Hopeful Workers, Marginal Jobs

LA's Off-The-Books Labor Force

2005

ECONOMIC ROUNDTABLE
A Nonprofit, Public Policy Research Organization

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2005

Prepared for the Los Angeles
Economy Project under the auspices
of the City of Los Angeles

Daniel Flaming
Brent Haydamack
Pascale Joassart

ECONOMIC ROUNDTABLE
A Nonprofit, Public Policy Research Organization
315 West Ninth Street, Suite 1209, Los Angeles, California 90015
www.economicrt.org

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Table of Contents

Executive Summary....3
Introduction....3
What is "informal economy"?....4
Why should we expect to find informal employment in Los Angeles?....5
What evidence points to economic desperation as a driver of informal employment?....8
The gap between jobs reported by employers and people who report working....11
How many workers are employed in LA's informal economy....13
What is a low-range estimate of the number of county workers in the informal economy?....14
What is a high-range estimate of the number of county workers in the informal economy?....15
What is a mid-range estimate of the number of county workers in the informal economy in 2000?....16
What is a mid-range estimate of the number of county workers in the informal economy in 2004?....16
How many workers in the City of Los Angeles hold informal jobs?....17
What is the cost of informal employment to the public social safety net?....17
What role does gender play in the informal economy?....18
Why do immigrants participate in the informal economy?....20
How many informal workers are undocumented immigrants?....25
Undocumented workers broken out by City planning area....28
Industries that employ the informal labor force....29
In which industries do undocumented workers find jobs?....30
Which industries show up with unreported jobs?....31
How many unreported jobs exist and in what industries....33
Best estimate of informal employment in each industry....35
Conclusions....37
Next step – learning more about the progress, conditions and needs of immigrant workers....39
Data appendix....41
Description of tables....41
Table A, Estimated undocumented workers by industry, Los Angeles City and County, 2000....45
Table B, Indicators of informal employment in Los Angeles County industries..49
Table C, Indicators of informal employment in City of Los Angeles industries..53
Table D, Integrated industry estimates of informal employment in Los Angeles City and County, 2000....57
Endnotes....61

Tables

1 Estimated informal workers in Los Angeles City and County....17
2 Foreign born population by region....21
3 Estimated undocumented immigrants by state, 1990 and 2000....26
4 Projected employed undocumented workers in California, LA County, City....28
5 Industries estimated to account for the most unreported jobs....34
6 Los Angeles County industries estimated to have unreported jobs grouped by average length of training for industry work force....34
7 Best estimate of total informal employment by industry sector....36
A Estimated undocumented workers by industry, LA City and County 2000....45
B Indicators of informal employment in Los Angeles County industries....49
C Indicators of informal employment in City of Los Angeles industries....53
D Integrated industry estimates of informal employment in LA City and County...57

Figures

1 Monthly employment for the City of Los Angeles, 1990-2003....5
2 Monthly employment for Los Angeles County, 1990-2004....6
3 Legal immigration to Los Angeles County, 1984-2000....6
4 Los Angeles County labor force....8
5 Estimated hours worked in 1999 by income level and year of immigration....9
6 Labor force status of working age (16-64) residents of LA County in 2000....10
7 Employed worker by month, ES-202 and CPS for LA County 1983-2004....11
8 Balance of California monthly employment, 1983-2004....12
9 United States monthly employment, 1983-2004....12
10 Gender shares of non-citizen workers by industry for industries projected to employ the most informal workers in Los Angeles County....18
11 Earnings by gender in 1999 for non-citizen workers in industries projected to employ the most informal workers in Los Angeles County....19
12 Number foreign-born persons without citizenship by census tract, LA County..22
13 Number of foreign born persons without citizenship by census tract, LA City...23
14 The Los Angeles labor market, immigrants, and the informal economy....24
15 Estimated proportion of population comprised of undocumented foreign born persons for the US, California, LA County, and LA City planning areas....28
16 Estimated undocumented foreign born population by LA City planning areas...29
17 Projected undocumented workers by top 20 industries for LA County, 2000....30
18 Projected percent undocumented workers in top industries, LA County, 2000 .31
19 Estimated informal LA County Employment based on industry data anomalies .33
20 Best estimate of informal employment within industries, 2000....35
21 Industries in which the best estimate of informal employment accounts for the highest proportion of industry jobs....36

Executive Summary

There is extensive evidence of a growing informal labor force in Los Angeles City and County, along with stagnant employment in the formal labor market. Between 2000 and 2004, the working age population in the county grew by 4.9 percent, but the number of wage and salary jobs (i.e., the formal economy) declined by 2.3 percent. This trend in Los Angeles' economy is in distinct contrast to national trends. When we look at the United States economy we see a much narrower gap between the number of household members who report being employed and the number of workers that employers report having on their payrolls.

The most compelling reason for workers to accept informal jobs is economic desperation. We have evidence that many working-poor residents of the city and county, including US citizens, accept jobs in the informal sector, but the group of workers who have the greatest difficulty finding employment is recent immigrants. The evidence suggests that non-citizen immigrants are a major component of the informal labor force. Foreign-born persons made up an estimated 11 percent of the US population, 36 percent of Los Angeles County's population, and 40 percent of Los Angeles City's population in 2000. We project that undocumented immigrants account for 25 percent of the foreign-born population of the city and 23 percent in the county.

Our best estimate is that on a typical day in 2004 there were 679,000 informal workers in the county and 303,800 in the city. These workers are estimated to account for 15 percent of the county labor force and 16 percent of the city's labor force. Undocumented workers are estimated to make up 61 percent of the informal labor force for the county and 65 percent for the city.

If we use the projection put forward in this paper that on a typical day there are 679,000 informal workers in Los Angeles County, and if we assume that the annualized wage for an informal job is $12,000, this represents $8.1 billion in annual payroll. It means that each year the public sector is shortchanged by $2 billion in unpaid employee benefits and insurance that is mandated by law for underwriting the public's costs in providing a minimal social safety net for workers. These costs are not avoided simply because the responsible parties fail to pay them. Instead, costs are shifted to other segments of society and the social safety net becomes more precarious.

Informal employment is more prevalent in low-skill jobs. Informal jobs are estimated to outnumber wage and salary jobs in low-skill industries where the average job can be learned in less than three months. One strategy for curtailing

the informal economy is to upgrade the skills of workers and build a better-trained labor force

Informal jobs emerge in large measure out of the hope and energy of workers who want to be self-sufficient but who are economically desperate. Undocumented immigrant workers whose low-cost labor has helped the region avert even worse economic stagnation are a central component of the informal economy. The status and future of undocumented workers must be addressed as part of any substantive strategy for curtailing the informal economy. We recommend three areas of immediate action to reduce informal employment, and a fourth area of longer-term research to understand the progress, conditions and needs of immigrant workers.

1. Provide an effective combination of incentives, technical assistance and sanctions that will induce informal employers to move into the formal economy. Tools include: enforcement of existing labor and tax laws, low-interest loans, targeted worker training, and technical and legal assistance for informal employers seeking to bring themselves into compliance with labor laws and tax reporting requirements.

2. Provide an effective combination of skill development, education, citizenship assistance, and enforcement of labor laws that will enable informal workers to move into the formal economy and become self-sufficient. Tools include: identifying fair eligibility criteria for citizenship, giving standing to immigrant workers with long-term employment histories, encouraging undocumented workers to file tax returns and establish positive track records, strengthening immigration controls to prevent continued large-scale undocumented immigration, and increasing the availability of English language, education and vocation training programs.

3. Respect union-organizing campaigns among low-wage workers as a means of formalizing the employment conditions of informal workers and raising the wage floor to bring workers above the poverty threshold. Tools for safeguarding worker rights include: national labor, occupational safety and civil rights laws, local job protection ordinances for public sector contractors, and local living wage ordinances.

4. Investigate unanswered questions about the jobs, skills, economic histories, and working conditions of LA's undocumented workforce. Questions include: What share of jobs is in the informal economy? How much economic progress are workers achieving? Is there growing job insecurity? Are they able to acquire new skills needed for better jobs? What eligibility criteria for citizenship do non-citizen immigrants see as being fair?

Introduction

Los Angeles City and County are in an era when the formal economy, with jobs that provide worker protections and payroll benefits, is standing still while growth occurs through under-the-table, off-the-books employment. This growing informal economy produces a wide range of legal goods and services such as apparel, food products, construction, and private household care, while ignoring basic labor and tax laws. The presence of this type of employment as a significant, growing, and possibly permanent part of our economy raises concerns about the ability of the working poor to improve their circumstances and achieve economic sustainability. It is also a compelling reason for us to rethink a regional economic trajectory that fosters tenuous growth on the margins of the economy and brings greater poverty and inequality.

A number of researchers have focused on the presence of an informal economy in industrialized countries, and specifically in urban areas like Los Angeles.[1] Most scholars agree that the phenomenon can be linked to economic restructuring towards more flexible modes of production, deregulation of the economy, and globalization of economic activity including immigration and increasing international flows of goods and capital. However, there is disagreement regarding the best approach to measure informal economic activities. This is due to the hidden nature of activities that cannot be directly identified in official data sources. To address this issue, three different approaches have been used: (1) examining inconsistencies between different sets of data such as jobs and employment, total and cash transactions,[2] (2) identifying individuals in public use data sets based on employment characteristics associated with informality such as self-employment or industries with a high proportion of non-citizen immigrants,[3] and (3) conducting ethnographic studies based on direct interviews of informal workers in specific areas and industries.[4] While all these approaches rely on debatable assumptions regarding the characteristics of informal employment, together they provide a clearer picture of the extent and characteristics of informal labor.

This paper summarizes available evidence about Los Angeles' informal economy, updating an earlier paper that was released in 2002 under the title, *Workers Without Rights*. In this expanded paper we break out data from Los Angeles County to show estimates of informal employment in the City of Los Angeles. We present information about labor force growth and job stagnation in the Los Angeles economy that suggests a high proportion of new workers find employment in the informal sector. We then highlight informative disparities between different types of employment data, indicating the potential presence of informal jobs. We also consider the role of immigrants in the informal economy.

What is the "informal economy"?

The term "informal economy" is marked by wide ranging variation in its definition. Economists have defined it as unregulated cash exchanges. Anthropologists and sociologists often relate the informal economy to household coping strategies, including both cash and non-cash exchanges.[5] Clearly, such definitions can include a broad range of activities both legal and illegal. Labels have been used to describe these exchanges include:

- black economy
- clandestine economy
- hidden economy
- irregular economy
- invisible economy
- non-official economy
- shadow economy
- sub-economy
- submerged economy
- subterranean economy
- underground economy
- unrecorded economy

In this paper we are concerned with measuring jobs that do not show up in formal data sources and that operate outside of established labor laws. They are jobs that would otherwise be considered legal but are not effectively regulated. Throughout this paper we use the terms informal economy, informal employment, and informal sector interchangeably to refer to this category of employment relationships.

In contrast to informal employment, formal employment comprises jobs that exist within the legal boundaries set by local, state and federal agencies. These include laws relating to the health and safety of workers, minimum wages, rights to organize and bargain collectively, prohibitions against discrimination, restrictions on child labor, documentation of immigration status, mandatory payroll benefits, and tax reporting. In short, they are jobs in which employers recognize and respect labor and tax laws. Jobs in the informal economy are not effectively regulated—they are hidden "under-the-table" and "off-the-books." They can give rise to abuses by employers who fail to respect the basic rights of workers. Furthermore, they shortchange the social safety net, and create an unfair disadvantage for competing businesses that comply with the law.

Given that we are interested in employment relationships, we do not address the various sorts of criminal activities that are a subset of the informal economy. These activities include the drug trade, black market trade in stolen goods, and the like. Also, we do not investigate the consumption patterns of residents and how such patterns might identify the scope and location of some segments of the informal economy.

Why should we expect to find informal employment in Los Angeles?

To gain insight into the nature and scope of the informal economy, it is helpful to understand the context in which it arises. Informal work does not arise by accident. It may emerge for any number of different reasons including competition for resources, cost competitiveness, need for employment flexibility, and lack of other opportunities. However, it is our assessment that Los Angeles' informal economy is largely an outgrowth of the lack of opportunities for residents in the formal economy and a survival strategy for residents during times of economic adversity.

The recent economic history of Los Angeles shows a region undergoing extensive change. In 1990 the US national economy underwent a recession. Nationally, it lasted only eight months, beginning in July 1990 and ending in March 1991. However, if one measures the impact of the recession by regional changes in employment and unemployment, the US recession of 1990 began a period of economic contraction that lasted nearly five years in Los Angeles.

Monthly employment in the City of Los Angeles between January 1990 and January 2004, as measured by the Current Population Survey, is shown in Figure 1. The

Figure 1
Monthly Employment for the City of Los Angeles, 1990 - 2003
Source: US Bureau of Labor Statistics, Current Population Survey &
National Bureau of Economic Research

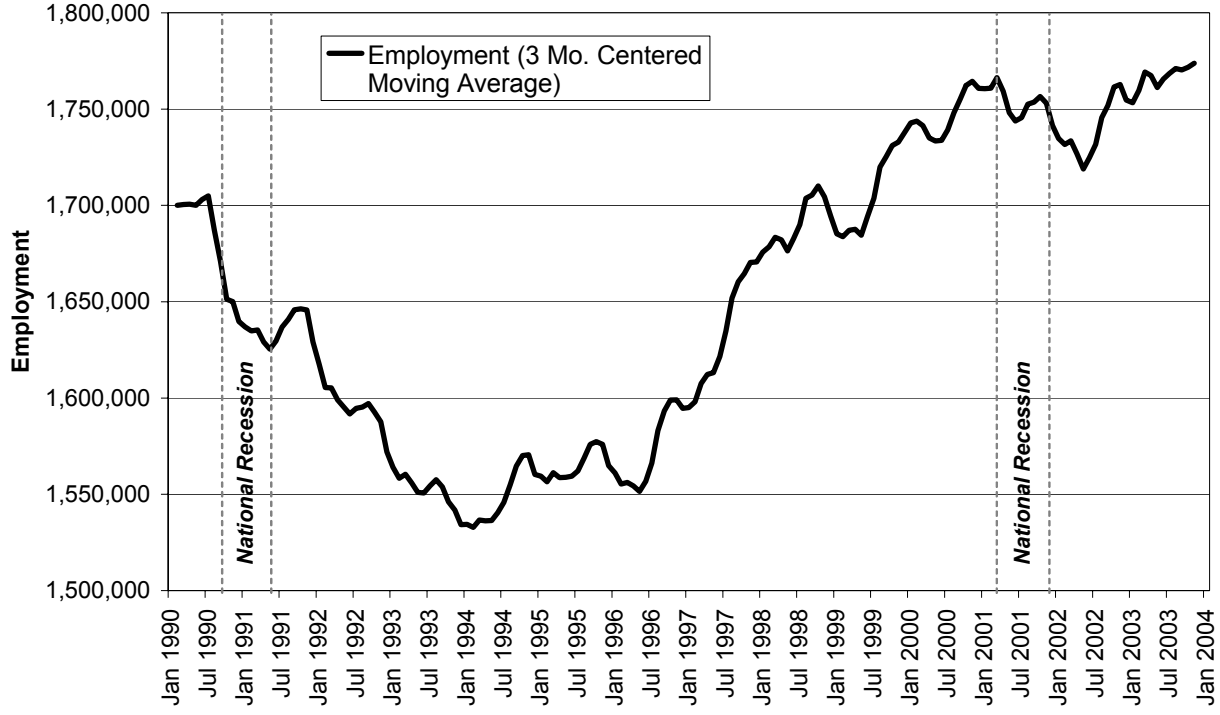


Figure 2
Monthly Employment for Los Angeles County, 1990 - 2004
Source: US Burea of Labor Statistics, Current Population Survey &
National Bureau of Economic Research

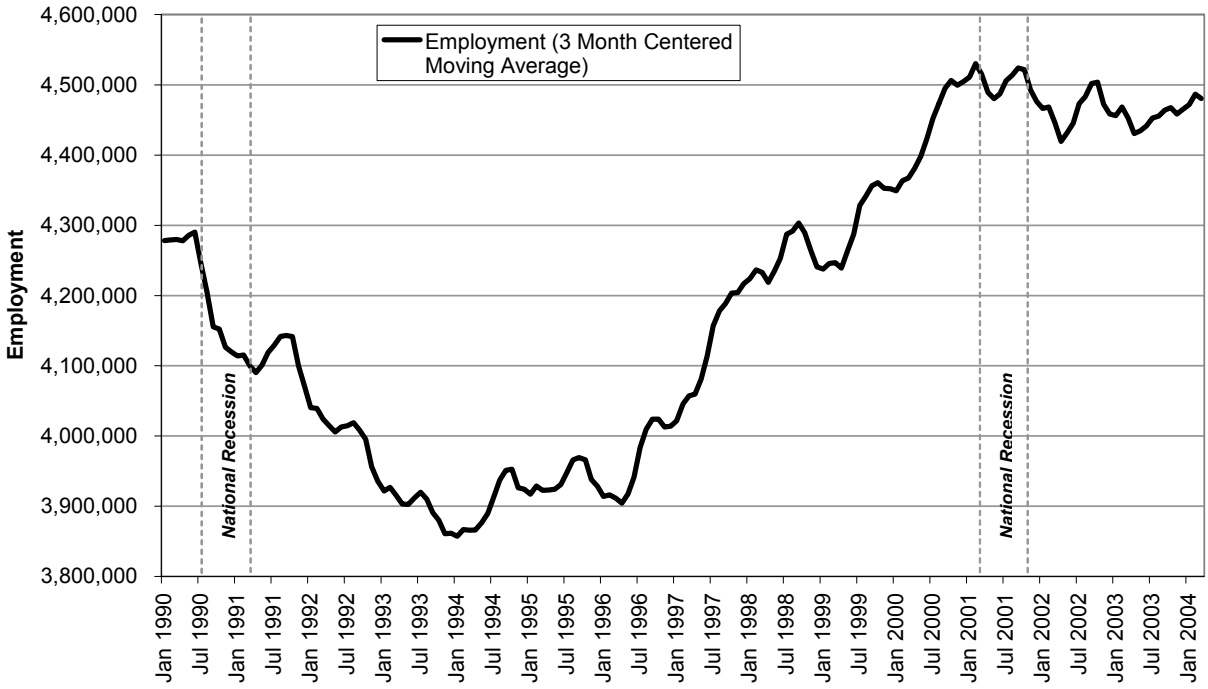
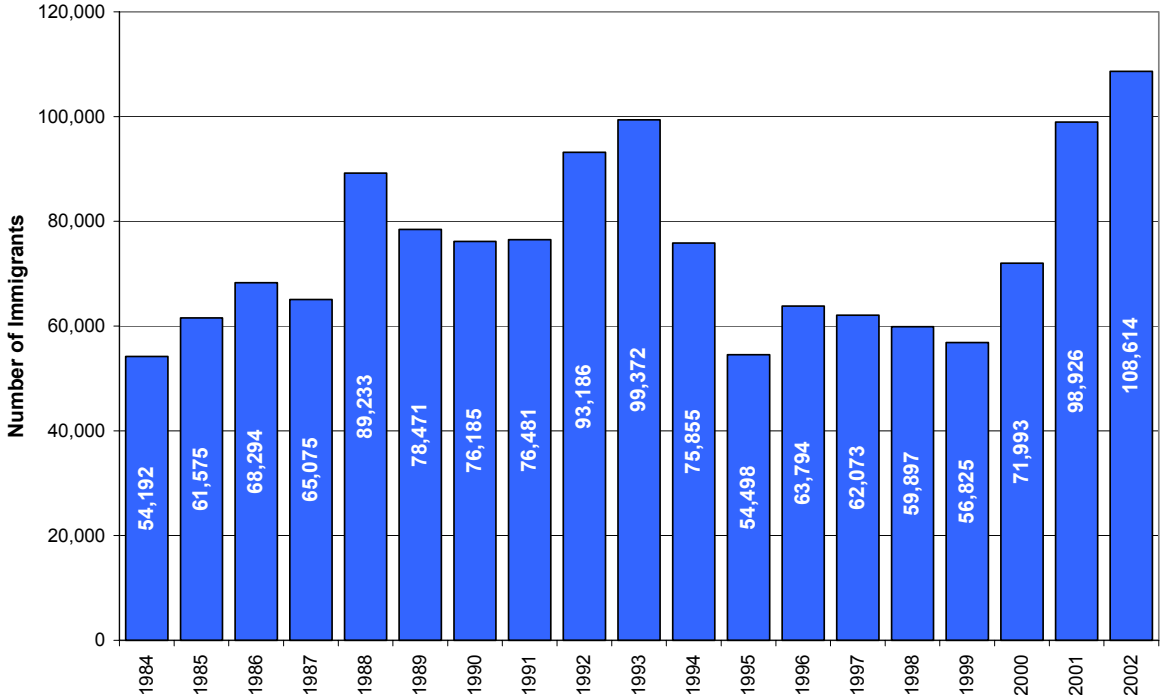


Figure 3
Legal Immigration To Los Angeles County, 1984 - 2000
Source: California Department of Finance, Demographic Research Unit



Current Population Survey is a national telephone survey of households conducted by the US Census to estimate the employment status of each household member at the regional, state and national levels. The data are reported by workers contacted through a random survey of households rather than employers, and thus include workers in the informal economy. The dotted lines in Figure 1 highlight the national recession periods. Unfortunately, job loss in Los Angeles did not cease with the end of the national recession in 1991. Los Angeles continued to lose jobs through to 1994. Between July 1990 and January 1994, the City of Los Angeles saw employment decline by 181,000. Los Angeles did not fully recover these jobs until July 1999. During this same period the working age population in the City of Los Angeles expanded by 86,000 people—an increase that was not absorbed by the formal labor market and perhaps led some to turn to informal work for economic survival.

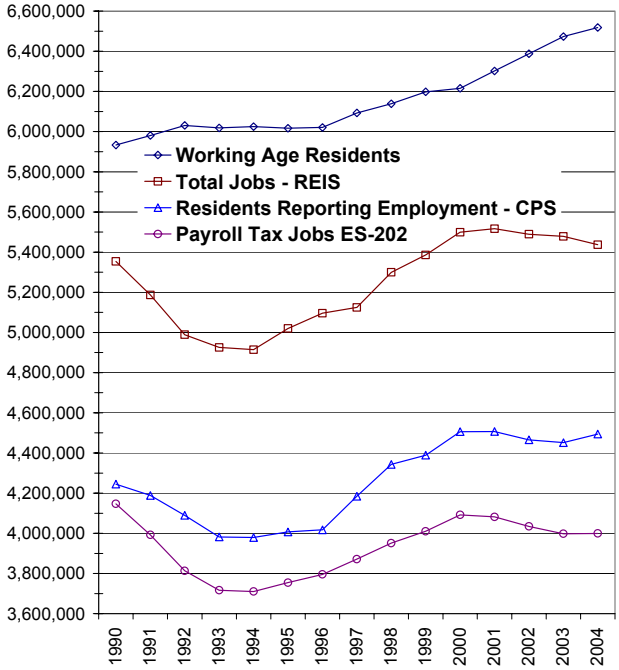
A similar story holds true for the County of Los Angeles. Employment in Los Angeles County between 1990 and 2004, as reported in the Current Population Survey, is shown in Figure 2. Between July 1990 and January 1994, employment declined by 429,000 jobs or 10% of jobs in the county. According to CPS data, the county did not recover these jobs until 1999.

