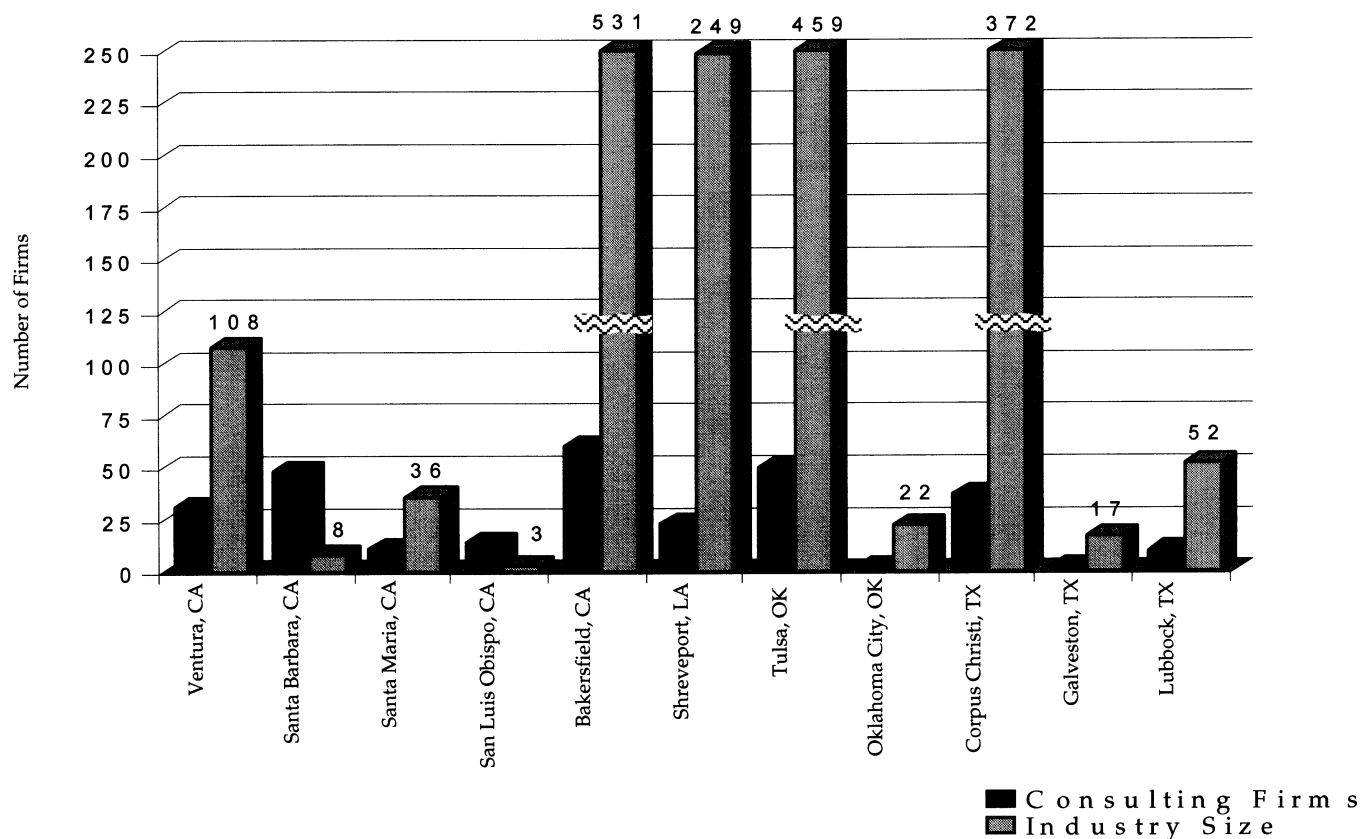


Figure 2. Environmental engineering firms and oil hub support firms.

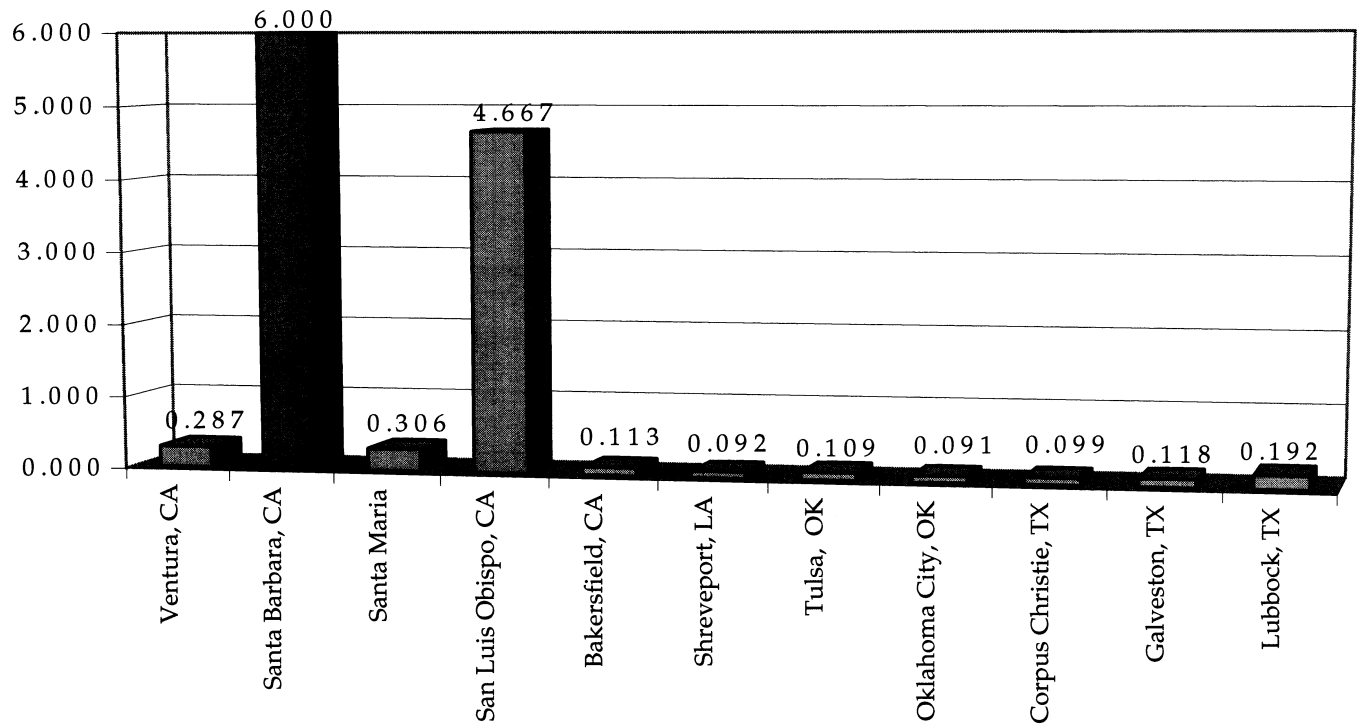


Figure 3. Ratio of environmental engineering to petroleum support firms.