Despite the shortage of jobs in the county the working age population increased and immigrants continued to arrive. We define the working age population to be people between the ages of 16 and 64 years. The annual working age population of Los Angeles County from 1990 to 2004 is displayed later in Figure 4. This population declined slightly in the early 90's in the aftermath of the recession. As employment increased in the later half of the decade the working age population expanded. Between 1995 and 2004 the working age population in the county grew by 437,000 people or 7 percent.

Throughout the period of job loss in the early 1990s, immigrants continued to settle in Los Angeles County, as shown in Figure 3. The flow of immigrants did decrease in the mid to late 1990s with the downturn in the regional economy. However, the number of arrivals surged again in 2000. The number of annual immigrants nearly doubled between 1999 and 2002. The 2002 cohort of immigrants is the largest group to enter the county since the mid-1980s.

Despite the apparent recovery of overall employment levels (when we include informal jobs) in the city and county, employer reports of employment show a significantly different picture. Between 1990 and 2003, the annual average jobs reported by the State of California Employment Development Department for the county (which account for most jobs in the formal economy) declined by 3.6 percent as shown later in Figure 4. Jobs reported to the Employment Development

Figure 4
Los Angeles County Labor Force
Working age (16-64) population Calif. Dept. Finance; Monthly jobs US Bureau of Economic Analysis; Monthly employment Current Population Survey; Monthly wage and salary jobs Califiornia Employ. Dev. Dept.



Department by employers peaked at 4.1 million in 1990 and have not surpassed or even matched that level since. The California Employment Development Department's employment records are considered to be the most reliable source of employment data for California. This data is based on all wage and salary employment reported by employers in their payroll tax submissions to the State. One can wonder why there is a disparity between data reported by workers in the Current Population Survey and that reported by employers in payroll tax data from the state. Where did the additional workers find jobs? As we discuss later, there are a number of possible explanations for the gap between employment and reported jobs. However, strong evidence from a variety of sources suggests that much of this differential is explained by jobs that people have found in the informal economy – jobs not reported by businesses in payroll tax records and therefore not shown in official employment data.

What evidence points to economic desperation as a driver of informal employment?

In the absence of good jobs or legal residency status, many workers will accept informal employment as a survival strategy, even if mandated protections and benefits are missing. Within Los Angeles there are exceptionally high levels of economic desperation in specific segments of the labor force that may serve to drive workers towards informal jobs.[6] We see two major trends. First, there appears to be growing overall scarcity of jobs of any kind for Los Angeles County's labor force. Second, immigrants, especially recent immigrants, experience the greatest difficulty in obtaining work.

If we just examine the data for 2000 to 2004 in Figure 4, we see four major trends:

1. The *working-age* (16-64 years) population grew 4.9 percent, effectively increasing the size of the labor force and expanding competition for jobs in the region.[7]

2. The average monthly number of *jobs of all types* (as reported by the Bureau of Economic Analysis in its REIS data series) declined 1.1 percent.[8] The decrease in the total number of jobs while the working-age population increased suggests that a declining share of the potential labor force was able to find work in any given month.

3. The number of Los Angels County *residents who reported holding jobs* through the Current Population Survey (CPS) survey declined 0.3 percent.[9] One possible explanation for a smaller decline in the number of people reporting employment than in the total number of jobs shown by REIS data is that fewer workers were able to stitch together multiple part time jobs, resulting in greater under-employment rather than greater unemployment. It is also probable that the CPS under-counts some of the workers identified by REIS – an issue that we explore later at greater length.

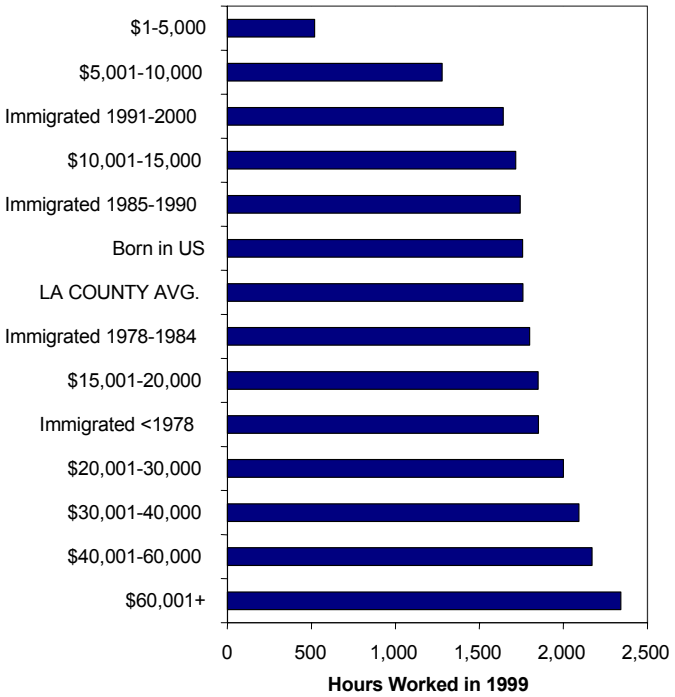
4. The number of people working in *payroll tax jobs* declined 2.3 percent – more than any other category of employment – indicating that the formal economy (which is mostly wage and salary jobs for which payroll taxes are paid) accounted for a steadily declining share of workers.[10]

In addition to a growing working-age population, the county's welfare-to-work program has increased the supply of labor in the region by raising the level of job seeking and job finding by welfare parents. From 1990 through 2001, over 1,000,000 welfare parents en-

Figure 5

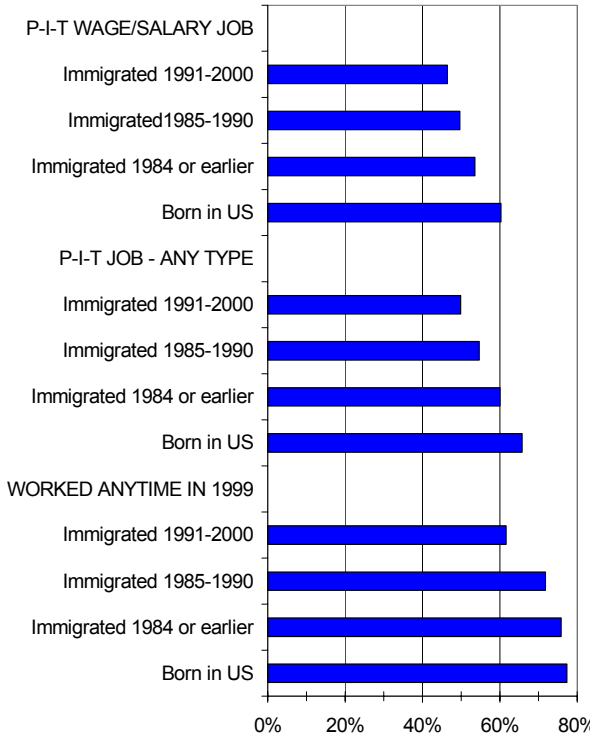
Estimated Hours Worked in 1999 by Income Level and Year of Immigration

Census 2000 PUMS 5% data - LA Co. residents employed in 1999



tered the labor market. On any given day these welfare workers make up one-eighth to one-tenth of the county labor force, and one-third of its job seekers. The Economic Roundtable's review of pre- and post-welfare-to-work employment records indicates that half of this employment effect is attributable to the welfare-to-work program, and that this effect is long lasting.[11] This suggests that in any given month there are about 225,000 more welfare parents working in the county than would have been the case without the welfare-to-work program.

Figure 6
Labor Force Status of Working Age (16-64) Residents of LA County in 2000



By examining data from the 2000 Census we can identify the segments of the labor force that experience the greatest difficulty finding work, and consequently the most economic desperation. The Census asked workers who held jobs in the preceding year (1999) how many weeks they had worked during the year and how many hours they usually worked each week. By multiplying weeks of work by hours of work per week we can estimate total annual hours of employment for different groups of workers. This measure of the amount of annual employment is shown in Figure 5 for workers in different income groups as well as workers who immigrated to the US in different time periods.

What we see are two very clear progressions based on annual hours of employment. First, workers with higher earnings work more hours; workers with very low earnings work very few hours. Second, workers who immigrated to the US over the past decade (1991 to 2000) and who found any work during 1999 worked an average of 1,643 hours during the year, compared to 1,759 hours for the average worker in the county. Another way of illustrating the greater difficulty that recent immigrants face in obtaining work is that immigrants entering the US since 1991 make up 17 percent of workers earning under $10,000 a year, but only 11 percent of the overall labor force.

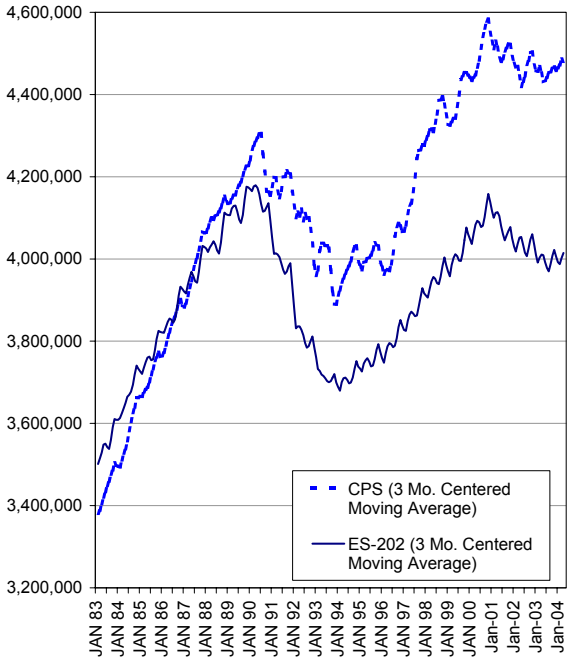
The difficulty recent immigrants have in finding a job is confirmed by looking at employment rates, as shown in Figure 6. Forty-six percent of working-age

immigrants who entered the US after 1990 had point-in-time wage or salary jobs (i.e., a job at the time of the 2000 Census), compared to 54 percent of workers who entered the US before 1985, and 60 percent of workers born in the US. This pattern of the lowest employment rate for recent immigrants and the highest employment rate for workers born in the US holds true when we look at the percent of the working age population that had any type of point-in-time job, as well the percent that worked any time in 1999. Recent immigrants have the lowest employment rate, creating especially acute economic pressures for them because most are not eligible for any type of public welfare benefits that would ensure a minimum level of income.

The gap between jobs reported by employers and people who report working

Data on employment and jobs is gathered from employer reports as well as from surveys of residents. Differences in these employment numbers can indicate the presence of unreported informal jobs, especially when more people report working than employers report jobs. There is a conspicuous gap of exactly this sort between resident-reported employment from the Current Population Survey (CPS) and employer-reported jobs from payroll tax information collected by the California Employment Development Department (ES-202 data).

Figure 7
Los Angeles County Monthly Employment 1983-2004
Source: California Employment Development Department



Within California and especially Los Angeles the number of people who reported working at a job is higher than the number of jobs reported by employers.[12] Data for the county is displayed in Figure 7, showing a gap that has widened steadily over the past fourteen years.

Data for the balance of California and for the US are displayed in Figures 8 and 9. As with the county, the number of workers who report having a job is greater than the number of jobs reported by employers, but the gap is smaller than in Los Angeles, and began widening in about 2000, whereas in

Los Angeles it began widening a decade earlier.

Before we attribute the gap between working residents and employer-reported jobs to the informal economy we need to consider other potential explanations linked to differences between the two data sources. The ES-202 jobs data comes from employer payroll tax reports and does not include self-employed workers, while the CPS survey of residents does. Thus, the higher count in CPS data might be explained by the fact that Los Angeles County has an unusually large share of self-employed workers. Indeed, according to CPS data, in 2000, 13 percent of Los Angeles County's workers were self-employed, compared to 10 percent in the rest of California, and 6 percent in the United States. However, it is important to note that self-employment has often been associated with informal economic activity because it offers more flexibility and is typically less accountable than wage and salary employment. In fact, a number of researchers have used self-employment as an estimate of the informal economy.[13] In Los Angeles, higher rates of self-employment are probably linked to the region's vibrant ethnic entrepreneurship, which ethnographic studies have shown to rely heavily on informal labor.

Figure 8
Balance of California (excluding LA Co)
Monthly Employment 1983 - 2004
Source: California Employment Development Department

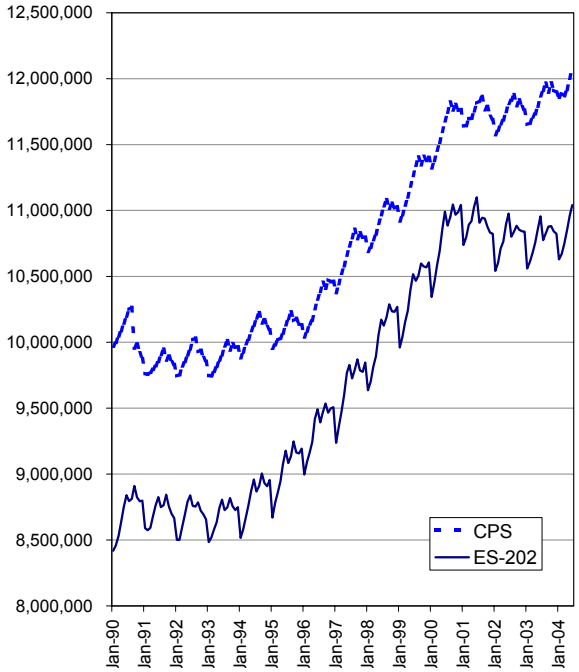
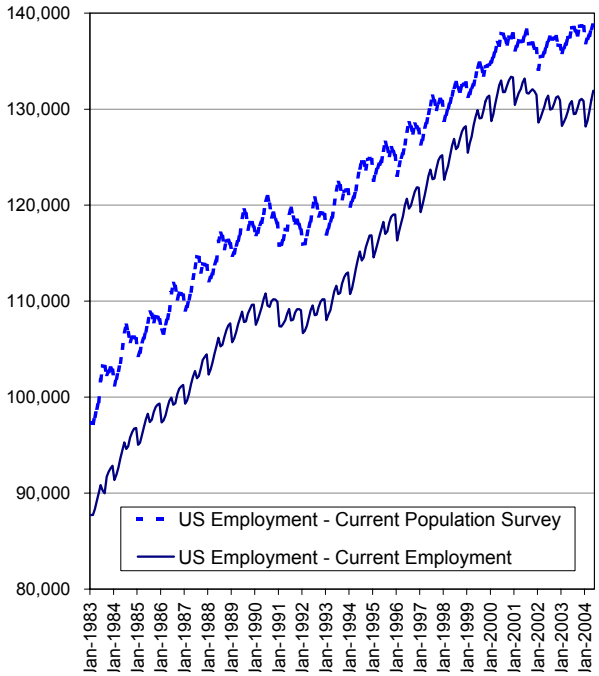


Figure 9
United States Monthly Employment
1983 - 2004 *(in thousands)*
Source: US Bureau of Labor Statistics



Another potential explanation is that employer-reported jobs are

based on the place where the employer is located, whereas resident-reported jobs are based on the place where the worker lives. Commuting patterns in and out of the county can generate a difference between the two data sets. For instance, in labor exporting counties that have a high proportion of people who commute into other areas for work, the number of workers (as recorded in the CPS) will be higher than the number of jobs (from the ES-202). This is likely to be the case in suburban counties like Ventura, Riverside, and San Bernardino.[14] However, Los Angeles County has traditionally been an importer of labor, attracting many commuting workers residing in the neighboring counties.[15] Therefore based on commuting patterns, we expect the number of employer reported jobs to be higher than employment reported by residents. That we find the opposite suggests that other forces are at play, keeping jobs "off-the-books."

An additional discrepancy is related to the fact that the CPS only counts employed persons once, regardless of the number of jobs they hold, while ES-202 data counts each job. Considering that in 2000, 4.2 percent of all jobs in Los Angeles County were the second, third or fourth jobs held by workers with multiple jobs, we would expect the ES-202 data to record higher employment than is shown by the CPS. Based on this estimate of multiple job holders, in 2000, 4,590,681 jobs would be required in Los Angeles County to match the 4,407,644 annual average number of workers recorded in the CPS. This is 512,681 more jobs than employers report providing in their payroll tax reports.

In sum, self-employment, the commuting patterns of workers, and workers that hold multiple jobs do not explain the gap between the number of residents who report that they are employed and the number of jobs that employers report providing. This suggests that a large number of jobs are left unreported in official employment statistics because employers fail to respect labor, safety and health, tax, and/or immigration laws, and hide them from law enforcing agencies in order to maintain their fraudulent competitive advantage.

How many workers are employed in LA's informal economy?

Based on an analysis of anomalies in employment data sets that indicate unreported employment, we can generate reasonable estimates of the upper and lower limits of a range of informal employment in 2000, the year of the US Census. And based on growth in the working-age population we can update our estimate to reflect 2004 data.

What is a low-range estimate of the number of county workers in the informal economy?

To produce a low-range estimate of the number informal workers, we compare the number of jobs that Los Angeles County employers reported providing in April 2000 to the number of Los Angeles residents who reported being employed in the April 2000 Current Population Survey. To make an accurate comparison we have to adjust both data sets to represent wage and salary workers who live and work in Los Angeles County through the following steps.

For the employer-reported data, which represents the number of wage and salary jobs located in Los Angeles County we:

1. Convert the number of jobs to number of workers by subtracting 4.2 percent of jobs that represent additional jobs held by multiple jobholders from the 4,078,000 wage and salary jobs in the county.[16]
2. Subtract 10.5 percent of workers who, according to the 2000 US Census, reside outside of LA County and commute into the county to work.[17]
3. This leaves us with 3,497,000 wage and salary workers who lived and worked in LA County in April 2000.

Turning to the CPS data we:

1. Reduce the 4,407,600 county residents who report being employed in April 2000 by 7.4 percent to remove self-employed persons.[18]
2. We subtract another 7.2 percent of employed county of residents who commute out of the county for their jobs.[19]
3. This leaves us with 3,788,700 people who lived in Los Angeles County and worked in wage and salary jobs located in the county in 2000.

To produce the low-range estimate of informal workers in 2000, we:

1. Subtract the modified ES-202 estimate of 3,497,000 workers from the modified CPS estimate of 3,788,700 workers to identify a gap of 291,700 apparently informal workers who live and work in the county.
2. Increase this core group of informal workers by 10.5 percent, the difference between people who live and work in the county and the total county workforce when we include people commuting across county lines, to get a **low-range estimate of 322,400 informal workers in Los Angeles County in 2000.**

Even this conservative estimate is startling. The following comparisons put this estimate in context:

- The low-range estimate represents enough informal workers to fill all of the seats in the Rose Bowl over 3.5 times.

- It is more than the combined populations of the cities of El Monte, Pasadena and Santa Monica.

What is a high-range estimate of the number of county workers in the informal economy?

The low-range estimate of informal workers probably is incomplete because it rests on the assumption that the Current Population Survey accurately samples workers in the informal sector, including very poor undocumented immigrants. Despite the best efforts of the Census Bureau, it is much harder to collect data from an "invisible" population than from the surrounding visible population. Some of the reasons why the CPS survey might leave out a segment of Los Angeles' informal workers include:

- Housing units occupied by many autonomous adult workers, the CPS refers to this type of error as "within-housing unit omissions"
- Housing that is not approved for human occupancy and not included in mailing lists or housing stock inventories, e.g., garages, the CPS refers to this as "frame omissions"
- Lack of housing stability because of frequent moves
- Absence of telephones
- Linguistic and cultural isolation, the CPS refers to this as "response error"
- Disinclination to provide information to government representatives, the CPS refers to this as "non-response error"

To produce a high-range estimate of the number informal workers, we compare the number of jobs that Los Angeles County employers reported providing in April 2000 to the average monthly employment in Los Angeles County in 2000 identified by the US Bureau of Economic Analysis. To make an accurate comparison we have to adjust both data sets to represent wage and salary workers in Los Angeles County through the following steps.

For the employer-reported data, which represents the number of wage and salary jobs located in Los Angeles County we:

1. Repeat the first step from the low-range estimate of converting the number of jobs to number of workers by subtracting 4.2 percent of jobs that are the additional jobs held by multiple jobholders from the 4,078,000 jobs in the county.
2. This leaves us with 3,908,000 wage and salary workers in Los Angeles County in April 2000.

Turning to the Bureau of Economic Analysis REIS data we:

1. Convert the number of jobs to number of workers by subtracting 4.2 percent of jobs that are held by multiple jobholders from the 5,499,000 average monthly jobs in the county identified by the BEA.
2. Reduce the number of workers by 7.4 percent to remove self-employed persons.
3. Reduce the estimated number of wage and salary workers by 0.04 percent to reflect the difference between the employment level in April 2000 and the 2000 annual average employment shown in BEA data.[20]
4. This leaves us with an estimated 4,881,200 people working in wage and salary jobs in Los Angeles County in 2000.

To produce the high-range estimate of informal workers in 2000, we subtract the modified ES-202 estimate of 3,908,000 workers from the modified BEA REIS estimate of 4,881,200 workers to get a **high-range estimate of 972,500 informal workers in Los Angeles County in 2000.**

What is a mid-range estimate of the number of county workers in the informal economy in 2000?

There is a wide spread between our low- and high-range estimates, indicating a large margin of potential error in our estimate of the size of the informal labor force. We arrive at our best estimate by averaging the low- and high-range estimates to get a **mid-range estimate of 647,500 informal workers in Los Angeles County in 2000.** This mid-range estimate represents **14.2 percent of Los Angeles County's labor force in 2000** when combined with the total number of wage and salary workers reported by employers.[21]

Based on this mid-range estimate, the number of informal workers in Los Angeles County is 40 percent larger than the total population of the City of Long Beach, or enough to fill all 90,000 seats in the Rose Bowl over 7 times.

What is a mid-range estimate of the number of county residents working in the informal economy in 2004?

The working-age population in Los Angeles County grew by 4.9 percent between 2000 and 2004, according the California Department of Finance's Demographic Research Unit, California's official source of population data.[22] This labor force growth can be seen in Figure 4, shown earlier, and suggests ongoing growth in the size LA's informal labor force.

Table 1
Estimated Informal Workers in Los Angeles City and County

	2000	2004
County of Los Angeles		
Workers in Formal Economy (ES-202)	3,908,700	3,833,600
Mid-Range Estimate of Informal Workers	647,500	679,000
Total Formal and Informal Workers	4,556,200	4,512,600
Informal Workers as % of Total Workers	14.2%	15.0%
City of Los Angeles		
Workers in Formal Economy (ES-202)	1,585,500	
Mid-Range Estimate of Informal Workers	289,700	303,800
Total Formal and Informal Workers	1,875,200	
Informal Workers as % of Total Workers	15.4%	16.4%

Given the decline in wage and salary jobs since 2000, it seems reasonable to assume that informal employment grew at least as much as the overall labor force by 2004. This increases our **mid-range estimate of the number of informal workers to 679,000 in 2004**. Combined with the 3,833,600 wage and salary workers reported by employers in 2004,[23] the mid-range estimate of informal workers represents **15.0 percent of Los Angeles County's labor force in 2004.**

How many workers in the City of Los Angeles hold informal jobs?

The corresponding mid-range estimates of informal employment in the City of Los Angeles are **15.4 percent of wage and salary worker in 2000 and 16.4 percent in 2004**.[24] This represents an estimated **289,700 informal workers in 2000, and 303,800 in 2004.** An overview of our mid-range estimate of informal employment in the city and county in 2000 and 2004 is shown in Table 1. Some data is not available for 2004, but by extrapolating city - county ratios for informal employment in 2000, we are able to produce 2004 estimates for the City of Los Angeles.

What is the cost of informal employment to the public social safety net?

The existence of informal jobs means that these employers are not contributing their fair share to the public social safety net. If we accept our best estimate put forward in this chapter that on a typical day there are 679,000 informal workers in Los Angeles County, and if we assume that the average annualized wage for an informal job is $12,000, then informal employment represents $8.1 billion in annual payroll. This unreported payroll means that each year the public sector is shortchanged by:

- $1 billion in Social Security taxes (from both employers and workers)
- $236 million in Medicare taxes (from both employers and workers)

- $96 million in State Disability Insurance payments (from workers)
- $220 million in Unemployment Insurance payments (from employers)
- $513 million in Workers Compensation Insurance payments (from employers)

This comes to a total of over $2 billion in unpaid payroll benefits and insurance that are mandated for underwriting the public's costs in providing a minimal social safety net for workers. Because the responsible parties fail to pay into these programs, the costs are shifted to other segments of society and the social safety net becomes more precarious. One of the most apparent ways in which these costs are shifted is through neglected health care needs of informal workers that become unfunded medical emergencies for regional hospitals.

In addition, informal workers in Los Angeles County make an estimated $4.1 billion in purchases each year that are subject to sales taxes, and that should generate $440 million in annual sales tax revenue.[26] It may well be that a significant share of these purchase are made from informal retailers who do not collect sales taxes and transfer them to the state.

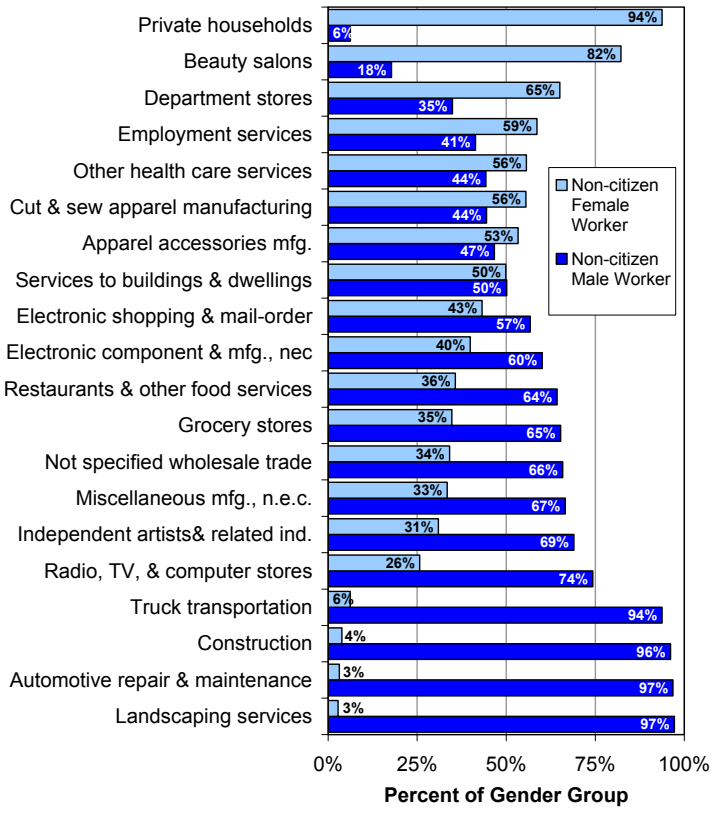
What role does gender play in the informal economy?

Not all workers in the informal economy participate in the same fashion. While some are attached to a particular industry, others are linked to informal work through social relationships rather than occupational specialties. In such cases workers may rely on kinship ties, social networks, and geographical proximity with neighbors as a source of employment.[25] This type of informal employment happens more often for women, and differs

Figure 10

Gender Shares of Non-citizen Workers by Industry for Industries Projected to Employ the Most Informal Workers in Los Angeles County

Source: U.S. Census 2000 PUMS 5% Sample



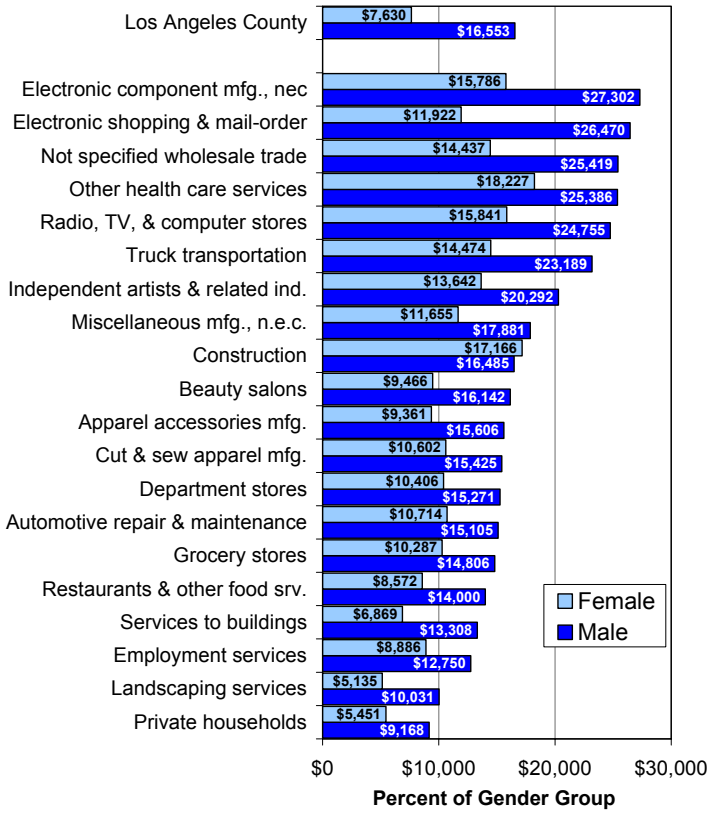
from the general perspective that the informal labor market mirrors the formal labor market (with the exception that employers do not follow established labor and tax laws). In such cases the workers know their employer outside of their immediate employment environment and they do not compete to secure a job. Neighbors and relatives may employ one another to earn extra cash, to help one another in time of need, to avoid the stigma of offering (or accepting) charity, or in lieu of informal social reciprocity. Where reciprocity has not formed, one cannot expect the other to "return the favor", thus the exchange of money for work is substituted. While this is a less common source of informal employment, it does represent a form of non-market work that helps us understand gender differences in the informal labor market.

We do not have information about workers' or employers' reasons for participating in the informal economy, but we are able to identify employment distribution by industry and wage level by gender for non-citizens shown in the 2000 Census. This data suggests that the non-market informal employment relationships just discussed are in operation. The gender shares of non-citizen workers for the industries that we project to have the highest numbers of informal workers are displayed in Figure 10. Women are highly concentrated in Private households, Beauty salons, Department stores, and Employment services. These are the sorts of jobs that can be done easily through non-market informal employment arrangements with relatives and neighbors. Men are highly concentrated in Landscaping, Automotive repair, and Truck transportation. This distribution follows the familiar separation of gender roles – women's work is in homes, personal services, and pink-collar jobs, while men attend to physically demanding blue-collar jobs.

Figure 11

Earnings by Gender in 1999 for Non-Citizen Workers in Industries Projected to Employ the Most Informal Workers in Los Angeles County

Source: U.S. Census 2000 PUMS 5% Sample



There is also gender variation in wages among industries. Figure 11 displays the average 1999 wage and salary income for non-citizen workers by gender for the industries we project to have the highest number of informal workers. In every industry, men earn more than women. The only industry in which wage and salary incomes are close is Construction. On average for the county, non-citizen female workers earn less than half of what their male counterparts earn.

Why do immigrants participate in the informal economy?

The issues of immigration and undocumented immigration are often conflated with the growth of the informal economy in such a way that the two are indistinguishable and the terms informal economy and immigrant economy become interchangeable. While there is certainly overlap, to conflate the two would obscure a more accurate understanding of the informal economy.

The concept of the informal economy was originally developed in the context of international development studies to describe the coping strategies of families and communities that did not have access to the formal economy.[26] Some suggest that immigrant participation in the informal economy may arise from cultural practices carried with them from their country of origin.[27] However, others suggest that a number of additional demand-side factors have encouraged the formation of the informal economy in developed economies. Informal work may be a logical outcome of economic restructuring and attending income polarization occurring in advanced free-market economies. From this perspective, informal employment is the end result of the search for flexibility among producers. The extensive use of subcontracting, coupled with increasing income polarization has led some people with very low incomes to engage the informal economy as a survival strategy.[28] The opportunity to work in the informal economy is enhanced by the fact that some providers of goods and services simply cannot compete while operating legally in urban areas. The costs of land, labor, capital and other services are relatively high in urban areas, thus skirting labor and tax laws, and engaging in informal employment relations may ease employers' burden of increased costs and competition for market share.

The perception that immigrants comprise the informal economy may emerge from the belief that recent immigrants have limited opportunities. In fact, limited English ability, limited education, social isolation, and cultural barriers often do curtail immigrants' access to information and opportunity in the broader economy. Limited English ability often prevents them from successfully completing English-

language interviews and accessing a broad range of job opportunities. Therefore, these workers may participate in the informal economy for survival. However, as will be discussed later, **non-immigrants also work in the informal economy – economic desperation is also found among US-born residents.** For example, there is evidence that at least 10 percent of welfare parents, all of whom are documented residents of the US, work in the informal economy.[29]

Table 2
Foreign Born Population By Region
Source: US Census 2000 Summary File 3 and City of Los Angeles

	Total Population	Foreign Born Population	Foreign Born Proportion	% of all US Foreign Born
US	281,421,906	31,107,889	11%	100%
California	33,871,648	8,864,255	26%	28%
LA County	9,519,338	3,449,444	36%	11%
LA City	3,762,803	1,512,720	40%	5%
North Valley	666,295	264,489	40%	0.9%
South Valley	713,255	267,064	37%	0.9%
Western	403,654	115,823	29%	0.4%
Central	671,266	361,011	54%	1.2%
East	405,114	193,129	48%	0.6%
South	691,108	259,583	38%	0.8%
Harbor	212,111	74,410	35%	0.2%

Immigrant social networks may also shape their participation in the informal economy. Successful immigrant entrepreneurs may recruit recent arrivals into informal jobs. Such jobs may be the only place recent immigrants can continue to exercise their culture and language—working with others from a similar background provides a comfort level that is unavailable elsewhere. These informal jobs may benefit recent immigrants who have little skill or experience. As recent immigrants acquire skills, work experience and mastery of the English language they may move on to compete in the formal labor market. Thus, working in the informal economy may serve as a training ground for the formal economy.

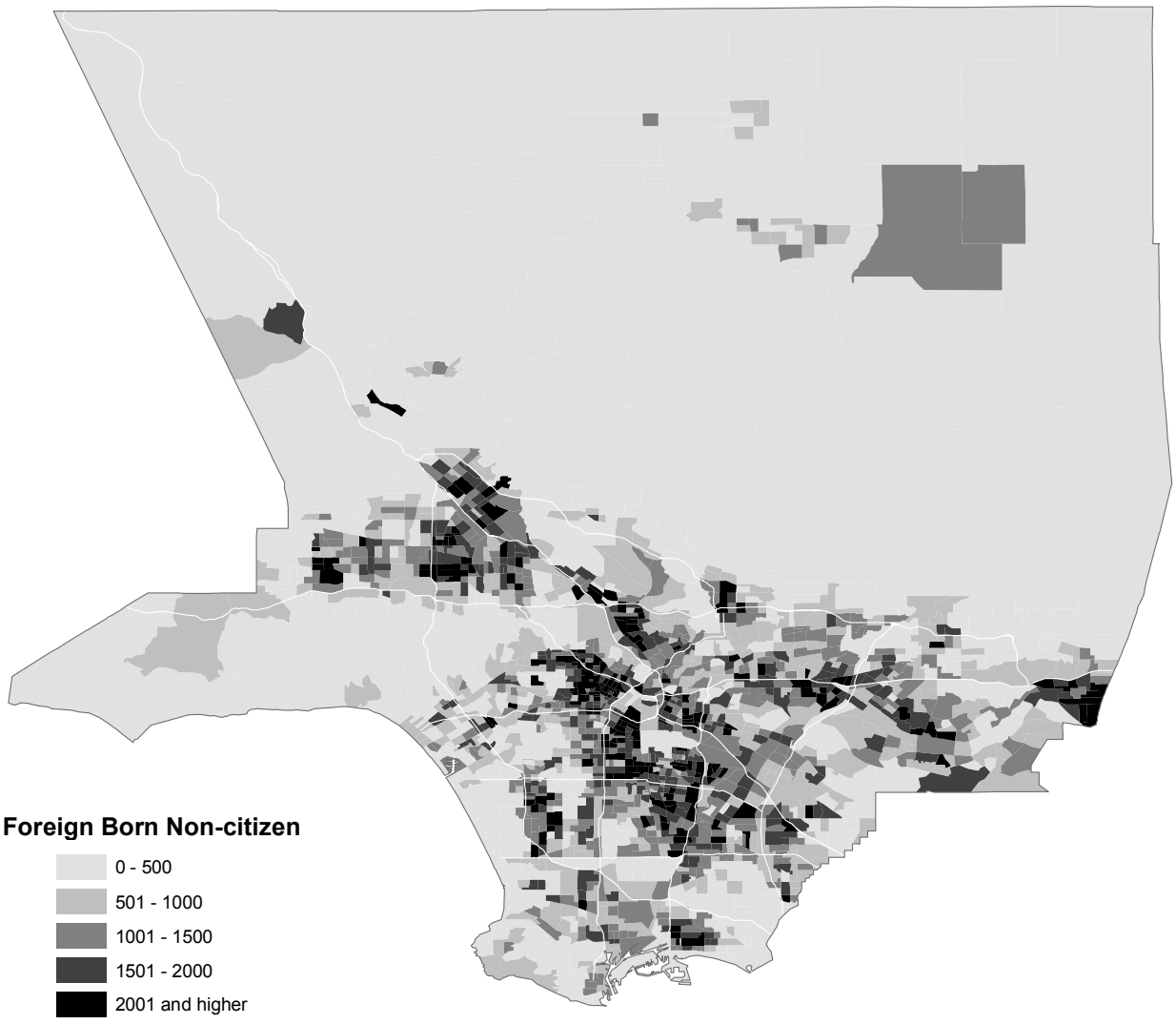
Undocumented immigrants may be especially vulnerable to exploitation in the informal economy. Unable to acquire a job in the formal economy, these residents may turn to the informal economy where employers disregard immigration and tax laws. Informal employers may use threats of reporting undocumented immigrants to authorities as a means to force them to accept substandard wages and working conditions. This type of threatening and isolating existence may further restrict their social networks and access to information about new opportunities, better jobs and improved working conditions.

The association of immigrants with the informal economy in Los Angeles may also emerge from the fact that there are large numbers of immigrants living in the Los Angeles region. US Census Bureau data indicates that 11 percent of the nation's immigrants live in Los Angeles County. Data on immigrants residing in California and Los Angeles in 2000 are provided in Table 2. Clearly, California is a strong magnet for immigrants. It is home to the largest immigrant population in the US.

Figure 12

Number of Foreign Born Persons Without Citizenship By Census Tract for Los Angeles County, 2000

Source: US Census 2000 Summary File 3

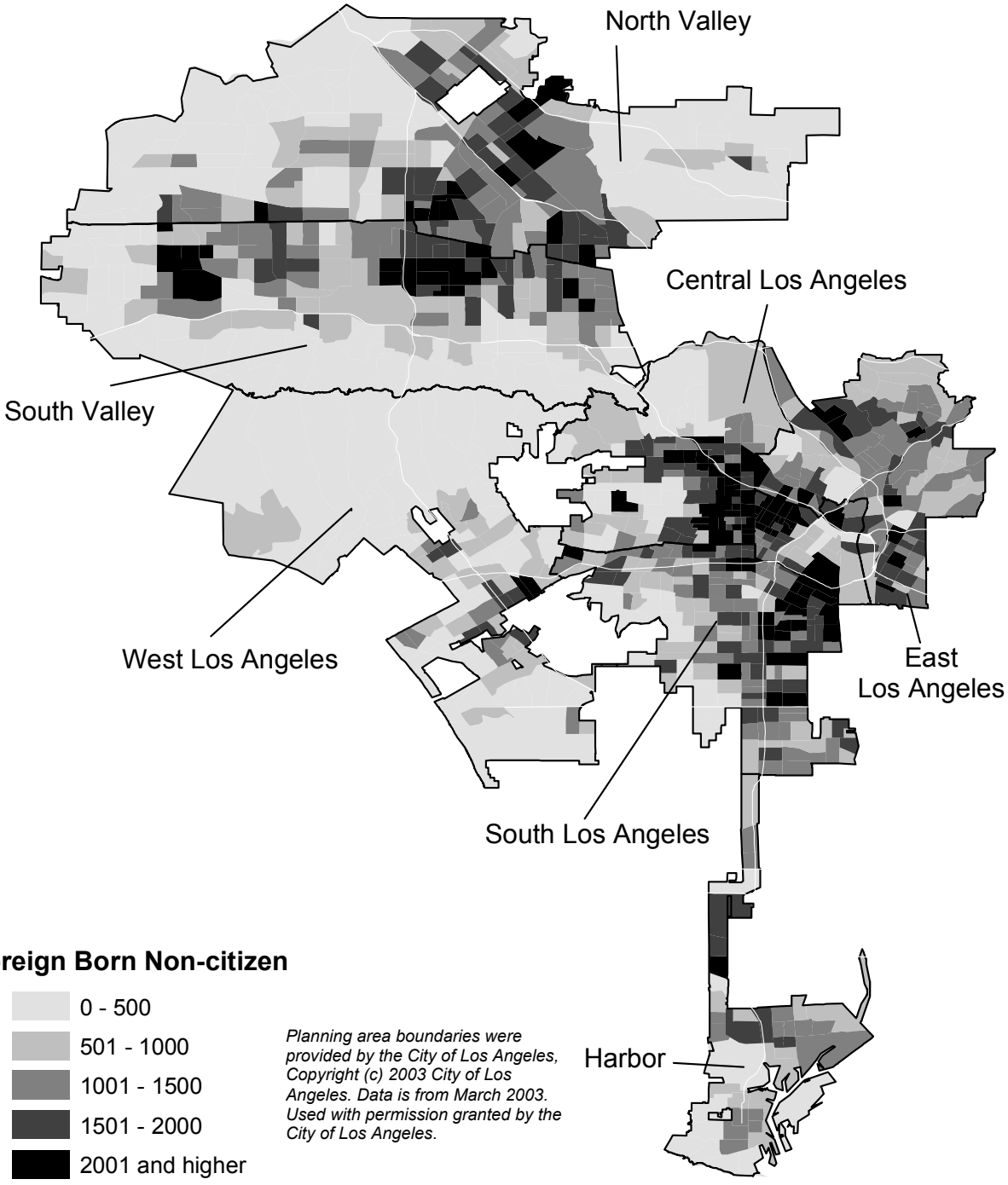


Just over one-quarter of California's residents are foreign-born—a population of nearly 9 million people. California's foreign-born population accounts for 28 percent of the foreign-born population of the US. Los Angeles County is home to 39 percent and Los Angeles City to 17 percent of California's foreign-born residents. Los Angeles City and its planning areas exhibit very high concentrations of foreign-born residents. While the foreign-born only make up 11 percent of the total US

Figure 13

Number of Foreign Born Persons Without Citizenship By Census Tract for the City of Los Angeles, 2000

Source: US Census 2000 Summary File 3



Planning area boundaries were provided by the City of Los Angeles, Copyright (c) 2003 City of Los Angeles. Data is from March 2003. Used with permission granted by the City of Los Angeles.

population, they represent 36 percent of the population in Los Angeles County and 40 percent of the population in the city. Within city planning areas, Central Los Angeles, and East Los Angeles have the highest concentrations of foreign-born residents (54 percent and 48 percent respectively).

While the data in Table 2 provide a good picture of the distribution of immigrants within the state and Los Angeles, they do not reveal the uneven distribution of the foreign-born on a more localized scale. This uneven distribution can be seen well in maps. The distribution of foreign-born residents in Los Angeles County is displayed in Figure 12. The distribution is based on census tracts in Los Angeles County. Not surprisingly, immigrants are highly concentrated in the urbanized areas of the county. The mountain and desert regions in the northern half of the county are thinly populated in general, and even more thinly populated by immigrants. Concentrations of the foreign-born are greatest in three areas: the San Fernando Valley, the area extending from downtown Los Angeles south along the 110 and 710 freeways, and east through the San Gabriel Valley along Interstate 10.

Looking outside the City of Los Angeles, concentrations of foreign-born in the central and eastern parts of the county show up clearly. The San Gabriel Valley area and central county area bordering the 710 Freeway are areas with high concentrations of foreign-born residents.