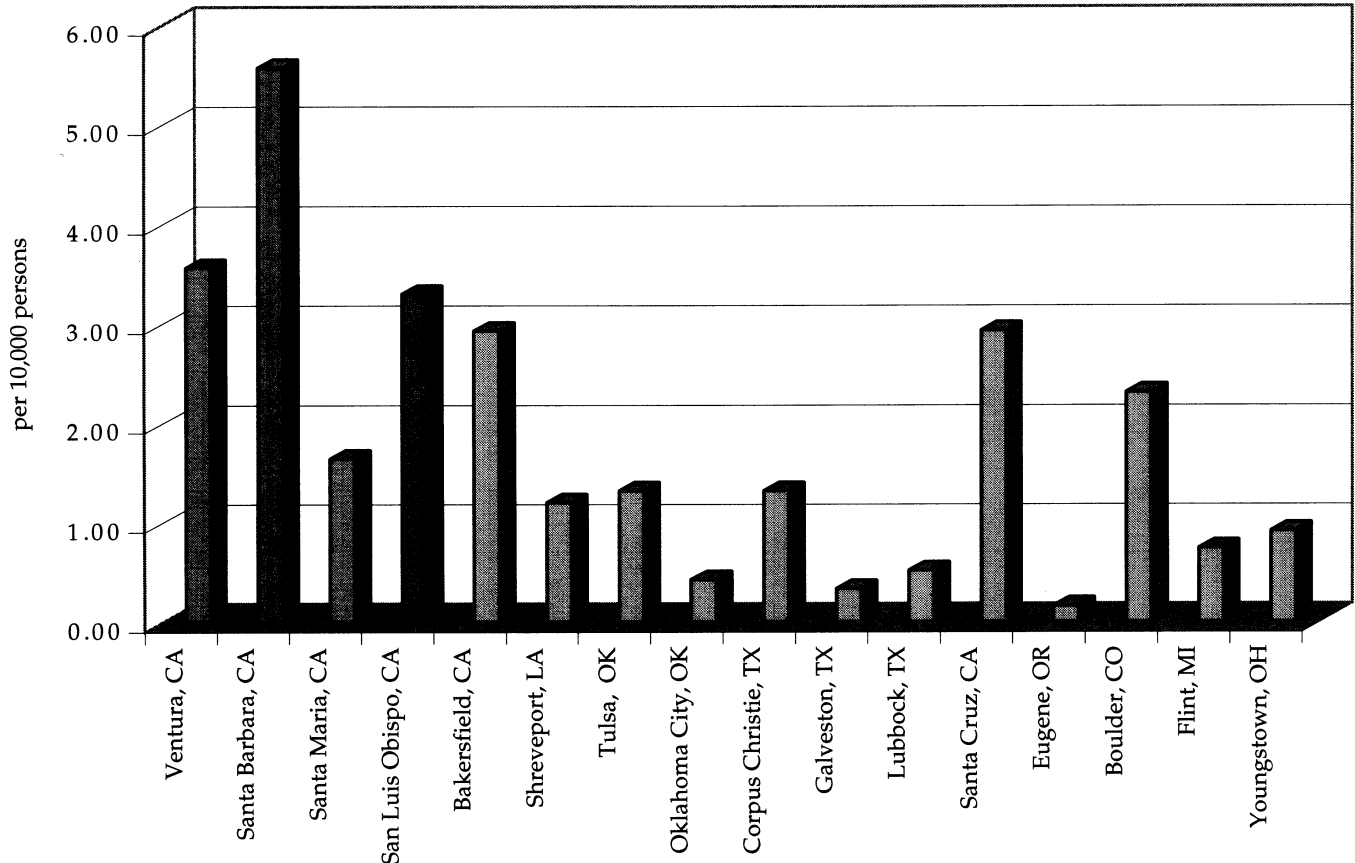


Figure 4. Ratio of environmental engineering firms to population size.

DISCUSSION

Based on a number of factors, Santa Barbara has seen a surprising amount of growth in its consulting sector. These factors would include resident concerns with regional aesthetics and a cultural connection with the surrounding natural environment, a university that supplies a labor pool of technical professionals, as well as proximity to petroleum's industrial machinations. When placed in conjunction with federal and state policies which call on agencies and extractive industries to submit environmental impact reports produced by impartial third parties (consultants), these factors have led to a burgeoning consulting sector in Santa Barbara.

We also speculate that the amenities offered by communities like Santa Barbara and San Luis Obispo attract

professionals, giving consulting firms an incentive to establish bases in these cities as they service a broader region. So-called "quality of life" factors, including cultural, educational (public schools as well as universities), and recreational resources (including the natural environment) aid firms in recruiting talented professionals to these areas. When located adjacent to areas that offer a significant amount of opportunity, in this case driven by a stringent regulatory climate and history of extractive industry, environmental consulting is a "good fit" with the cities of the Santa Barbara Channel. Because Santa Barbara and other Channel cities can attract environmental consulting firms with opportunity as well as amenities, we surmise that the consulting sector will continue to be a viable contributor to the local economy.