The distribution of the foreign-born within the City of Los Angeles is displayed in Figure 13. The planning areas are outlined in black and labeled. The concentrations of foreign-born listed in Table 2 are evident in this map. There are high numbers of immigrants surrounding downtown Los Angeles and in the San Fernando Valley. Their numbers are high throughout the Los Angeles basin and on the floor of the valley areas but decline rapidly in regions of higher elevation such as the Santa Monica Mountains, and the foothills surrounding the North and South Valley planning areas—places we normally associate with wealthy neighborhoods and gated communities. There are also relatively low numbers of foreign-born residents in the West Los Angeles planning area.

Figure 14
The Los Angeles Labor Market, Immigrants and the Informal Economy

Working in the informal economy may serve as a survival strategy for immigrants; however, this is also true for some native workers. Informal jobs serve as a source of income and work flexibility for native workers as

well as immigrants. As we noted before, we define informal employment as those otherwise legal employment relationships that go unreported. An accountant who does extra work on the side for cash payment is part of the informal economy even though he or she may work a regular 40-hour workweek at a formal job. A carpenter and a plumber who exchange in-kind work on each other's homes on the weekend are also participating in the informal economy. And US-born welfare parents who are required to find work sometimes accept last-resort employment in the informal economy. This point is illustrated in Figure 14.

While immigrants play a significant role in the overall Los Angeles labor market as well as the informal component of the labor market, they do not offer a complete explanation of the existence and operation of the informal economy. An examination of immigrants does not tell a complete story because native workers also participate in the informal economy. There are a variety of factors that drive workers to participate in the informal economy and these factors vary together with the life circumstances that create economic desperation for different segments of the population.

In the following sections we examine the degree to which immigrants participate in or contribute to the informal economy in Los Angeles, and the extent to which there is overlap between immigration and the informal economy. Specifically, we examine the size of the undocumented immigrant population and we provide estimates by industry of undocumented immigrants' participation in the informal economy.

How many informal workers are undocumented immigrants?

The undocumented immigrant population is a significant sector of the informal economy, and many of the industries where these residents find work are flagships of the informal labor market. Informal employment relationships occur in a wide range of sectors from sweatshop work in apparel to high-tech manufacturing industries. On one hand, some high-skilled workers may opt for informal work to supplement their income, for the flexibility of work schedules, or for tax evasion. On the other hand, workers with less formal training and limited marketable skills can be trapped in the informal economy and have few options but to accept substandard forms of employment characterized by low wages, no benefits, and very limited rights. Informal employment may last a lifetime for recent immigrants, especially undocumented recent immigrants. However, because of its "low road" economic impacts on the region and its dead-end career prospects for many workers, it is clearly not a preferred solution to the problem of economic survival.

Table 3
Estimated Undocumented Immigrants by State 1990 and 2000
Source: US Immigration and Naturalization Service - Office of Policy and Planning

	Undocumented Immigrants 1,000s		Change 1990-2000		*Percent of Total Undocumented*	
State*	**2000**	**1990**	**Change I,000s**	**% Change**	**2000**	**1990**
All States	**7,000**	**3,500**	**3,500**	100%	**-**	**-**
North Carolina	206	26	180	692%	2.9%	0.7%
Georgia	228	34	194	571%	3.3%	1.0%
Arkansas	27	5	22	440%	0.4%	0.1%
South Carolina	36	7	29	414%	0.5%	0.2%
Tennessee	46	9	37	411%	0.7%	0.3%
Alabama	24	5	19	380%	0.3%	0.1%
Minnesota	60	13	48	369%	0.9%	0.4%
Colorado	144	31	113	365%	2.1%	0.9%
Iowa	24	5	18	360%	0.3%	0.1%
Utah	65	15	50	333%	0.9%	0.4%
Wisconsin	41	10	31	310%	0.6%	0.3%
Indiana	45	11	34	309%	0.6%	0.3%
Mississippi	8	2	6	300%	0.1%	0.1%
Nebraska	24	6	18	300%	0.3%	0.2%
Kentucky	15	4	11	275%	0.2%	0.1%
Nevada	101	27	74	274%	1.4%	0.8%
Kansas	47	13	34	262%	0.7%	0.4%
Washington	136	39	97	249%	1.9%	1.1%
Oregon	90	26	64	246%	1.3%	0.7%
Ohio	40	12	29	242%	0.6%	0.3%
Delaware	10	3	7	233%	0.1%	0.1%
Arizona	283	88	195	222%	4.0%	2.5%
Michigan	70	23	47	204%	1.0%	0.7%
Oklahoma	46	16	30	188%	0.7%	0.5%
Missouri	22	8	14	175%	0.3%	0.2%
Texas	**1,041**	**438**	**603**	**138%**	**14.9%**	**12.5%**
New Jersey	221	95	125	132%	3.2%	2.7%
Illinois	**432**	**194**	**238**	**123%**	**6.2%**	**5.5%**
Virginia	103	48	55	115%	1.5%	1.4%
Connecticut	39	19	20	105%	0.6%	0.5%
Rhode Island	16	8	8	100%	0.2%	0.2%
Pennsylvania	49	25	24	96%	0.7%	0.7%
New Mexico	39	20	19	95%	0.6%	0.6%
Idaho	19	11	9	82%	0.3%	0.3%
Alaska	5	3	2	67%	0.1%	0.1%
Maryland	56	34	22	65%	0.8%	1.0%
Massachusetts	87	53	34	64%	1.2%	1.5%
California	**2,209**	**1,476**	**732**	50%	**31.6%**	**42.2%**
Florida	**337**	**239**	**98**	**41%**	**4.8%**	**6.8%**
New York	**489**	**357**	**132**	**37%**	**7.0%**	**10.2%**
District of Colombia	7	16	-9	-56%	0.1%	0.5%
Hawaii	2	6	-4	-67%	0.0%	0.2%
Louisiana	5	15	-10	-67%	0.1%	0.4%
Other States	**7**	**7**	**1**	14%	**0.1%**	**0.2%**

Source: US Immigration and Naturalization Service—Office of Policy and Planning, "Estimates of the Unauthorized Immigrant Population Resident in the United States: 1990—2000". http://uscis.gov/graphics/shared/aboutus/statistics/Illegals.htm
* Eight states were not included in this list because they each had fewer than 2,500 estimated undocumented immigrant residents. They include Maine, Montana, New Hampshire, North Dakota, South Dakota, West Virginia, and Wyoming.

Estimating the size of the undocumented immigrant population is a difficult task. The status of "undocumented" means that a foreign-born person took up residence in the US without being counted in official statistics. However, the US Immigration and Naturalization Service (INS) has produced estimates of the undocumented immigrant population based on a residual technique that compares the documented immigrant population with the US Census 2000 estimates of the foreign-born non-citizen population.[30] By subtracting the documented immigrant population in 2000 from the US Census count of foreign-born non-citizens, they arrived at an estimate of the undocumented population. This estimate is the residual of immigrants identified in the Census but not accounted for by documented immigration. For 2000, the US INS estimates that 7 million undocumented immigrants resided in the US. They also provide estimates for 42 of the 50 US States. They estimate 2.2 million undocumented immigrants resided in California in 2000.

The state level distribution is shown in more detail in Table 3. California has a larger share of the undocumented immigrant population than any other state. Just under one-third of the undocumented immigrant population in the US resides in California. Texas ranks second with just under 15 percent of the undocumented population. New York is third, followed by Illinois, and Florida. Together, these 5 states account for 64.5 percent of the undocumented population in 2000. North Carolina added the greatest proportion of undocumented immigrants between 1990 and 2000.

Table 3 is sorted by the percent change in each state's undocumented population from 1990 to 2000. This ranking shows that even though California has the largest undocumented population, it has among the lowest rates of growth in the size of this population. Clearly, the presence of undocumented residents and workers is rapidly becoming an issue for many other states.

Unfortunately, the US INS did not provide further sub-state breakouts of the undocumented population. However, we can estimate the undocumented population in cities and counties by using regional shares of the foreign-born population extracted from Summary File 3 of the 2000 US Census to distribute the state level estimate of undocumented immigrants from the INS.

For 2000, the US Immigration and Naturalization Service projected that 2,209,000 undocumented immigrants resided in California. If we assume undocumented workers find employment at the same rate as foreign-born non-citizens (according to the 2000 US Census, 46 percent of non-citizens in California reported being employed), then we estimate that 1,038,000 undocumented immigrants were employed at the time of the Census in California. We can distribute this population to counties and cities based on regional and local shares of non-citizen workers.

Table 4
Projected Employed Undocumented Workers in California, Los Angeles County and Los Angeles City in 2000

	Total Non-citizen Population	Non-citizen Workers	Percent State-Level Employed Non-Citizen	Projected Undocumented Population	Projected Employed Undocumented Workers	Estimated Share of Informal Employment
California	5,410,000	2,520,000	47%	2,209,000	1,030,000	n.a.
LA County	2,150,000	968,000	38%	776,000	395,000	61%
LA City	1,000,000	459,000	18%	382,700	187,000	65%

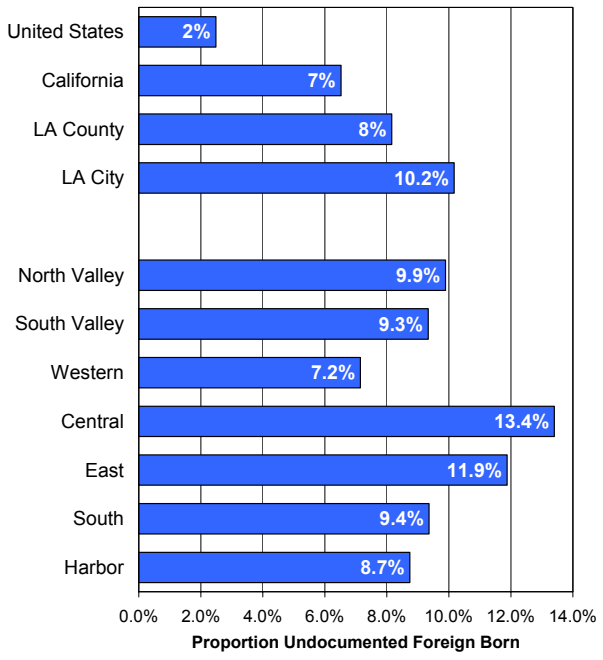
Source: U.S. INS and U.S. Census 2000 PUMS 5% Sample. Note: totals may not sum due to rounding.

In 2000, Los Angeles County was home to 38 percent of the states' employed non-citizen population; therefore we assigned 38 percent of the state level estimate of employed undocumented workers to the county. Similarly we assigned 18 percent of total employed undocumented workers to the city. Thus, we project that 187,000 undocumented workers were employed in the city and 395,000 undocumented workers were employed in the county at the time of the census. These estimates are shown in Table 4. U**ndocumented workers are estimated to make up 61 percent of the informal labor force for the county and 65 percent for the city**.

Undocumented workers broken out by City planning area

The concentration of the undocumented population in the US, California, Los Angeles County, Los Angeles City, and city planning regions is displayed in Figure 15. While undocumented immigrants make up only 2 percent of the US population they make up 10 percent of the population of the City of Los Angeles. Their distribution among city planning regions is uneven. Central Los Angeles and East Los Angeles have the highest proportion of undocumented immigrant residents (13 percent and 12 percent respectively).

Figure 15
Estimated Proportion of Population Comprised of Undocumented Foreign Born Persons for the U.S., California and LA City Planning Areas
Source: Census 2000 SF3 & U.S. INS Data



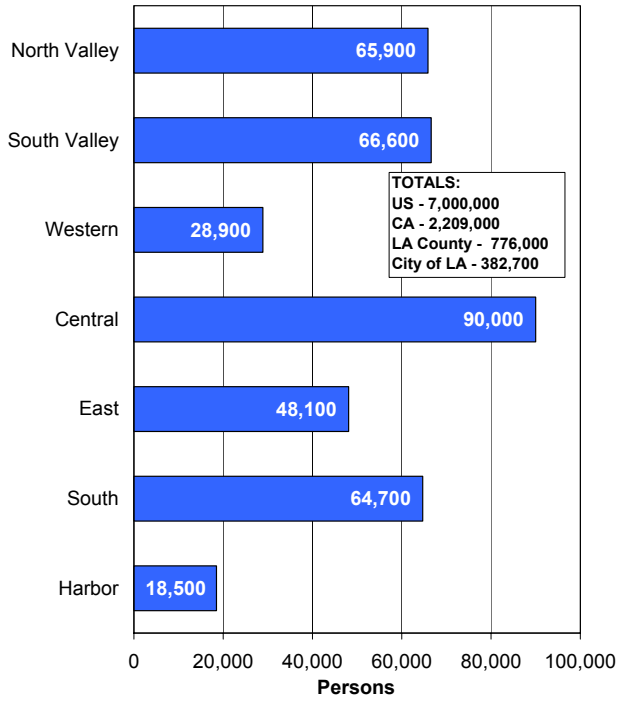
Western Los Angeles has the lowest concentration at only 7 percent.

Our estimates of the undocumented immigrant population by planning area for the City of Los Angeles in 2000 are displayed in Figure 16. The total undocumented population for the city, county, state, and the nation are also given. Overall, we estimate that 382,000 undocumented immigrants reside in the city and 776,000 in the county. Thus, roughly 50 percent of the undocumented immigrants in Los Angeles County reside in the City of Los Angeles. We estimate that Central Los Angeles has the greatest number of undocumented immigrants in the City of Los Angeles, followed by the Valley areas and South Los Angeles.

Figure 16

Estimated Undocumented Foreign Born Population by LA City Planning Areas

Source: Census 2000 SF3 & U.S. INS Data



Undocumented immigrants are a significant component of the population in both the city and county of Los Angeles. As a proportion of the total foreign-born population, **undocumented immigrants are estimated to account for 25 percent of the foreign-born population residing in the city and 23 percent of the foreign-born population residing in the county**.

Industries that employ the informal labor force

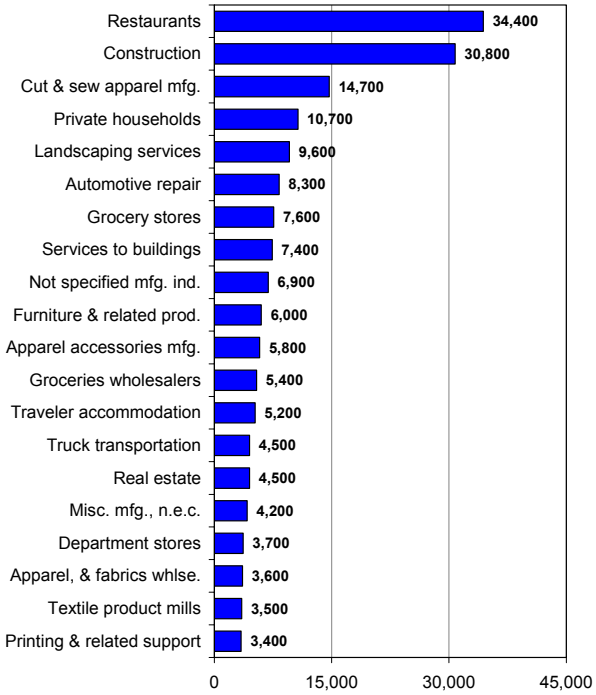
We are able to produce partial estimates of informal employment within specific industries by using two different combinations of data sets. The first approach is based on information about undocumented immigrants and non-citizen workers. The second approach is based on comparing employer-reported job numbers for each industry to resident-reported employment data, along with data from the US Bureau of Economic Analysis. We explore each of these approaches and then combine both types of data to produce our best estimate of the number of informal workers in each industry in Los Angeles County and City.

In which industries do undocumented workers find jobs?

Figure 17

Projection of Undocumented Workers by Top 20 Industries for Los Angeles County, 2000

Source: Projections calculated from U.S. INS data and U.S. Census 2000 PUMS 5% Sample



On the basis of US INS state-level estimates of undocumented immigrants and US Census counts of the foreign-born population we estimated the undocumented population for Los Angeles County and the City of Los Angeles. However, this distribution method does not suggest anything about the industry employers of undocumented immigrants. In what industries do undocumented laborers find jobs? Are undocumented workers concentrated in some industries and not others? A number of researchers have shown that informal employment often occurs in industries that pay low-wages, require limited skills, and are shunned by non-immigrant workers.[31] Therefore, they employ higher proportions of immigrant laborers - often undocumented immigrant laborers.

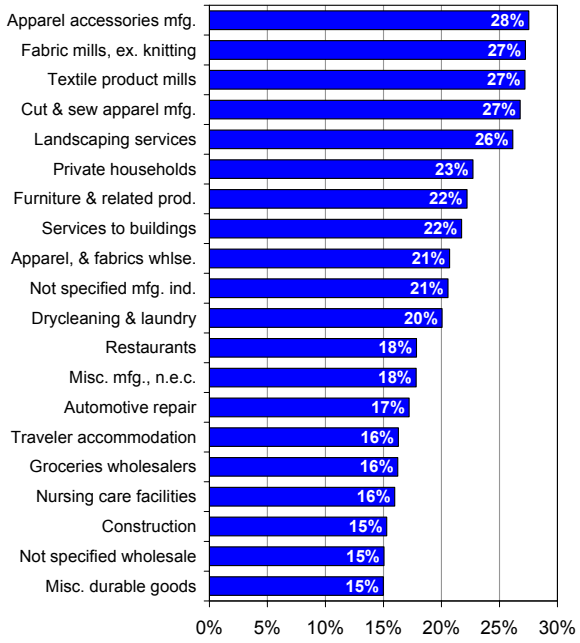
The largest industry employers of estimated undocumented workers are displayed in Figure 17, with estimates for all industries provided in Table A in the Appendix.[32] For both the city and the county the same five industries rank as the top five employers of undocumented non-citizen workers. They are Restaurants and other food services, Construction, Cut and sew apparel manufacturing, Private households (which includes day care, maid services and cleaning), and Landscaping services. Nearly all of the industries listed in Figure 17 have been recognized in other research work as being employers of informal workers and undocumented workers. Further, many of the industries reported in Figure 17 are service related. Real estate may be a surprise, however, roughly 40 percent of employment in Real estate is related to basic services such as cleaning, building maintenance, landscaping and grounds keeping, and security - all jobs commonly associated with informal employment.

The concentration of undocumented workers within major industries is shown in Figure 18, which lists the estimated share of undocumented workers in each industry in the county that is estimated to employ 1,000 or more undocumented workers.

Figure 18

Projected Proportion Undocumented Workers by Top 20 Industries for Los Angeles County, 2000

Source: Projections calculated from U.S. INS data and U.S. Census 2000 PUMS 5% Sample



While the industries that appear in Figure 18 may be similar to those in Figure 17, their rank order is different. The four industries that have the highest concentrations of estimated undocumented workers are related to clothing production. They include Apparel accessories manufacturing, Fabric mills, Textile product mills, and Cut and sew apparel manufacturing. Landscaping services also makes it into the top five industries for the county. The estimated proportion of undocumented workers is over one-quarter of the industry workforce for each of the top five industries. Concentrations are also high in Restaurants and Construction - the two industries that employ the highest estimated numbers of undocumented workers. However, their proportions are not as high as for apparel related work because food service and construction are very large industries that also employ many native-born and naturalized workers, who are less likely to be found in the sweatshop conditions often associated with apparel production.

Which industries show up with unreported jobs?

Our second approach to producing industry-specific indicators of informal employment is based on identifying industries that are unaccountably underrepresented in data showing formal wage and salary employment. We compare the proportional shares of industry employment in the employer-reported (ES-202) data to industry employment proportions in two additional sources of employment data. The first source is resident-reported employment in the 2000 US Census 5 Percent PUMS data.[33] The second source is the US Bureau of Economic Analysis effort to provide the federal government's most complete accounting of employment through its Regional Economic Information System (REIS) data.[34] We used REIS data for 2001 and disaggregated it into fine-grain industries using IMPLAN data.[35] These two data sources both include jobs not reported in ES-202 payroll tax records, and we compared them to employer-reported (ES-202) employment to produce estimates of unreported employment in each industry.[36]

This method of estimating unreported jobs is based on the percent distribution of employment rather than the number of workers shown in each data set. This is because both ES-202 and PUMS data appear to undercount the Los Angeles labor force. There is an undercount in ES-202 data because it does not include informal workers, and although PUMS data includes some informal workers, it shows a labor force that is 22 percent smaller than that shown by REIS data.[37] Some of this gap results from a slightly broader definition of employment in REIS data, but it also suggests that the Census under-counted the county's work force.

Comparing proportions is useful for estimating unreported jobs in many industries, but it is not an effective tool for industries such as apparel manufacturing that are highly concentrated in the LA region. For this type of industry we rely on the first approach that was just discussed of analyzing the industries that employ non-citizen workers. Also, we exclude five types of industries from this second analysis in order to increase the likelihood that the estimates of unreported employment will be as accurate as possible. The excluded industries are:

1. Government – the likelihood of public sector agencies engaging in significant levels of informal employment seems low.
2. Industries with fewer than 1,000 employees - this ensures that there will be a reliable number of cases to investigate in the sample-based Census data.[38]
3. Religious organizations, which are allowed to opt out of the Unemployment Insurance system and therefore are not reliably represented in employer payroll tax reports (ES-202) showing formal wage and salary employment.
4. Real estate, which includes a large number of self-employed landlords who are not covered by the Unemployment Insurance system and do not show up in official reports of wage and salary employment.
5. Industries in which the average length of training is greater than two years. These tend to be knowledge-based industries that often procure an atypically high proportion of their labor through consulting and independent contractor agreements, often resulting in an unusually low, but legitimate, proportion of workers in wage and salary jobs.[39]

Along with the numerical estimates of unreported employment outlined above we also examined four additional indicators of unreported employment in each industry. These additional indicators represent corroborating evidence that informal labor practices may be occurring in an industry. The four additional indicators include:[40]

1. High rates of self-employment.
2. High levels of foreign-born non-citizen workers.

3. Relatively high concentrations of foreign-born non-citizen workers when compared with the United States.
4. Lower share of the labor force in local employer-reported data for an industry than in nationally reported household data for an industry.

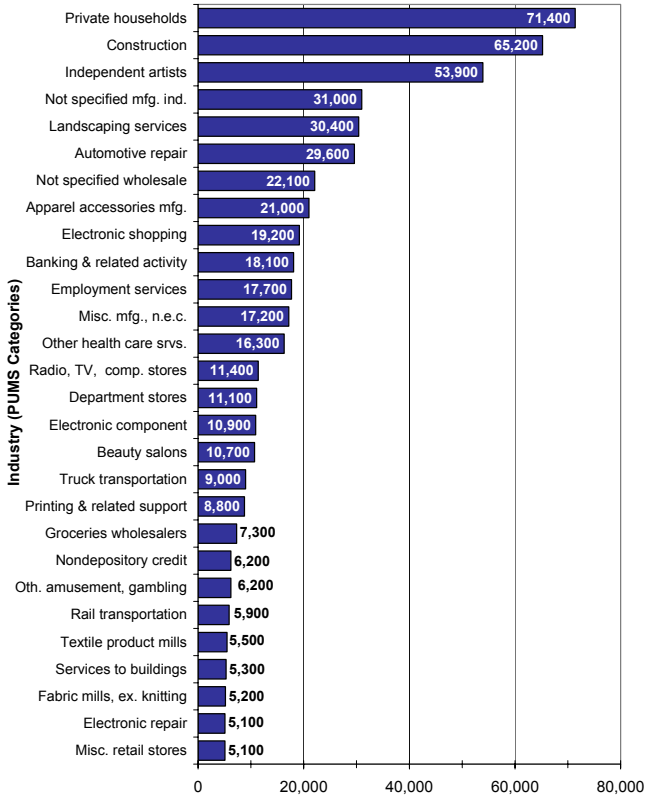
Although several of the industries highlighted by this analysis are improbable candidates for unreported employment, and estimates for other industries such as Cut and sew apparel manufacturing must be produced using estimates based on non-citizen workers rather than this methodology, it is our assessment that this estimating model produces easily believable estimates of unreported employment in many of the industries where unreported wage and salary employment is occurring. Information about the four indicators listed above for each industry along with estimates of levels of unreported employment for Los Angeles County and City are presented in Tables B and C in the Data Appendix.[41]

How many unreported jobs exist and in what industries?

We were able to compare a total of 187 county and 151 city industries (as defined in the Census Bureau PUMS data) across data sets. These represent the largest medium- and low-skill private sector industries in the region. Out of this group, 153 county and 124 city industries had at least one indicator of unreported employment, and 90 county and 75 city industries had indicators that provided the basis for projecting unreported jobs.

This procedure for estimating unreported employment is suggestive rather than conclusive and appears to capture only a portion of informal employment in many industries. Having offered these caveats, it is our assessment that this procedure identifies unreported employment in many of the industries where informal wage and salary employment is occurring. These industry-by-industry estimates for the county

Figure 19
Estimated Informal Employment in LA County Based on Anomalies in Industry Data
Comparison of ES-202, US Census PUMS, and US BEA REIS Data



and city are shown in Tables B and C in the Data Appendix.

The industries with the most unreported jobs are listed in Figure 19. The industries that appear to employ the most unreported workers include Private households, Construction, Independent artists, Miscellaneous manufacturing and Landscaping services. Four of these five industries involve work that can be done discretely within private residences. That Private households tops the list is not a surprise because these jobs are often secured by workers through private social relationships.

Table 5
Industries Estimated to Account for the Most Unreported Jobs

PUMS Code	Industry Name	% Estimated Unreported Jobs: LA County	% Estimated Unreported Jobs: LA City
929	Private households	11%	11%
77	Construction	10%	11%
856	Independent artists	8%	11%
399	Not specified mfg. industries	5%	4%
777	Landscaping services	5%	5%
877	Automotive repair	5%	4%
169	Apparel accessories mfg.	3%	4%
459	Not specified wholesale	3%	3%
	TOTAL	**50%**	**51%**

Half of all unreported jobs in both the county and city appear in just eight industries, as shown in Table 5. Services provided in people's homes in the form of housecleaning, childcare, construction and gardening appear to account for one-quarter of unreported jobs.

Another way of examining the context of unreported employment is to look at the average length of training needed to learn the skills required for unreported jobs. We grouped Los Angeles County's total industry employment as well as the estimated unreported employment in each industry into two categories based on whether the average length of training for jobs is less or more than three months. Roughly one-quarter of unreported jobs are in industries where the average worker learns how to do his or her job in less than three months, compared to 12 percent of wage and salary jobs in the formal economy, as shown in Table 6. **Unreported jobs are estimated to outnumber wage and salary jobs in low-skill industries where the average job can be learned in less than three months**.

Table 6
Los Angeles County Industries Estimated to have Unreported Jobs Grouped by Average Length of Training for Industry Work Force

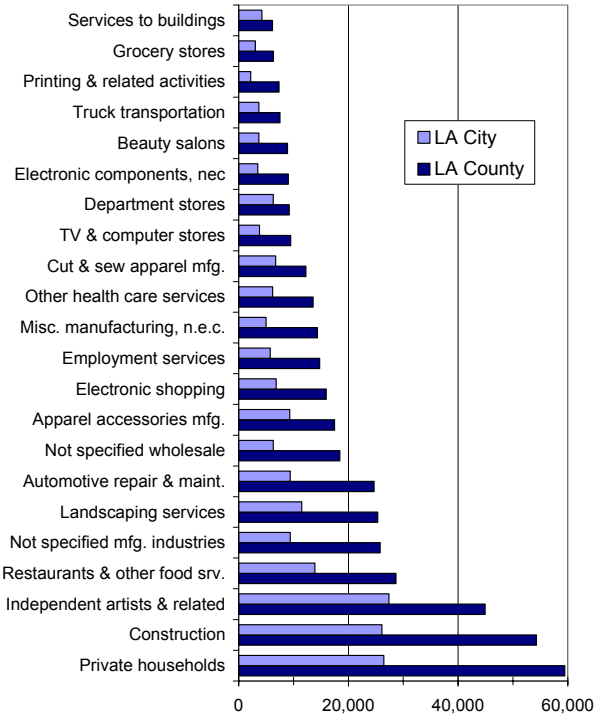
Average Length of Training for Industry Workers	Wage and Salary Jobs (ES-202)	% Wage & Salary Jobs	Estimated Unreported Jobs	% Unreported Jobs
Less than 3 months	138,800	12%	148,500	23%
Over 3 months	1,003,500	88%	495,100	77%
TOTAL	**1,142,300**	100%	**643,600**	100%

One of the defining characteristics of the informal economy is that it is highly concentrated in low-skilled jobs. This suggests that **one strategy for curtailing the informal economy**

is to upgrade the skills of workers and build a better-trained labor force.

Best estimate of informal employment in each industry

Figure 20
Best Estimate of Informal Employment Within Industries, 2000



Having found two windows into the industries that employ Los Angeles' informal labor force, one based on undocumented workers and the other on unreported workers identified through anomalies between employment data sets, we now need to arrive at a single integrated distribution of informal workers among industries that combines our two different methods. Our assumption in combining these two methods to produce a third and final distribution of informal workers among industries is that each of the first two methods leaves out a segment of the informal work force, and consequently each only partially represents informal employment within different industries.

The approach of estimating the share of each industry's workforce that is made up of undocumented workers leaves out the documented immigrant workers and natives who accept work in the informal economy. The approach of examining anomalies in industry data leaves out some industries that are over-concentrated in Los Angeles and predominantly employ immigrant workers. Consequently, we combined the two sets of estimates by extracting the highest estimate for each industry, and proportionately adjusting the projected estimates so that the total number of informal workers is equal to our best estimate (mid-range) of 647,500 informal workers in the county in 2000. An overview of the results from integrating these two sets of estimates is shown in Appendix Table D. It is our assessment that this integrated distribution represents the best projection of the number of informal workers by industry in the city and county.

If we look at our integrated industry estimates of informal workers by industry size, the industries shown in Figure 20 are estimated to account for over two-thirds of all

informal employment. Private households lead the list, followed by Construction, Independent artists, Restaurants, Miscellaneous manufacturing, and Landscaping.

Industries estimated to have the highest percent of their labor force made up of informal workers are shown in Figure 21. Apparel accessories manufacturing leads the list followed by Miscellaneous manufacturing, Landscaping, and Independent artists.

If we roll up our integrated estimates of informal workers by industry sector, as is done in Table 7, six sectors account for three quarters of total informal employment. The largest of these is Manufacturing (which includes apparel manufacturing), followed by Other services (which includes work in private households). Retail trade ranks third, followed by Construction. Professional, scientific and administrative services, which includes temporary employment agencies and landscaping services, ranks fifth. The sixth rank sector is Arts, entertainment and recreation, which includes intermittent employees in the entertainment industry.

There is convincing evidence that informal employment is occurring in a broad range of

Figure 21
Industries in which the Best Estimate of Informal Employment Accounts for the Highest Proportion of Industry Jobs
Industries with 10,000 or more total jobs

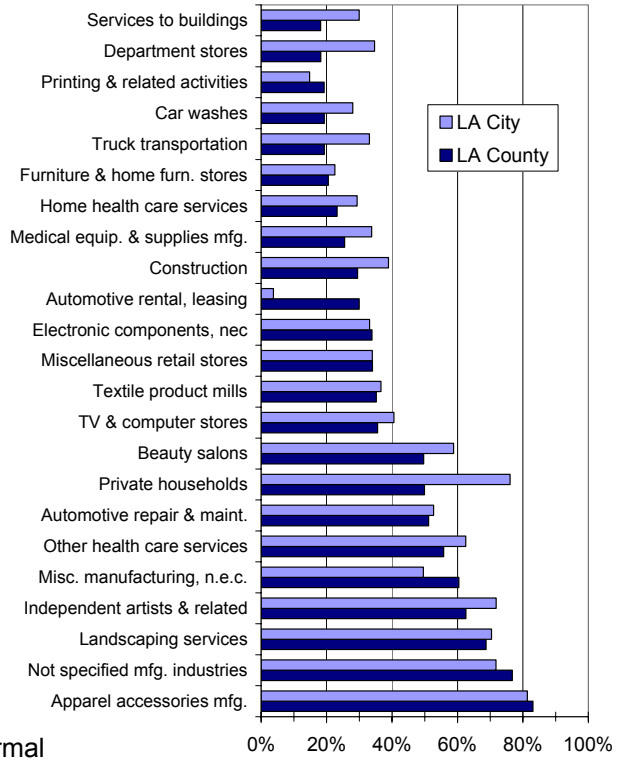


Table 7

Best Estimate of the Distribution of Total Informal Employment by Industry Sector

Industry Sector	LA City	LA County
Manufacturing	20%	22%
Other Services	16%	17%
Automotive repair & maintenance	*3%*	*4%*
Private households	*9%*	*9%*
Retail Trade	15%	12%
Construction	9%	8%
Professional, Scientific, Administrative	9%	8%
Employment services	*2%*	*2%*
Landscaping services	*4%*	*4%*
Arts, Entertainment and Recreation	10%	8%
Wholesale Trade	4%	6%
Accommodation and Food Services	6%	5%
Finance, Ins., Real Estate, Leasing	5%	5%
Educational, Health, & Social Services	3%	3%
Transportation and Warehousing	2%	3%
Information	1%	1%
Utilities	0.4%	1%
Mining	0.0%	0.4%
Agriculture	0.1%	0.3%
TOTAL	**100%**	**100%**

industries. This labor relationship is the predominant form of employment in a core group of low-skill industries, and a growing number of employers in many additional industries have adopted this expedient business strategy.

Conclusions

Evidence about unreported jobs and undocumented immigrant workers shows that most net job growth in Los Angeles is occurring in the informal sector, accounting for an estimated 647,500 Los Angeles County workers in 2000, and 679,000 workers in 2004. These workers are sandwiched between questionable employers, lack of rights, and economic desperation. Non-citizen immigrants make up an estimated 61 percent of the county's informal labor force. We estimate that informal workers fill roughly 15 percent of jobs in Los Angeles County and 16 percent of all jobs in Los Angeles City.

Nine industries are estimated to account for half of all informal employment in both the City and the County of Los Angeles:

Private Households	9%	Landscaping services	4%
Construction	9%	Automotive repair & maintenance	4%
Independent artists & related	8%	Not specified wholesale	3%
Misc. or not specified mfg.	6%	Apparel accessories mfg.	3%
Restaurants & food services	5%		

Given this large number of informal jobs, and the continuing practice by many employers of avoiding legally mandated payroll taxes, there is real risk that a steadily increasing number of employers will adopt this illicit labor management practice in order to remain competitive within the Los Angeles region. If this strategy for economic competitiveness continues to be widely practiced in Los Angeles it will expand the low-skill, low-wage, non-tax-paying sector of the labor market and reduce revenue for essential government services. Informal jobs are estimated to have shortchanged the public social safety net $2 billion in 2004. Over the long-term this trend portends a downward spiral for the regional economy as the low-wage labor force continues to grow, the costs of informal employment are shifted to other segments of society, and the social safety net becomes more precarious.

Los Angeles does not have to follow this low-road growth trajectory. Informal jobs emerge in large measure out of the hope and energy of workers who want to be self-sufficient but who are economically desperate. Undocumented immigrant workers whose low-cost labor has helped the region avert even worse economic stagnation are a central component of the informal economy. The status and future of undocumented workers must be addressed as part of any substantive strategy for curtailing the informal economy. We recommend three areas of immediate action to reduce informal employment, and further research to learning more about the progress, conditions and needs of immigrant workers.

1. Provide an effective combination of incentives, technical assistance and sanctions that will induce informal employers to move into the formal economy. Tools include:
    a. Systematic enforcement of existing labor regulations and sales tax requirements, particularly for businesses with annual revenues greater than $100,000 that are subject to business license taxes.
    b. Low-interest loans, targeted worker training, and small business assistance for immigrant entrepreneurs seeking to move into the formal economy.
    c. Technical and legal assistance for informal employers seeking to bring themselves into compliance with labor laws and tax reporting requirements.
2. Provide an effective combination of skill development, education, citizenship assistance, and enforcement of labor laws that will enable informal workers to move into the formal economy and become self-sufficient. Tools include:
    a. Foster an inclusive dialogue that includes federal and local officials, immigrant organizations, and all other stakeholders about identifying fair and reasonable eligibility criteria for citizenship.
    b. Advocate for reforms in immigration laws to enact fair and reasonable eligibility criteria for citizenship, and in particular recognizing the standing of immigrant workers with long-term employment histories.
    c. Encourage undocumented workers to use Individual Taxpayer ID Numbers to file a tax return, obtain financial services from institutions in the formal economy, and establish positive track records that can help with eventual green card applications.
    d. Strengthen immigration controls to prevent continued large-scale immigration of undocumented workers.
    e. Increase the availability of English language and basic literacy classes.
    f. Provide broad access to regional education and vocation training programs for immigrants.

3. Respect union-organizing campaigns among low-wage workers as a means of formalizing the employment conditions of informal workers and raising the wage floor to bring workers above the poverty threshold. Tools for safeguarding worker rights include:
    a. National Labor Relations Act (NLRA)
    b. Occupational Safety and Health Act (OSHA)
    c. Americans with Disabilities Act (ADA)
    d. Title VII of the Civil Rights Act of 1964
    e. Fair Labor Standards Act (FLSA)
    f. Local living wage ordinances
    g. Local job protection ordinances for public sector contractors

Next step – learning more about the progress, conditions and needs of immigrant workers

Los Angeles' future is deeply intertwined with the still unfolding future of its working-poor immigrants – workers who are most likely to accept last-resort jobs in the informal economy. The human face of a transnational labor force is more visible in Los Angeles than in any other metropolitan area, and the energy of these workers has emerged as a primary source of the region's economic expansion.

Nationally, the US is seeing widespread up-skilling by the overall labor force as well as by most employers.[42] Yet Los Angeles is experiencing growing income polarization and skill disparities in its labor force. Information presented in this paper raises a dozen important and still unanswered questions regarding the labor force connections, skills, economic histories, and working conditions of LA's often invisible informal workforce:

1. How much of the work that non-citizen immigrants find is in the informal economy?
2. Do workers move back and forth between the formal and informal economies?
3. How much occupational mobility are non-citizen immigrants able to achieve?
4. Are immigrant workers succeeding in acquiring the new skills required for jobs that will support their families?
5. What will happen to the 114,000 immigrant workers employed in LA's apparel and textile industries whose jobs are now being exported to other countries?
6. Are immigrant workers facing growing job insecurity?
7. How prevalent are abuses by informal employers?
8. How much informal work, such as piecework, is done at home?
9. Which workers succeed in entering the formal economy?
10. What eligibility criteria for achieving US citizenship do immigrant workers see as being fair?
11. How many immigrant workers are likely to continue being mobile?
12. Where are they likely to move to?

Future prospects for an economy and tax base that support good schools, essential public health and safety services, viable transportation systems, and clean public spaces are substantially dependent on understanding the answers to these questions and helping Los Angeles' informal workers achieve economic progress.

Data Appendix

Description of Tables

Table A: Estimated Undocumented Workers by Industry Los Angeles City and County 2000

Columns 1 and 2, *PUMS Industry Code and Title*: these industry classifications are established by the Census Bureau and correspond with NAICS industry classifications, with one or more NAICS 4-digit codes corresponding to each PUMS code. A crosswalk between PUMS and NAICS codes is available from the Census Bureau web site.

Columns 3 and 7, *Non-citizen Employment*: Number of non-citizen residents shown by Census 2000 PUMS data to be employed in each industry. Note: this Census category includes both authorized and unauthorized immigrants.

Columns 4 and 8, *Estimated Undocumented Employment*: Estimated number of undocumented workers in each industry. The total estimated number undocumented workers shown in Table 4 in the City and county of Los Angeles is disaggregated by industry based on the percent of non-citizens shown by Census data to be employed in each industry.

Columns 5 and 9, *PUMS Total Employment*: Census 2000 PUMS data for total number of residents employed in each industry.

Columns 6 and 10, *Percent Undocumented Workers*: Estimated undocumented employment as a percent of PUMS total employment.

Column 11, *Average Job Zone*: Index of the estimated average length of time required to become proficient in the occupations used in each industry. This index is derived from U.S. Department of Labor's O*NET occupational data. Higher values indicate longer periods of training. A guide to this index is shown at the end of the table

Note: Table A shows the resident population of Los Angeles City and County, and is not adjusted to account for inter-county commuters.

Tables B and C: Indicators of Informal Employment in Los Angeles County and City Industries

Columns 1 and 2, *PUMS Industry Code and Title*: these industry classifications are established by the Census Bureau and correspond

with NAICS industry classifications, with one or more NAICS 4-digit codes corresponding to each PUMS code. A crosswalk between PUMS and NAICS codes is available from the Census Bureau web site.

Column 3, *ES-202 Employment, April 2000*: Employment in wage and salary jobs reported by employers to California's Unemployment Insurance program. NAICS industry classifications have been converted to PUMS classifications.

Column 4, *LA-US Ratio of Self Employment*: This indicator of a high rate of self employment is derived from Census 2000 PUMS data. Self employment is significant because employers of informal workers sometimes claim that workers who should be covered by payroll tax benefits are self-employed independent contractors. The average ratio of self-employment in Los Angeles County to self-employment in the US is 1.2 (i.e., the county's self-employment rate is 20 percent higher than the US rate) and the average ratio for the city is 1.3. In this table a ratio of 1.3 or higher is used as an indicator of informal employment.

Column 5, *Foreign-born Non-citizen Percent*: This indicator of high concentrations of non-citizen workers is derived from Census 2000 PUMS data. Immigrant workers who are not citizens are more likely than other residents to find it necessary to accept jobs in the informal sector. Consequently, a high level of foreign-born non-citizens in an industry's labor force is an indicator of possible informal labor practices. PUMS data show 24 percent of county workers and 30 percent of city workers to be foreign-born non-citizens. In this table an informal level of 32 percent or more non-citizens is used as an indicator of informal employment.

Column 6, *LA-US FB Non-citizen Ratio*: This additional indicator of high concentrations of non-citizen workers is also derived from Census 2000 PUMS data. A variation of the preceding indicator is to identify industries with atypically high concentrations of foreign-born non-citizen workers compared to all U.S. workers in the same industry. PUMS data show the county's labor force to have 3.5 times as many foreign-born non-citizen workers as the U.S. labor force, and the city's labor force to have 4.3 times as many. In this table a percent of foreign-born non-citizen workers in an industry that is 4.1 times or more greater than the U.S. percent in the same industry is used as an indicator of informal employment.

Column 7, *LA ES-202-US PUMS Ratio*: This indicator compared the percent of the city and county labor force shown by ES-202 data to work in each industry (excluding the agriculture, mining, utility and

manufacturing sectors, because Los Angeles' industrial structure differs from that of the U.S. in many industries within these sectors) to the percent of all U.S. residents reporting to the Census Bureau that they work in the same industry. For many industries in Los Angeles' distribution and service sectors the U.S. labor market provides a reliable template for the share of the work force that we can reasonably expect to see employed in an industry, and if a lower share shows up in county or city data for the formal economy it is possible that the missing workers are in informal jobs. In this table a ratio of the percent local employer-reported employment in an industry to the percent of U.S. household-reported employment in an industry is that is 0.8 to 1 or less is used as an indicator of informal employment.

Column 8, *LA ES-202-LA PUMS Ratio*: This indicator is similar to the previous indicator except that it compares the percent of the city and county labor force shown by ES-202 data to work in each industry to the percent of city and county residents reporting to the Census Bureau that they work in the same industry. The average ratio of these two percentages is 1.0. In this table a ratio of the percent local employer-reported employment in an industry to the percent of U.S. household-reported employment in an industry is that is 0.9 to 1 or less is used as an indicator of informal employment.

Column 9, *LA ES-202-LA REIS Ratio*: This indicator compares data on total industry employment in Los Angeles County (including self-employment) that is produced by the U.S. Bureau of Economic Analysis' Regional Economic Information System (REIS) and further disaggregated by IMPLAN, to formal wage and salary employment (ES-202) data for the county. This data is not available at the city level, so the ratio for the county in Table B is also used for the city in Table C. If a smaller share of county employment shows up in formal employment data for an industry than in REIS data, the missing share of labor may be accounted for by employment in the informal economy. In this table a ratio of the percent of employer-reported employment in an industry (ES-202 data) to the percent of REIS-reported employment is 0.9 to 1 or less is used as an indicator of informal employment.

Column 10, *Total Indicators*: The total number of indicators of informal employment in each industry.

Column 11, *Possible Unreported Jobs*: The estimated number of unreported jobs in each industry, as calculated based on a higher

share of the labor force being shown in the industry by PUMS and/or REIS data than by ES-202 data. The procedures for making this calculation are described in the report and the endnotes.

Table D: Integrated Industry Estimates of Informal Employment in Los Angeles City and County, 2000

Columns 1 and 2, *PUMS Industry Code and Title*: these industry classifications are established by the Census Bureau and correspond with NAICS industry classifications, with one or more NAICS 4-digit codes corresponding to each PUMS code. A crosswalk between PUMS and NAICS codes is available from the Census Bureau web site.

Columns 3 and 7, *Possible Undocumented Workers*: This data is imported from Table A, where it is shown under the column heading, *Estimated Undocumented Employment*.

Columns 4 and 8, *Unreported Jobs*: This data is imported from Tables B and C, where it is shown under the column heading, *Possible Unreported Jobs*.

Columns 5 and 9, *Highest Industry Projection*: This is the highest value for each industry out of the two preceding columns showing estimated undocumented workers and estimated unreported jobs.

Columns 6 and 10, *Mid-range Industry Estimate*: This is the highest industry projection for each industry reduced proportionately so that total values in this column equal the mid-range estimates of 647,500 informal workers in the county and 289,700 informal workers in the city in 2000.

Note: Estimates of undocumented, unreported and informal employment in each industry should be seen as suggestive rather than conclusive. Labor market conditions within an industry should be examined to determine whether anomalies in employment data for the industry could be accounted for by circumstances other than informal employment.

Table A
Estimated Undocumented Workers by Industry
Los Angeles City and County 2000

Private sector industries with 1,000+ PUMS employees in LA County in 2000. Religious organizations, real estate, and industries with average length of job training greater than 2 years excluded. Industry estimates of undocumented workers derived from state-level estimates by the INS, with estimates of regional and industry employment based on the distribution of non-citizen workers in the US Census 2000 PUMS 5% sample. Job zone estimates of training time are from O*NET.

		City of Los Angeles				Los Angeles County				
PUMS Code	Short Industry Name	Non-Citizen Employment	Estim. Undocumented Emp.	PUMS Total Emp	% Undocumented Wkrs	Non-Citizen Employment	Estim. Undocumented Emp.	PUMS Total Emp	% Undocumented Wkrs	Average Job Zone
17	Agriculture and nurseries	778	300	1,305	23%	2,321	900	4,265	21%	1.0
18	Animal production	246	100	489	20%	529	200	1,364	15%	1.0
29	Support activities for agri.	198	100	477	21%	585	200	1,630	12%	1.4
49	Support activities, mining	-	-	315	-	-	-	1,068	-	2.5
57	Electric generation, trans.	328	100	1,574	6%	838	300	9,536	3%	2.8
59	Electric & gas comb.	-	-	1,278	-	-	-	3,721	-	2.8
67	Water, steam, air-cond.	-	-	902	-	332	100	4,915	2%	2.8
77	Construction	39,720	16,200	79,527	20%	75,439	30,800	201,546	15%	2.9
107	Animal food, grain milling	-	-	251	-	347	100	1,034	10%	1.9
108	Sugar & confectionery	313	100	765	13%	1,027	400	2,635	15%	1.5
109	Fruit & vegetable preserv.	434	200	934	21%	1,571	600	3,306	18%	1.7
117	Dairy product mfg.	-	-	363	-	647	300	2,228	13%	1.9
118	Animal slaughtering	818	300	1,382	22%	2,157	900	4,084	22%	2.1
119	Retail bakeries	1,255	500	2,705	18%	3,049	1,200	7,221	17%	1.9
127	Bakeries, except retail	1,302	500	2,221	23%	3,353	1,400	6,690	21%	1.9
128	Seafood & misc. foods	652	300	1,360	22%	1,914	800	4,213	19%	1.4
129	Not specified food ind.	323	100	836	12%	1,772	700	3,818	18%	2.1
137	Beverage mfg.	-	-	1,011	-	475	200	3,861	5%	1.9
148	Fabric mills, ex. knitting	2,580	1,100	3,580	31%	4,878	2,000	7,342	27%	2.2
149	Textile & fabric finishing	1,603	700	2,274	31%	3,603	1,500	5,513	27%	1.8
157	Carpets & rugs mfg.	229	100	344	29%	1,008	400	1,708	23%	1.6
159	Textile product mills	4,717	1,900	6,443	29%	8,513	3,500	12,872	27%	1.6
167	Knitting mills	631	300	920	33%	1,419	600	2,659	23%	2.1
168	Cut & sew apparel mfg.	21,241	8,700	28,262	31%	35,932	14,700	54,885	27%	1.5
169	Apparel accessories mfg.	8,627	3,500	11,625	30%	14,167	5,800	21,072	28%	1.3
177	Footwear mfg.	307	100	602	17%	615	300	1,280	23%	1.9
179	Leather tanning & prod.	666	300	1,034	29%	1,183	500	2,228	22%	1.8
187	Pulp, paper mills	227	100	474	21%	875	400	2,300	17%	2.0
188	Paperboard containers	282	100	676	15%	1,385	600	4,612	13%	2.1
189	misc. paper & pulp prod.	-	-	403	-	1,189	500	3,201	16%	2.1
199	Printing & related support	3,372	1,400	9,249	15%	8,406	3,400	28,789	12%	2.6
219	Pharmaceutical, med. mfg.	639	300	2,859	10%	1,741	700	7,914	9%	2.5
228	Soap & cosmetic mfg.	1,148	500	2,378	21%	2,062	800	5,054	16%	2.1
229	Industrial & misc. chem.	447	200	1,516	13%	1,300	500	4,997	10%	2.4
237	Plastics product mfg.	2,105	900	3,897	23%	7,219	2,900	15,834	18%	2.1
239	Rubber products, ex. tires	309	100	625	16%	1,099	400	2,324	17%	1.9
247	Pottery, ceramics	-	-	393	-	691	300	1,508	20%	1.6

Table A continued

PUMS Code	Short Industry Name	City of Los Angeles: Non-Citizen Employment	City of Los Angeles: Estim. Undocumented Emp.	City of Los Angeles: PUMS Total Emp	City of Los Angeles: % Undocumented Wkrs	Los Angeles County: Non-Citizen Employment	Los Angeles County: Estim. Undocumented Emp.	Los Angeles County: PUMS Total Emp	Los Angeles County: % Undocumented Wkrs	Average Job Zone
249	Glass product mfg.	574	200	1,064	19%	1,176	500	3,356	15%	2.1
257	Cement, concrete, lime	-	-	439	-	314	100	2,243	4%	2.2
259	Misc. nonmetallic min. mfg.	446	200	704	28%	938	400	1,915	21%	2.2
267	Iron & steel mills	346	100	620	16%	1,318	500	3,409	15%	2.4
268	Aluminum production	243	100	341	29%	711	300	1,704	18%	2.2
269	Nonferrous metal ex. al.	-	-	229	-	465	200	1,449	14%	2.8
277	Foundries	484	200	733	27%	1,939	800	4,056	20%	2.4
278	Metal forgings & stamping	329	100	665	15%	1,009	400	2,870	14%	2.6
279	Cutlery & hand tool mfg.	-	-	417	-	604	200	1,615	12%	2.2
287	Structural metals & tank	888	400	2,052	19%	2,816	1,100	8,127	14%	2.4
289	Coating, engraving, heat	1,295	500	2,323	22%	3,159	1,300	7,024	19%	2.2
298	misc. fabricated metal mfg.	795	300	2,478	12%	2,636	1,100	8,868	12%	2.5
299	Not specified metal ind.	325	100	411	24%	813	300	1,284	23%	2.6
309	Comm. & srv. ind. mach.	537	200	1,799	11%	1,062	400	5,127	8%	2.9
317	Metalworking machinery	612	200	1,300	15%	1,584	600	4,629	13%	2.9
319	Machinery mfg., nec	1,125	500	2,975	17%	3,466	1,400	10,883	13%	2.9
329	Not specified mach. mfg.	-	-	364	-	440	200	1,104	18%	3.0
339	Electronic component	3,015	1,200	10,102	12%	6,450	2,600	26,235	10%	2.9
347	Household appliance mfg.	359	100	636	16%	674	300	1,633	18%	1.9
349	Electrical lighting, equip.	1,635	700	3,932	18%	4,104	1,700	12,107	14%	2.6
357	Motor vehicle & equip mfg	1,694	700	4,252	16%	5,793	2,400	18,015	13%	2.5
368	Ship & boat building	248	100	624	16%	320	100	1,117	9%	2.0
387	Misc. wood products	936	400	1,367	29%	2,554	1,000	4,255	24%	2.2
389	Furniture & related prod.	4,847	2,000	8,121	25%	14,798	6,000	27,021	22%	2.2
396	Medical equipment mfg.	1,238	500	4,069	12%	2,839	1,200	12,472	10%	2.6
397	Toys, amusement prod.	1,055	400	2,557	16%	2,355	1,000	7,072	14%	2.5
398	Misc. mfg., n.e.c.	4,877	2,000	9,874	20%	10,212	4,200	23,581	18%	2.5
399	Not specified mfg. ind.	7,679	3,100	13,169	24%	16,831	6,900	33,558	21%	2.5
407	Motor vehicles & parts	974	400	2,789	14%	2,979	1,200	10,076	12%	2.2
408	Furniture & home furn.	479	200	1,555	13%	1,879	800	5,153	16%	1.9
409	Lumber & const. mat.	474	200	1,073	19%	1,007	400	3,430	12%	1.8
418	Metals & minerals	163	100	684	15%	924	400	3,142	13%	2.1
426	Hardware, plumbing eq.	305	100	1,314	8%	879	400	4,997	8%	2.2
427	Machinery, equipment	922	400	3,434	12%	2,406	1,000	12,288	8%	2.4
428	Recyclable material	1,066	400	1,644	24%	2,361	1,000	4,253	24%	1.7
429	Misc. durable goods	3,016	1,200	7,505	16%	6,680	2,700	18,014	15%	1.7
437	Paper & paper prod. whl.	451	200	1,712	12%	1,226	500	5,734	9%	2.0
438	Drugs, sundries, whlse.	849	300	2,613	11%	1,631	700	6,172	11%	2.2
439	Apparel, & fabrics whlse.	4,442	1,800	8,306	22%	8,725	3,600	17,390	21%	1.8
447	Groceries wholesalers	4,918	2,000	9,711	21%	13,132	5,400	33,274	16%	1.8
449	Petroleum whlse.	-	-	462	-	326	100	2,599	4%	1.9
456	Alcoholic beverage whl.	266	100	852	12%	461	200	2,614	8%	2.3
458	Misc. nondurable whlse.	901	400	2,642	15%	2,577	1,100	7,507	15%	2.0
459	Not specified wholesale	2,666	1,100	6,537	17%	6,883	2,800	18,602	15%	1.7
467	Automobile dealers	2,436	1,000	8,732	11%	6,122	2,500	27,820	9%	2.2

Table A continued

PUMS Code	Short Industry Name	City of Los Angeles: Non-Citizen Employment	City of Los Angeles: Estim. Undocumented Emp.	City of Los Angeles: PUMS Total Emp	City of Los Angeles: % Undocumented Wkrs	Los Angeles County: Non-Citizen Employment	Los Angeles County: Estim. Undocumented Emp.	Los Angeles County: PUMS Total Emp	Los Angeles County: % Undocumented Wkrs	Average Job Zone
468	Other motor veh. dealers	-	-	495	-	227	100	1,966	5%	2.0
469	Auto parts, accessories	1,697	700	4,193	17%	3,796	1,500	12,491	12%	2.2
477	Furniture stores	2,403	1,000	7,130	14%	5,305	2,200	18,194	12%	1.9
478	Household appliance store	188	100	567	18%	432	200	1,939	10%	2.0
479	Radio, TV, comp. stores	1,917	800	9,091	9%	5,162	2,100	26,181	8%	2.0
487	Building supplies dealers	1,527	600	5,544	11%	2,966	1,200	16,288	7%	1.8
488	Hardware stores	376	200	1,425	14%	773	300	3,973	8%	1.8
489	Lawn & garden equip.	-	-	610	-	511	200	2,154	9%	1.7
497	Grocery stores	9,627	3,900	24,182	16%	18,636	7,600	63,906	12%	1.5
498	Specialty food stores	1,322	500	2,938	17%	3,326	1,400	8,327	17%	1.7
499	Beer, wine, liquor stores	541	200	1,603	12%	1,215	500	4,127	12%	1.4
507	Pharmacies & drug stores	1,441	600	5,864	10%	2,962	1,200	16,210	7%	1.9
508	Health , ex drug stores	976	400	3,686	11%	2,222	900	9,097	10%	1.9
509	Gasoline stations	1,822	700	3,941	18%	3,792	1,500	9,695	15%	1.3
518	Shoe stores	916	400	2,189	18%	1,752	700	4,922	14%	2.0
519	Jewelry, luggage	1,191	500	3,002	17%	2,608	1,100	7,790	14%	2.0
527	Sporting goods, camera	762	300	3,863	8%	1,899	800	11,002	7%	2.0
528	Sewing, needlework store	216	100	796	13%	639	300	2,062	15%	1.9
529	Music stores	651	300	3,409	9%	1,365	600	6,733	9%	1.8
538	Department stores	4,091	1,700	17,510	10%	8,984	3,700	49,298	8%	1.8
539	Misc. gen. merch. store	529	200	1,046	19%	990	400	2,807	14%	1.6
547	Retail florists	686	300	2,048	15%	1,479	600	5,062	12%	2.0
549	Used merchandise stores	840	300	2,536	12%	1,977	800	6,093	13%	2.1
557	Gift, novelty, & souvenir	948	400	3,426	12%	1,709	700	8,201	9%	1.9
558	Misc. retail stores	1,345	500	4,724	11%	3,007	1,200	11,725	10%	2.0
559	Electronic shopping	1,051	400	4,543	9%	2,050	800	10,573	8%	2.9
567	Vending machine op.s	-	-	376	-	300	100	1,082	9%	2.0
569	Other direct selling estab.	813	300	1,910	16%	1,572	600	4,802	12%	1.3
608	Rail transportation	171	100	979	10%	298	100	3,485	3%	1.8
609	Water transportation	-	-	767	-	256	100	1,895	5%	1.8
617	Truck transportation	4,152	1,700	10,701	16%	11,118	4,500	37,932	12%	1.8
619	Taxi & limousine service	1,075	400	3,151	13%	2,064	800	6,492	12%	1.4
639	Warehousing & storage	1,217	500	2,816	18%	4,251	1,700	11,123	15%	1.7
647	Newspaper publishers	1,767	700	6,224	11%	3,644	1,500	14,991	10%	3.0
659	Sound recording industry	351	100	4,081	2%	632	300	6,627	5%	2.7
677	Libraries & archives	328	100	2,493	4%	707	300	6,831	4%	2.0
678	Other information service	846	300	7,510	4%	1,703	700	15,876	4%	2.0
687	Banking & related activity	2,846	1,200	17,391	7%	6,583	2,700	47,773	6%	2.7
688	Savings inst. & credit	275	100	1,695	6%	623	300	5,741	5%	2.7
689	Nondepository credit	1,554	600	10,505	6%	3,747	1,500	27,910	5%	2.9
707	Real estate	5,493	2,200	31,764	7%	10,985	4,500	75,297	6%	
708	Automotive equip. rental	387	200	2,271	9%	1,195	500	6,025	8%	1.5
717	Video tape & disk rental	374	200	1,572	13%	646	300	4,076	7%	1.5
718	Other consumer rental	380	200	1,303	15%	541	200	2,986	7%	1.7
758	Employment services	2,960	1,200	13,348	9%	7,839	3,200	32,019	10%	1.8

Table A continued

PUMS Code	Short Industry Name	City of Los Angeles: Non-Citizen Employment	City of Los Angeles: Estim. Undocumented Emp.	City of Los Angeles: PUMS Total Emp	City of Los Angeles: % Undocumented Wkrs	Los Angeles County: Non-Citizen Employment	Los Angeles County: Estim. Undocumented Emp.	Los Angeles County: PUMS Total Emp	Los Angeles County: % Undocumented Wkrs	Average Job Zone
767	Travel arrangement	1,315	500	6,715	7%	2,991	1,200	14,841	8%	2.9
769	Services to buildings	11,308	4,600	17,082	27%	18,153	7,400	34,060	22%	1.4
777	Landscaping services	11,904	4,900	16,382	30%	23,606	9,600	36,715	26%	1.4
778	Other administrative srv.	1,087	400	3,114	13%	2,169	900	7,598	12%	2.8
779	Waste management srv.	1,241	500	2,830	18%	2,886	1,200	8,653	14%	1.9
798	Offices of dentists	1,314	500	7,462	7%	3,861	1,600	22,746	7%	2.4
817	Home health care srvs.	1,697	700	5,993	12%	3,873	1,600	15,834	10%	2.9
818	Other health care srvs.	2,066	800	9,883	8%	3,874	1,600	24,056	7%	2.5
827	Nursing care facilities	2,975	1,200	7,094	17%	6,987	2,900	18,154	16%	2.3
856	Independent artists	3,078	1,300	29,367	4%	5,527	2,300	50,065	5%	2.9
858	Bowling centers	-	-	341	-	-	-	1,134	-	2.0
859	Oth. amusement, gambling	3,188	1,300	15,087	9%	6,927	2,800	42,100	7%	1.8
866	Traveler accommodation	6,155	2,500	14,570	17%	12,620	5,200	31,938	16%	1.7
868	Restaurants	43,731	17,900	81,161	22%	84,262	34,400	192,810	18%	1.6
869	Drinking places, alcoholic	754	300	3,386	9%	1,285	500	6,170	8%	1.2
877	Automotive repair	9,781	4,000	18,414	22%	20,276	8,300	48,217	17%	2.4
878	Car washes	2,266	900	3,394	27%	4,536	1,900	7,004	27%	2.4
879	Electronic repair	624	300	2,111	14%	1,765	700	6,553	11%	3.0
888	Personal goods repair	1,504	600	3,011	20%	2,555	1,000	6,289	16%	2.7
897	Barber shops	294	100	999	10%	664	300	2,466	12%	2.7
898	Beauty salons	2,140	900	9,152	10%	4,818	2,000	24,293	8%	2.7
899	Nail salons	405	200	2,177	9%	1,395	600	6,030	10%	2.7
907	Drycleaning & laundry	3,249	1,300	6,359	20%	7,033	2,900	14,460	20%	1.7
908	Funeral homes, cemetery	352	100	996	10%	693	300	3,458	9%	2.2
909	Other personal services	3,273	1,300	8,080	16%	4,994	2,000	14,406	14%	1.3
929	Private households	17,344	7,100	28,190	25%	26,251	10,700	47,126	23%	1.0
	TOTAL	**458,666**	**187,300**	**1,534,208**	**12%**	**968,113**	**395,300**	**3,953,448**	**10%**	**2.3**

Correlation of O*NET Job Zones to SVP Codes and training for occupations

Job Zone	Specific Vocational Preparation (SVP Code)	Length of Training
1	<4	Less than 3 months
2	4 to <6	Over 3 months
3	6 to <7	Over 1 year
4	7 to <8	Over 2 years
5	8+	Over 4 years

Table B

Indicators of Informal Employment in Los Angeles County Industries

Private Sector Industries with 1,000+ PUMS or ES-202 Employees in Los Angeles County in 2000. Religious organizations, real estate, and industries with average length of training for workers greater than 2 years excluded.

PUMS Code	Industry Name	ES-202 Employment April 2000	LA-US Ratio of Self Employment	Foreign-born Non-citizen %	LA-US FB Non-citizen Ratio	LA ES-202-US PUMS Ratio	LA ES-202-LA PUMS Ratio	LA ES-202-LA REIS Ratio	Total Indicators	Possible Unreported Jobs
17	Agriculture and nurseries	6,470	0.4	**54%**	2.4		1.5	2.0	1	
18	Animal production	330	0.5	**39%**	**4.5**		**0.2**	**0.7**	4	700
29	Support activities for agri.	900	0.6	**36%**	2.4		**0.5**	**0.6**	3	800
37	Oil & gas extraction	2,180					3.5	**0.4**	1	3,500
57	Electric generation, trans.	15,120		9%	**4.8**		1.5	4.6	1	
59	Electric & gas comb.	170					**0.0**		1	4,200
67	Water, steam, air-cond.	3,650		7%	3.0		**0.7**	9.8	1	1,700
77	Construction	129,830	1.0	**37%**	3.5	**0.5**	**0.6**	**0.8**	4	65,200
107	Animal food, grain milling	2,780		**34%**	**11.9**		2.6	1.0	2	
108	Sugar & confectionery	2,210		**39%**	3.6		**0.8**	1.2	2	600
109	Fruit & vegetable preserv.	5,950		**48%**	3.3		1.7	1.2	1	
117	Dairy product mfg.	5,290		29%	**6.5**		2.3	1.3	1	
118	Animal slaughtering	6,240		**53%**	2.2		1.5	1.3	1	
119	Retail bakeries	4,480	0.9	**42%**	3.1		**0.6**	1.0	2	3,400
127	Bakeries, except retail	13,810	1.1	**50%**	2.9		2.0	1.4	1	
128	Seafood & misc. foods	1,750		**45%**	3.9		**0.4**	1.4	2	3,000
129	Not specified food ind.	3,540		**46%**	3.0		**0.9**		2	500
148	Fabric mills, ex. knitting	3,040	**1.8**	**66%**	**6.6**		**0.4**	1.4	4	5,200
149	Textile & fabric finishing	8,830	**2.7**	**65%**	**4.6**		1.5	1.4	3	
157	Carpets & rugs mfg.	1,680		**59%**	**4.4**		1.0	1.3	2	100
159	Textile product mills	8,500	1.2	**66%**	**4.1**		**0.6**	1.4	3	5,500
167	Knitting mills	4,840	**2.7**	**53%**	**4.1**		1.8	1.4	3	
168	Cut & sew apparel mfg.	89,690	0.9	**65%**	2.5		1.6	1.4	1	
169	Apparel accessories mfg.	3,560	1.1	**67%**	1.9		**0.2**	1.4	2	21,000
177	Footwear mfg.	1,380		**48%**	**5.6**		1.0	1.7	2	
179	Leather tanning & prod.	2,340		**53%**	3.0		1.0	1.3	1	
187	Pulp, paper mills	1,500		**38%**	**9.8**		**0.6**	1.5	3	1,000
188	Paperboard containers	6,860		30%	**5.0**		1.4	1.3	1	
189	misc. paper & pulp prod.	5,160		**37%**	**6.0**		1.6	1.2	2	
199	Printing & related support	30,900	**1.3**	29%	**4.7**		1.0	**0.7**	3	8,800
217	Resin, synthetic rubber	2,030		**50%**	**8.2**		2.0	1.1	2	
219	Pharmaceutical, med. mfg.	6,710		22%	3.1		**0.8**	1.3	1	1,700
228	Soap & cosmetic mfg.	7,790	**1.9**	**41%**	3.1		1.5	1.3	2	

Table B continued

PUMS Code	Industry Name	ES-202 Employ-ment	Ratio of Self Em-ployment	Foreign-born Non-citizen %	FB Non-citizen Ratio	LA Co. ES-202-US PUMS Ratio	LA Co. ES-202-PUMS Ratio	LA Co. ES-202-REIS Ratio	Total Indi-cators	Unre-ported Jobs
229	Industrial & misc. chem.	4,970		26%	**6.5**		1.0	1.4	1	200
237	Plastics product mfg.	21,490	0.9	**46%**	**4.7**		1.3	1.2	2	
239	Rubber products, ex. tires	2,750		**47%**	**7.1**		1.1	1.1	2	
247	Pottery, ceramics	1,610		**46%**	**7.5**		1.0	1.5	2	
249	Glass product mfg.	5,050	**1.7**	**35%**	**5.0**		1.5	1.2	3	
259	Misc. nonmetallic min. mfg.	1,410		**49%**	**6.3**		**0.7**	1.5	3	700
267	Iron & steel mills	2,410		**39%**	**7.8**		**0.7**	1.5	3	1,300
268	Aluminum production	2,220		**42%**	**6.2**		1.3	**0.7**	3	800
269	Nonferrous metal ex. al.	2,090		**32%**	**5.9**		1.4	1.6	2	
277	Foundries	6,290		**48%**	**6.5**		1.5	1.3	2	
278	Metal forgings & stamping	4,130		**35%**	**4.5**		1.4	1.2	2	
279	Cutlery & hand tool mfg.	2,190		**37%**	3.9		1.3	1.3	1	
287	Structural metals & tank	12,640	**1.6**	**35%**	**4.7**		1.5	1.3	3	
288	Machine shops, screw	15,080	1.2	28%	**4.2**		1.0	1.3	1	
289	Coating, engraving, heat	11,840	1.0	**45%**	3.9		1.6	1.2	1	
298	misc. fabricated metal mfg.	12,720		30%	**4.1**		1.4	1.3	1	
299	Not specified metal ind.	2,470		**63%**	2.9		1.9	1.2	1	
317	Metalworking machinery	6,170	**1.6**	**34%**	**7.3**		1.3	1.3	3	
319	Machinery mfg., nec	11,450	**2.1**	**32%**	**5.6**		1.0	1.3	3	
329	Not specified mach. mfg.	880		**40%**	3.2		**0.8**		2	300
339	Electronic component	17,690	**2.1**	25%	2.0		**0.7**	1.4	2	10,900
347	Household appliance mfg.	820		**41%**	**6.1**		**0.5**	1.0	3	1,000
349	Electrical lighting, equip.	14,080	**2.3**	**34%**	**4.4**		1.1	1.4	3	
357	Motor vehicle & equip mfg	17,900	**2.8**	**32%**	**6.5**		1.0	1.7	3	900
368	Ship & boat building	890		29%	**6.2**		**0.8**	1.5	2	300
369	Other transportation eq.	1,230		**44%**	**6.4**		1.9	1.7	2	
387	Misc. wood products	5,070	0.8	**60%**	**8.1**		1.2	1.3	2	
389	Furniture & related prod.	33,180	0.8	**55%**	**5.0**		1.2	1.2	2	
396	Medical equipment mfg.	9,510	**2.1**	23%	2.9		**0.7**	1.3	2	3,900
397	Toys, amusement prod.	4,610	0.7	**33%**	2.8		**0.6**	1.3	2	3,100
398	Misc. mfg., n.e.c.	9,410	1.0	**43%**	3.4		**0.4**	1.2	2	17,200
399	Not specified mfg. ind.	7,810	1.1	**50%**	3.2		**0.2**		2	31,000
407	Motor vehicles & parts whls.	15,770	0.8	30%	**5.1**	1.9	1.5		1	
408	Furniture & home furn. whls.	10,020	0.8	**36%**	3.6	3.3	1.9		1	
409	Lumber & const. mat. whls.	4,480	**1.4**	29%	3.9	**0.7**	1.3		2	
418	Metals & minerals whls.	5,850		29%	**5.6**	2.3	1.8		1	
426	Hardware, plumbing eq. whl.	9,990	0.9	18%	**4.4**	1.8	1.9		1	
427	Machinery, equipment whls.	18,420	1.1	20%	**5.2**	1.1	1.4		1	
428	Recyclable material whls.	5,760	1.0	**56%**	**6.3**	1.6	1.3		2	
429	Misc. durable goods whls.	15,400	0.9	**37%**	3.0	2.2	**0.8**		2	3,700
437	Paper & paper prod. whls.	6,710	1.1	21%	**4.1**	1.8	1.1		1	

Table B continued

PUMS Code	Industry Name	ES-202 Employ-ment	Ratio of Self Em-ployment	Foreign-born Non-citizen %	FB Non-citizen Ratio	LA Co. ES-202-US PUMS Ratio	LA Co. ES-202-PUMS Ratio	LA Co. ES-202-REIS Ratio	Total Indi-cators	Unre-ported Jobs
438	Drugs, sundries, whls.	10,120	**1.5**	26%	**5.4**	1.6	1.6		2	
439	Apparel, & fabrics whls.	19,620	1.3	**50%**	2.7	4.9	1.1		1	
447	Groceries wholesalers	28,120	1.2	**39%**	3.3	1.1	**0.8**		2	7,300
449	Petroleum whlse.	1,780		13%	**5.2**	**0.4**	**0.7**		3	1,100
456	Alcoholic beverage whls.	2,200		18%	**4.6**	**0.5**	**0.8**		3	600
458	Misc. nondurable whls.	15,480	1.3	**34%**	2.5	2.2	2.0		1	
459	Not specified wholesale	0	0.9	**37%**	2.7			1.2	1	22,100
467	Automobile dealers	33,570	0.8	22%	**5.0**	0.9	1.2	1.2	1	
468	Other motor veh. dealers	2,050		12%	**4.5**	**0.5**	1.0		2	
469	Auto parts, accessories	14,050	1.1	30%	**6.5**	1.1	1.1		1	
477	Furniture stores	14,830	1.1	29%	**4.3**	**0.8**	**0.8**	1.2	3	4,600
478	Household appliance store	3,840	1.0	22%	**5.5**	1.3	1.9		1	
479	Radio, TV, comp. stores	17,190	1.2	20%	2.8	**0.7**	**0.6**	1.2	2	11,400
487	Building supplies dealers	16,080	0.9	18%	**4.7**	**0.7**	1.0	1.2	2	900
488	Hardware stores	2,710	1.1	19%	**7.5**	**0.4**	**0.7**		3	1,600
489	Lawn & garden equip.	2,190	0.8	24%	**4.3**	**0.3**	1.0		2	
497	Grocery stores	62,990	**1.4**	29%	**4.3**	**0.7**	1.0	1.2	3	3,600
498	Specialty food stores	11,560	1.1	**40%**	3.5	1.9	1.3		1	
499	Beer, wine, liquor stores	3,390	**1.7**	29%	3.1	1.0	**0.8**		2	1,000
507	Pharmacies & drug stores	16,910	**1.6**	18%	**4.4**	**0.8**	1.0	1.1	3	
508	Health , ex drug stores	7,450	1.2	24%	3.6	1.0	**0.8**		1	2,300
509	Gasoline stations	11,430	**1.3**	**39%**	**4.4**	0.9	1.1	1.2	3	
518	Shoe stores	6,480	**1.9**	**36%**	**5.1**	1.4	1.3		3	
519	Jewelry, luggage	5,370	1.3	**33%**	3.4	1.0	**0.7**		2	3,100
527	Sporting goods, camera	10,880	0.9	17%	**4.7**	0.9	1.0	1.0	1	400
528	Sewing, needlework store	1,990	0.8	31%	**5.5**	1.1	**0.9**		2	200
529	Music stores	6,250	1.1	20%	3.6	1.4	**0.9**		1	800
538	Department stores	41,370	**2.2**	18%	3.6	**0.6**	**0.8**	1.4	3	11,100
539	Misc. gen. merch. store	13,430		**35%**	**4.3**	3.2	4.6		2	
547	Retail florists	2,710	**1.4**	29%	**4.8**	**0.5**	**0.5**		4	2,900
549	Used merchandise stores	4,110	0.8	**32%**	4.0	**0.7**	**0.7**		3	2,500
557	Gift, novelty, & souvenir	7,450	1.3	21%	**4.1**	0.9	**0.9**		2	1,200
558	Misc. retail stores	8,170	**1.3**	26%	**4.8**	**0.7**	**0.7**	**0.9**	5	5,100
559	Electronic shopping	6,050	**1.8**	19%	3.6	**0.7**	**0.6**	**0.2**	4	19,200
567	Vending machine op.s	740		28%	**9.2**	**0.4**	**0.7**		3	400
569	Other direct selling estab.	2,620	1.2	**33%**	**6.1**	**0.4**	**0.5**		4	2,700
608	Rail transportation	0		9%	**4.1**			**0.0**	2	5,900
609	Water transportation	1,670		14%	2.7	1.0	**0.9**	1.1	1	300
617	Truck transportation	31,410	1.0	29%	**6.2**	**0.6**	**0.8**	1.8	3	9,000
619	Taxi & limousine service	2,420	0.9	**32%**	1.2	**0.4**	**0.4**		3	4,900
639	Warehousing & storage	19,120	0.6	**38%**	**4.2**	2.3	1.7	2.0	2	

Table B continued

PUMS Code	Industry Name	ES-202 Employ-ment	Ratio of Self Em-ployment	Foreign-born Non-citizen %	FB Non-citizen Ratio	LA Co. ES-202-US PUMS Ratio	LA Co. ES-202-PUMS Ratio	LA Co. ES-202-REIS Ratio	Total Indi-cators	Unre-ported Jobs
647	Newspaper publishers	11,830	0.5	24%	**5.1**	**0.7**	**0.8**	1.2	3	4,200
648	Publishing ex. newspaper	12,990	**1.3**	11%	2.5	1.1	**0.9**	1.2	2	1,100
659	Sound recording industry	4,710	0.8	10%	1.3	4.2	**0.7**	1.1	1	2,500
677	Libraries & archives	4,890		10%	3.1	**0.6**	**0.7**		2	2,500
687	Banking & related activity	33,660	1.1	14%	3.2	**0.6**	**0.7**	1.4	2	18,100
689	Nondepository credit	23,490	**1.6**	13%	2.8	0.9	**0.8**	1.4	2	6,200
708	Automotive equip. rental	7,720	**1.5**	20%	2.4	1.5	1.2	**0.7**	2	4,000
717	Video tape & disk rental	4,470	**1.5**	16%	**4.5**	1.1	1.1	1.0	2	
718	Other consumer rental	6,480	0.6	18%	3.8	2.1	2.1	**0.7**	1	3,300
748	Veterinary services	4,250	0.8	8%	3.5	**0.6**	1.0	1.3	1	
749	Other prof. & tech. srv.	14,550	1.2	15%	2.3	1.6	1.1	**0.8**	1	3,800
758	Employment services	131,640	1.1	24%	2.7	5.5	4.0	**0.9**	1	17,700
767	Travel arrangement	13,800	**1.5**	20%	2.3	1.4	**0.9**	1.1	2	1,800
769	Services to buildings	27,750	0.9	**53%**	2.9	1.0	**0.8**	1.0	2	5,300
777	Landscaping services	11,530	1.3	**64%**	2.6	**0.5**	**0.3**		3	30,400
778	Other administrative srv.	21,560	**1.3**	29%	4.0	3.6	2.7	1.0	1	
779	Waste management srv.	8,240	1.2	**33%**	**4.7**	0.8	**0.9**	1.3	3	800
798	Offices of dentists	23,910	1.1	17%	**4.1**	1.1	1.0		1	
817	Home health care srvs.	10,800	**1.5**	24%	2.8	**0.6**	**0.7**	**0.9**	4	3,900
818	Other health care srvs.	10,750	1.1	16%	3.1	**0.5**	**0.4**		2	16,300
827	Nursing care facilities	30,620	**1.9**	**38%**	**6.4**	**0.6**	1.6	1.2	4	
856	Independent artists	26,890	1.0	11%	1.8	1.5	**0.5**	**0.3**	2	53,900
858	Bowling centers	1,420				**0.8**	1.2	2.0	1	
859	Oth. amusement, gambling	38,190	**1.9**	16%	2.7	0.8	**0.9**	1.4	2	6,200
866	Traveler accommodation	40,050	1.2	**40%**	2.6	1.0	1.2	1.8	1	
868	Restaurants	234,090	**1.3**	**44%**	3.4	1.2	1.2	1.1	2	
869	Drinking places, alcoholic	6,610	0.6	21%	**4.1**	0.9	1.0		1	
877	Automotive repair	23,570	1.0	**42%**	**4.7**	**0.6**	**0.5**	**0.5**	5	29,600
878	Car washes	7,600	0.8	**65%**	3.3	1.8	1.0	**0.8**	2	2,200
879	Electronic repair	3,220	**1.3**	27%	**4.4**	**0.6**	**0.5**	**0.4**	5	5,100
888	Personal goods repair	2,660	0.8	**41%**	**4.3**	**0.4**	**0.4**	**0.6**	5	3,300
897	Barber shops	230	0.8	27%	**5.4**	**0.1**	**0.1**		3	2,700
898	Beauty salons	9,030	1.0	20%	3.0	**0.4**	**0.4**	**0.8**	3	10,700
899	Nail salons	3,430	0.8	23%	1.8	**0.6**	**0.5**		2	3,200
907	Dry cleaning & laundry	14,340	1.3	**49%**	2.5	1.3	1.0	**0.9**	2	1,600
908	Funeral homes, cemetery	3,400		20%	**7.4**	**0.7**	1.0	**0.8**	3	600
909	Other personal services	14,860	0.7	**35%**	3.0	1.9	1.0	**0.8**	2	2,800
929	Private households	59,720	0.8	**56%**	2.3	3.3	1.2	**0.4**	2	71,400
Total / Average		**4,090,630**	**1.2**	**24%**	**3.5**	**1.0**	**1.0**	**1.0**		643,600

Table C

Indicators of Informal Employment in City of Los Angeles Industries

Private Sector Industries with 1,000+ PUMS or ES-202 Employees in Los Angeles City in 2000. Religious organizations, real estate, and industries with average length of training for workers greater than 2 years excluded.

PUMS Code	Industry Name	ES-202 Employment April 2000	LA-US Ratio of Self Employment	Foreign-born Non-citizen %	LA-US FB Non-citizen Ratio	LA ES-202-US PUMS Ratio	LA City ES-202-PUMS Ratio	LA Co. ES-202-REIS Ratio	Total Indicators	Possible Unreported Jobs
17	Agriculture and nurseries	1,540		**60%**	2.68		1.09	2.0	1	
57	Electric generation, trans.	7,520		21%	**11.35**		4.42	4.6	1	
59	Electric & gas comb.	40					**0.03**		1	1,500
77	Construction	41,030	1.08	**50%**	**4.71**	**0.37**	**0.48**	**0.8**	5	33,600
108	Sugar & confectionery	1,700		**41%**	3.78		2.05	1.2	1	
109	Fruit & vegetable preserv.	1,810		**46%**	3.19		1.79	1.2	1	
118	Animal slaughtering	1,470		**59%**	2.52		0.98	1.3	1	
119	Retail bakeries	2,060	1.18	**46%**	3.37		**0.70**	1.0	2	1,000
127	Bakeries, except retail	5,400		**59%**	3.37		2.25	1.4	1	
128	Seafood & misc. foods	1,580		**48%**	**4.10**		1.08	1.4	2	
129	Not specified food ind.	1,570		**39%**	2.50		1.74		1	
148	Fabric mills, ex. knitting	930		**72%**	**7.15**		**0.24**	1.4	3	3,400
149	Textile & fabric finishing	4,120		**70%**	**4.94**		1.68	1.4	2	
159	Textile product mills	4,230	**1.33**	**73%**	**4.56**		**0.61**	1.4	4	3,100
167	Knitting mills	1,960		**69%**	**5.23**		1.97	1.4	2	
168	Cut & sew apparel mfg.	52,920	0.81	**75%**	2.85		1.74	1.4	1	
169	Apparel accessories mfg.	2,130	**1.37**	**74%**	2.11		**0.17**	1.4	3	12,000
179	Leather tanning & prod.	1,330		**64%**	3.59		1.19	1.3	1	
188	Paperboard containers	1,440		**42%**	**6.92**		1.97	1.3	2	
199	Printing & related support	12,680	**1.54**	**36%**	**5.88**		1.27	**0.7**	4	2,800
228	Soap & cosmetic mfg.	3,440		**48%**	3.73		1.34	1.3	1	
229	Industrial & misc. chem.	1,250		29%	**7.37**		**0.76**	1.4	2	400
237	Plastics product mfg.	4,640		**54%**	**5.59**		1.10	1.2	2	
249	Glass product mfg.	1,650		**54%**	**7.75**		1.44	1.2	2	
277	Foundries	1,320		**66%**	**9.04**		1.67	1.3	2	
278	Metal forgings & stamping	1,020		**49%**	**6.35**		1.43	1.2	2	
287	Structural metals & tank	4,280		**43%**	**5.85**		1.93	1.3	2	
288	Machine shops, screw	3,280	**1.61**	**35%**	**5.39**		**0.68**	1.3	4	1,700
289	Coating, engraving, heat	4,660		**56%**	**4.89**		1.86	1.2	2	
298	misc. fabricated metal mfg.	3,450		**32%**	**4.46**		1.29	1.3	2	
309	Commercial machinery mfg	830		30%	**4.16**		**0.43**	1.3	2	1,300
317	Metalworking machinery	1,350		**47%**	**10.06**		0.96	1.3	2	100
319	Machinery mfg., nec	2,460		**38%**	**6.63**		**0.77**	1.3	3	900
339	Electronic component	7,010	**2.53**	30%	2.47		**0.64**	1.4	2	4,500
349	Electrical lighting, equip.	3,280	**4.03**	**42%**	**5.35**		**0.77**	1.4	4	1,100
357	Motor vehicle & equip mfg	3,990		**40%**	**8.08**		**0.87**	1.7	3	700

Table C continued

PUMS Code	Industry Name	ES-202 Employ-ment	Ratio of Self Em-ployment	Foreign-born Non-citizen %	FB Non-citizen Ratio	LA Co. ES-202-US PUMS Ratio	LA City ES-202-PUMS Ratio	ES-202-REIS Ratio	Total Indi-cators	Unre-ported Jobs
387	Misc. wood products	1,550		**68%**	**9.26**		1.05	1.3	2	
389	Furniture & related prod.	9,350	1.21	**60%**	**5.48**		1.07	1.2	2	
396	Medical equipment mfg.	2,790	**2.07**	30%	3.81		**0.64**	1.3	2	1,800
397	Toys, amusement prod.	1,130	0.79	**41%**	3.51		**0.41**	1.3	2	1,900
398	Misc. mfg., n.e.c.	5,070	**1.35**	**49%**	3.91		**0.48**	1.2	3	6,400
399	Not specified mfg. ind.	3,690	**1.40**	**58%**	3.76		**0.26**		3	12,100
407	Motor vehicles & parts	6,700	1.18	**35%**	**6.03**	2.00	2.23		2	
409	Lumber & const. mat.	1,130		**44%**	**5.88**	**0.47**	0.98		3	
417	Professional & com. equip	10,760	**2.09**	21%	3.16	2.04	2.17		1	
418	Metals & minerals	1,260		24%	**4.57**	1.22	1.70		1	
419	Electrical goods	5,890	0.75	29%	**4.89**	1.20	1.26		1	
426	Hardware, plumbing eq.	2,700		23%	**5.74**	1.19	1.91		1	
427	Machinery, equipment	4,260	**1.96**	27%	**7.07**	**0.63**	1.15		3	
428	Recyclable material	2,430	**1.76**	**65%**	**7.36**	1.66	1.37		3	
429	Misc. durable goods	7,740	0.96	**40%**	3.23	2.70	0.96		1	400
437	Paper & paper prod. whl.	2,550		26%	**5.01**	1.65	1.38		1	
438	Drugs, sundries, whlse.	3,280	**2.00**	**32%**	**6.67**	1.27	1.16		3	
439	Apparel, & fabrics whlse.	11,310	1.01	**53%**	2.86	7.00	1.26		1	
447	Groceries wholesalers	13,650	**1.44**	**51%**	**4.24**	1.28	1.30		3	
458	Misc. nondurable whlse.	6,570	**1.47**	**34%**	2.46	2.35	2.30		2	
459	Not specified wholesale	0	1.12	**41%**	3.03			1.2	1	8,100
467	Automobile dealers	9,000	1.08	28%	**6.40**	**0.62**	0.95	1.2	2	500
469	Auto parts, accessories	4,990	1.03	**40%**	**8.70**	0.95	1.10		2	
477	Furniture stores	5,800	1.12	**34%**	**4.96**	**0.75**	**0.75**	1.2	4	2,200
478	Household appliance store	1,380		**33%**	**8.13**	1.19	2.25		2	
479	Radio, TV, comp. stores	5,560	**1.41**	21%	3.00	**0.56**	**0.57**	1.2	3	4,900
487	Building supplies dealers	5,180		28%	**7.18**	**0.52**	**0.87**	1.2	3	900
488	Hardware stores	1,000		26%	**10.18**	**0.41**	**0.65**		3	600
497	Grocery stores	24,320	**1.47**	**40%**	**5.87**	**0.68**	0.93	1.2	4	2,000
498	Specialty food stores	5,860	1.08	**45%**	3.96	2.36	1.85		1	
499	Beer, wine, liquor stores	1,610	**1.70**	**34%**	3.50	1.19	0.93		2	100
507	Pharmacies & drug stores	6,120	**1.71**	25%	**5.85**	**0.71**	0.97	1.1	3	200
508	Health , ex drug stores	2,370	0.95	26%	3.93	**0.78**	**0.59**		2	1,900
509	Gasoline stations	3,880	1.26	**46%**	**5.18**	**0.74**	0.91	1.2	3	400
517	Clothing & access. stores	12,920	**1.75**	30%	3.92	1.51	**0.88**	1.1	2	2,100
518	Shoe stores	2,170		**42%**	**6.00**	1.14	0.92		2	200
519	Jewelry, luggage	2,460	**1.32**	**40%**	4.01	1.10	**0.76**		3	900
527	Sporting goods, camera	3,350	0.68	20%	**5.31**	**0.71**	**0.80**	1.0	3	500
529	Music stores	2,560	1.28	19%	3.43	1.43	**0.70**		1	1,300
537	Book stores & news dlrs.	2,000	**1.61**	14%	3.63	0.95	**0.83**		2	500

Table C continued

PUMS Code	Industry Name	ES-202 Employ-ment	Ratio of Self Em-ployment	Foreign-born Non-citizen %	FB Non-citizen Ratio	LA Co. ES-202-US PUMS Ratio	LA City ES-202-PUMS Ratio	ES-202-REIS Ratio	Total Indi-cators	Unre-ported Jobs
538	Department stores	11,860	**1.77**	23%	**4.61**	**0.42**	**0.63**	1.4	4	8,100
539	Misc. gen. merch. store	4,880		**51%**	**6.12**	2.89	4.32		2	
547	Retail florists	1,030	**1.36**	**33%**	**5.51**	**0.48**	**0.47**		5	1,400
548	Office supplies stores	2,850	**1.62**	21%	**4.83**	1.20	1.22		2	
549	Used merchandise stores	2,280	0.88	**33%**	4.03	0.92	**0.83**		2	500
557	Gift, novelty, & souvenir	3,190	**1.68**	28%	**5.40**	0.99	**0.86**		3	600
558	Misc. retail stores	3,280	**1.42**	28%	**5.38**	**0.68**	**0.64**	**0.9**	5	2,200
559	Electronic shopping	1,830	**1.68**	23%	**4.30**	**0.50**	**0.37**	**0.2**	5	8,800
569	Other direct selling estab.	1,040	1.13	**43%**	**7.96**	**0.42**	**0.50**		4	1,200
579	Not specified retail trade	0	1.08	**36%**	4.06				1	9,700
617	Truck transportation	7,430	1.29	**39%**	**8.21**	**0.36**	**0.64**	1.8	4	4,700
619	Taxi & limousine service	1,130	0.93	**34%**	1.27	**0.51**	**0.33**		3	2,600
638	Couriers & messengers	13,130	0.51	25%	**5.19**	2.37	1.83	1.6	1	
639	Warehousing & storage	5,680		**43%**	**4.74**	1.70	1.87	2.0	2	
647	Newspaper publishers	7,570		28%	**5.95**	1.15	1.13	1.2	1	
659	Sound recording industry	2,850	0.79	9%	1.15	6.25	**0.65**	1.1	1	1,800
687	Banking & related activity	9,130		16%	3.75	**0.38**	**0.49**	1.4	2	11,100
688	Savings institutions	7,730		16%	**5.97**	3.13	4.23		1	
689	Nondepository credit	8,460	**1.45**	15%	3.13	**0.80**	**0.75**	1.4	3	3,300
717	Video tape & disk rental	1,520		24%	**6.73**	0.94	**0.90**	1.0	2	100
718	Other consumer rental	2,130		29%	**6.16**	1.67	1.51	**0.7**	2	1,400
748	Veterinary services	1,520	1.20	14%	**5.96**	**0.57**	**0.89**	1.3	3	200
749	Other prof. & tech. srv.	3,320	**1.34**	16%	2.52	0.91	**0.53**	**0.8**	3	2,600
758	Employment services	40,320	**1.36**	22%	2.43	4.13	2.80	**0.9**	2	7,400
767	Travel arrangement	7,310	**1.68**	20%	2.26	1.84	1.01	1.1	1	
769	Services to buildings	9,870	0.85	**66%**	3.58	0.89	**0.54**	1.0	2	5,400
777	Landscaping services	4,830	1.26	**73%**	2.96	**0.48**	**0.27**		3	14,800
778	Other administrative srv.	8,500	**1.80**	**35%**	**4.91**	3.48	2.53	1.0	3	
779	Waste management srv.	2,280	**1.45**	**44%**	**6.17**	**0.56**	**0.75**	1.3	5	900
798	Offices of dentists	7,930	1.19	18%	**4.30**	0.93	0.99		1	100
817	Home health care srvs.	3,590	**1.31**	28%	3.24	**0.47**	**0.56**	**0.9**	4	1,900
818	Other health care srvs.	3,720	0.91	21%	4.06	**0.41**	**0.35**		2	8,000
827	Nursing care facilities	10,480		**42%**	**7.00**	**0.54**	1.37	1.2	3	
829	Residential care facilities	12,780	**2.15**	23%	3.83	1.97	2.69		1	
856	Independent artists	10,760	1.06	10%	1.76	1.46	**0.34**	**0.3**	2	35,300
859	Oth. amusement, gambling	16,770	**2.69**	21%	3.47	0.89	1.03	1.4	1	
866	Traveler accommodation	16,810	1.21	**42%**	2.73	1.02	1.07	1.8	1	
868	Restaurants	84,910	**1.31**	**54%**	**4.14**	1.07	0.97	1.1	3	3,100
869	Drinking places, alcoholic	2,830	0.72	22%	**4.33**	0.99	**0.77**		2	1,000
877	Automotive repair	8,440	0.98	**53%**	**5.94**	**0.51**	**0.42**	**0.5**	5	12,100

Table C continued

PUMS Code	Industry Name	ES-202 Employ-ment	Ratio of Self Em-ployment	Foreign-born Non-citizen %	FB Non-citizen Ratio	LA Co. ES-202-US PUMS Ratio	LA City ES-202-PUMS Ratio	ES-202-REIS Ratio	Total Indi-cators	Unre-ported Jobs
878	Car washes	2,450	0.95	**67%**	3.35	1.44	**0.67**	**0.8**	3	1,200
879	Electronic repair	700	**1.38**	30%	**4.84**	**0.31**	**0.31**	**0.4**	5	1,900
888	Personal goods repair	1,310	0.82	**50%**	**5.29**	**0.53**	**0.40**	**0.6**	5	1,600
898	Beauty salons	2,580	0.94	23%	3.50	**0.26**	**0.26**	**0.8**	3	4,700
899	Nail salons	1,560	0.83	19%	1.42	**0.73**	**0.66**		2	900
907	Dry cleaning & laundry	5,510	**1.38**	**51%**	2.60	1.28	**0.80**	**0.9**	4	1,300
909	Other personal services	8,290	0.52	**41%**	3.53	2.57	0.95	**0.8**	2	1,800
929	Private households	8,330	0.78	**62%**	2.53	1.14	**0.27**	**0.4**	3	34,000
Total / Average		**1,655,592**	**1.3**	**30%**	**4.3**	**1.0**	**1.0**			316,000

Table D
Integrated Industry Estimates of Informal Employment in Los Angeles City and County, 2000

Highest projection for each industry adjusted proportionately to total mid-range estimate for Los Angeles County and City in 2000. Private sector industries with 1,000+ employees in Los Angeles County in 2000 included in table. Religious organizations, real estate, and industries with average length of training for jobs greater than 2 years excluded.

		City of Los Angeles				Los Angeles County			
PUMS Code	Industry Title	Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate	Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate
17	Crop production	300		300	230	900		900	750
18	Animal production	100		100	80	200	700	700	580
29	Support activities for agriculture	100		100	80	200	800	800	670
37	Oil & gas extraction			0	0		3,500	3,500	2,920
57	Electric generation, trans. & dist.	100		100	80	300		300	250
59	Electric & gas & combinations		1,500	1,500	1,170		4,200	4,200	3,500
67	Water, steam, air-conditioning,			0	0	100	1,700	1,700	1,420
77	Construction	16,200	33,600	33,600	26,100	30,800	65,200	65,200	54,330
107	Animal food, grain milling			0	0	100		100	80
108	Sugar & confectionery products	100		100	80	400	600	600	500
109	Fruit & vegetable preserving and	200		200	160	600		600	500
117	Dairy product manufacturing			0	0	300		300	250
118	Animal slaughtering & processing	300		300	230	900		900	750
119	Retail bakeries	500	1,000	1,000	780	1,200	3,400	3,400	2,830
127	Bakeries, except retail	500		500	390	1,400		1,400	1,170
128	Seafood & misc. foods, nec	300		300	230	800	3,000	3,000	2,500
129	Not specified food industries	100		100	80	700	500	700	580
137	Beverage manufacturing			0	0	200		200	170
148	Fabric mills, except knitting	1,100	3,400	3,400	2,640	2,000	5,200	5,200	4,330
149	Textile & fabric finishing mills	700		700	540	1,500		1,500	1,250
157	Carpets & rugs manufacturing	100		100	80	400	100	400	330
159	Textile product mills ex. carpets	1,900	3,100	3,100	2,410	3,500	5,500	5,500	4,580
167	Knitting mills	300		300	230	600		600	500
168	Cut & sew apparel manufacturing	8,700		8,700	6,760	14,700		14,700	12,250
169	Apparel accessories mfg.	3,500	12,000	12,000	9,320	5,800	21,000	21,000	17,500
177	Footwear manufacturing	100		100	80	300		300	250
179	Leather tanning & products	300		300	230	500		500	420
187	Pulp, paper, & paperboard mills	100		100	80	400	1,000	1,000	830
188	Paperboard containers & boxes	100		100	80	600		600	500
189	Misc. paper & pulp products			0	0	500		500	420
199	Printing & related activities	1,400	2,800	2,800	2,180	3,400	8,800	8,800	7,330
219	Pharmaceutical & medicine mfg.	300		300	230	700	1,700	1,700	1,420
228	Soap, cleaning, & cosmetic mfg.	500		500	390	800		800	670
229	Industrial & misc. chemicals	200	400	400	310	500	200	500	420
237	Plastics product manufacturing	900		900	700	2,900		2,900	2,420

Table D continued

PUMS Code	Industry Title	City of Los Angeles				Los Angeles County			
		Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate	Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate
239	Rubber products, except tires	100		100	80	400		400	330
247	Pottery, ceramics, & related prod.			0	0	300		300	250
249	Glass & glass product mfg.	200		200	160	500		500	420
257	Cement, concrete, lime, gypsum			0	0	100		100	80
259	Misc. nonmetallic mineral mfg.	200		200	160	400	700	700	580
267	Iron & steel mills & product mfg.	100		100	80	500	1,300	1,300	1,080
268	Aluminum production & process	100		100	80	300	800	800	670
269	Nonferrous metal, ex. aluminum			0	0	200		200	170
277	Foundries	200		200	160	800		800	670
278	Metal forgings & stampings	100		100	80	400		400	330
279	Cutlery & hand tool mfg.			0	0	200		200	170
287	Structural metals & tank	400		400	310	1,100		1,100	920
288	Machine shops, screw, nut mfg.		1,700	1,700	1,320	3,877		3,877	3,230
289	Coating, engraving, heat treating	500		500	390	1,300		1,300	1,080
298	Misc. fabricated metal mfg.	300		300	230	1,100		1,100	920
299	Not specified metal industries	100		100	80	300		300	250
309	Commercial & srv. industry mach	200	1,300	1,300	1,010	400		400	330
317	Metalworking machinery mfg.	200	100	200	160	600		600	500
319	Machinery mfg., nec	500	900	900	700	1,400		1,400	1,170
329	Not specified machinery mfg.			0	0	200	300	300	250
339	Electronic components, nec	1,200	4,500	4,500	3,500	2,600	10,900	10,900	9,080
347	Household appliance mfg.	100		100	80	300	1,000	1,000	830
349	Electrical lighting, equip., & sup	700	1,100	1,100	850	1,700		1,700	1,420
357	Motor vehicle & equip mfg	700	700	700	540	2,400	900	2,400	2,000
368	Ship & boat building	100		100	80	100	300	300	250
387	Miscellaneous wood products	400		400	310	1,000		1,000	830
389	Furniture & related products mfg.	2,000		2,000	1,550	6,000		6,000	5,000
396	Medical equip. & supplies mfg.	500	1,800	1,800	1,400	1,200	3,900	3,900	3,250
397	Toys, amusement, sporting goods	400	1,900	1,900	1,480	1,000	3,100	3,100	2,580
398	Misc. manufacturing, n.e.c.	2,000	6,400	6,400	4,970	4,200	17,200	17,200	14,330
399	Not specified mfg. industries	3,100	12,100	12,100	9,400	6,900	31,000	31,000	25,830
407	Motor vehicles, parts & supplies	400		400	310	1,200		1,200	1,000
408	Furniture & home furnishings	200		200	160	800		800	670
409	Lumber & other const. materials	200		200	160	400		400	330
418	Metals & minerals, ex. petroleum	100		100	80	400		400	330
426	Hardware, plumbing & heating eq.	100		100	80	400		400	330
427	Machinery, equip., & supplies	400		400	310	1,000		1,000	830
428	Recyclable material	400		400	310	1,000		1,000	830
429	Miscellaneous durable goods	1,200	400	1,200	930	2,700	3,700	3,700	3,080
437	Paper & paper product whlse.	200		200	160	500		500	420
438	Drugs, sundries, & chem. whlse.	300		300	230	700		700	580
439	Apparel, fabrics, & notions whlse.	1,800		1,800	1,400	3,600		3,600	3,000

Table D continued

PUMS Code	Industry Title	City of Los Angeles				Los Angeles County			
		Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate	Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate
447	Groceries & related product whl.	2,000		2,000	1,550	5,400	7,300	7,300	6,080
449	Petroleum & petro. product whlse.			0	0	100	1,100	1,100	920
456	Alcoholic beverage wholesalers	100		100	80	200	600	600	500
458	misc. nondurable goods whlse.	400		400	310	1,100		1,100	920
459	Not specified wholesale trade	1,100	8,100	8,100	6,290	2,800	22,100	22,100	18,410
467	Automobile dealers	1,000	500	1,000	780	2,500		2,500	2,080
468	Other motor vehicle dealers			0	0	100		100	80
469	Auto parts, access., & tire stores	700		700	540	1,500		1,500	1,250
477	Furniture & home furn. stores	1,000	2,200	2,200	1,710	2,200	4,600	4,600	3,830
478	Household appliance stores	100		100	80	200		200	170
479	Radio, TV, & computer stores	800	4,900	4,900	3,810	2,100	11,400	11,400	9,500
487	Building material & supplies dlrs.	600	900	900	700	1,200	900	1,200	1,000
488	Hardware stores	200	600	600	470	300	1,600	1,600	1,330
489	Lawn & garden equip. & supplies			0	0	200		200	170
497	Grocery stores	3,900	2,000	3,900	3,030	7,600	3,600	7,600	6,330
498	Specialty food stores	500		500	390	1,400		1,400	1,170
499	Beer, wine, & liquor stores	200	100	200	160	500	1,000	1,000	830
507	Pharmacies & drug stores	600	200	600	470	1,200		1,200	1,000
508	Health & personal care stores	400	1,900	1,900	1,480	900	2,300	2,300	1,920
509	Gasoline stations	700	400	700	540	1,500		1,500	1,250
517	Clothing & accessories stores		2,100	2,100	1,630			0	0
518	Shoe stores	400	200	400	310	700		700	580
519	Jewelry, luggage, & leather goods	500	900	900	700	1,100	3,100	3,100	2,580
527	Sporting goods, camera, & hobby	300	500	500	390	800	400	800	670
528	Sewing, needlework stores	100		100	80	300	200	300	250
529	Music stores	300	1,300	1,300	1,010	600	800	800	670
537	Book stores & news dealers		500	500	390			0	0
538	Department stores	1,700	8,100	8,100	6,290	3,700	11,100	11,100	9,250
539	Misc. general merch. stores	200		200	160	400		400	330
547	Retail florists	300	1,400	1,400	1,090	600	2,900	2,900	2,420
549	Used merchandise stores	300	500	500	390	800	2,500	2,500	2,080
557	Gift, novelty, & souvenir shops	400	600	600	470	700	1,200	1,200	1,000
558	Miscellaneous retail stores	500	2,200	2,200	1,710	1,200	5,100	5,100	4,250
559	Electronic shopping & mail-order	400	8,800	8,800	6,840	800	19,200	19,200	16,000
567	Vending machine operators			0	0	100	400	400	330
569	Other direct selling establishments	300	1,200	1,200	930	600	2,700	2,700	2,250
579	Not specified retail trade		9,700	9,700	7,540			0	0
608	Rail transportation	100		100	80	100	5,900	5,900	4,920
609	Water transportation			0	0	100	300	300	250
617	Truck transportation	1,700	4,700	4,700	3,650	4,500	9,000	9,000	7,500
619	Taxi & limousine service	400	2,600	2,600	2,020	800	4,900	4,900	4,080
639	Warehousing & storage	500		500	390	1,700		1,700	1,420

Table D continued

PUMS Code	Industry Title	City of Los Angeles				Los Angeles County			
		Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate	Possible Undoc-umented Workers	Unre-ported Jobs	Higest Industry Projection	Mid-range Industry Estimate
647	Newspaper publishers	700		700	540	1,500	4,200	4,200	3,500
648	Publishing ex. newspapers			0	0		1,100	1,100	920
659	Sound recording industries	100	1,800	1,800	1,400	300	2,500	2,500	2,080
677	Libraries & archives	100		100	80	300	2,500	2,500	2,080
678	Other information services	300		300	230	700		700	580
687	Banking & related activities	1,200	11,100	11,100	8,620	2,700	18,100	18,100	15,080
688	Savings & credit institutions	100		100	80	300		300	250
689	Nondepository credit & related	600	3,300	3,300	2,560	1,500	6,200	6,200	5,170
707	Real estate	2,200		2,200	1,710	4,500		4,500	3,750
708	Automotive equip. rental, leasing	200		200	160	500	4,000	4,000	3,330
717	Video tape & disk rental	200	100	200	160	300		300	250
718	Other consumer goods rental	200	1,400	1,400	1,090	200	3,300	3,300	2,750
748	Veterinary services		200	200	160			0	0
749	Other professional & tech. srv.		2,600	2,600	2,020		3,800	3,800	3,170
758	Employment services	1,200	7,400	7,400	5,750	3,200	17,700	17,700	14,750
767	Travel arrangement & reservation	500		500	390	1,200	1,800	1,800	1,500
769	Services to buildings & dwellings	4,600	5,400	5,400	4,200	7,400	5,300	7,400	6,170
777	Landscaping services	4,900	14,800	14,800	11,500	9,600	30,400	30,400	25,330
778	Other admin. & support srv.	400		400	310	900		900	750
779	Waste management, remed. srv.	500	900	900	700	1,200	800	1,200	1,000
798	Offices of dentists	500	100	500	390	1,600		1,600	1,330
817	Home health care services	700	1,900	1,900	1,480	1,600	3,900	3,900	3,250
818	Other health care services	800	8,000	8,000	6,220	1,600	16,300	16,300	13,580
827	Nursing care facilities	1,200		1,200	930	2,900		2,900	2,420
856	Independent artists& related	1,300	35,300	35,300	27,420	2,300	53,900	53,900	44,910
859	Other amusement, gambling	1,300		1,300	1,010	2,800	6,200	6,200	5,170
866	Traveler accommodation	2,500		2,500	1,940	5,200		5,200	4,330
868	Restaurants & other food srv.	17,900	3,100	17,900	13,910	34,400		34,400	28,660
869	Drinking places, alcoholic bev.	300	1,000	1,000	780	500		500	420
877	Automotive repair & maintenance	4,000	12,100	12,100	9,400	8,300	29,600	29,600	24,660
878	Car washes	900	1,200	1,200	930	1,900	2,200	2,200	1,830
879	Electronic & precision eq repair	300	1,900	1,900	1,480	700	5,100	5,100	4,250
888	Personal goods repair	600	1,600	1,600	1,240	1,000	3,300	3,300	2,750
897	Barber shops	100		100	80	300	2,700	2,700	2,250
898	Beauty salons	900	4,700	4,700	3,650	2,000	10,700	10,700	8,920
899	Nail salons & personal care srv.	200	900	900	700	600	3,200	3,200	2,670
907	Drycleaning & laundry services	1,300	1,300	1,300	1,010	2,900	1,600	2,900	2,420
908	Funeral homes, cemeteries	100		100	80	300	600	600	500
909	Other personal services	1,300	1,800	1,800	1,400	2,000	2,800	2,800	2,330
929	Private households	7,100	34,000	34,000	26,410	10,700	71,400	71,400	59,490
	TOTAL	***187,300***	***315,979***	***372,900***	***289,700***	***395,300***	***643,611***	***777,077***	***647,500***

Endnotes

[1] See for instance, Portes, Alejandro, and Saskia Sassen-Koob, 1987, "Making it Underground: Comparative Material on the Informal Sector in Western Market Economies," American Journal of Sociology, 93(1):30-61; Portes, Alejandro, Manuel Castells, and Laura Benton (eds), 1989, The Informal Economy: Studies in Advanced and Less Developed Countries, Baltimore, MD: Johns Hopkins University Press; Marcelli, Enrico, Manuel Pastor Jr., and Pascale Joassart-Marcelli, 1999, "Estimating the Effects of Informal Economic Activity: Evidence from Los Angeles County," Journal of Economic Issues, 33(3):579-607.

[2] David O'Neill, 1983, Growth of the Underground Economy, 1950-1981: Some Evidence from the Current Population Survey, Washington DC: Congressional Joint Economic Committee. Porter, Richard, and Amanda Bayer, 1984, "A Monetary Perspective on Underground Economic Activity in the United States," Federal Reserve Bulletin, 70: 177-189.

[3] Marcelli, et al, Ibid.

[4] Chinchilla, Norma, and Nora Hamilton, 1996, "Negotiating Urban Space: Latina Workers in Domestic Work and Street Vending in Los Angeles, Humboldt Journal of Social Relations, 22(1): 25-35.

[5] Losby, J.L. et. al. (2002). Informal Economy Literature Review. The Aspen Institute Microenterprise Fund for Innovation, Effectiveness, Learning and Dissemination: Washington D.C.

[6] This is similar to the "marginalization thesis" elsewhere in the literature on informal employment. See Marcelli, E.A. (2004). Unauthorized Mexican Immigration, Day Labour and other Lower-wage Informal Employment in California. Regional Studies,38.1: 1-13.

[7] State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA.

[8] Regional Economic Indicators Statistics (REIS) data from the Bureau of Economic Analysis, which produces this employment data, was available only through 2003. Data for 2004 was estimated based on the year-to-year change in employment from 2000 through 2003. This data series represents the federal government's best estimate of total average monthly employment for the year, including self-employment and informal employment.

[9] Current Population Survey, US Department of Labor Bureau of Labor Statistics. It should be noted that the raw, unadjusted employment numbers for Los Angeles County shown by the Current Population Survey (CPS) are typically 18 to 19 percent lower than what is shown by REIS data. A wide gap still remains after making adjustments to convert jobs to workers and account for cross-county labor flows. This gap may well be the result of under-representation of marginally employed and informal workers in the population that is represented in the CPS.

[10] California Employment Development Department, Labor Market Information Division, March 2003 benchmark.

[11] Burns, P. et.al. (2003). Prisoners of Hope: Welfare to Work in Los Angeles. Los Angeles: The Economic Roundtable. Visit http://www.economicrt.org to download an electronic version of the report.

[12] ES-202 data shows the number of jobs while CPS data shows the number of workers. Approximately 6 percent of workers hold multiple jobs. Therefore, the gap between ES-202 and CPS employment is somewhat greater than what is shown in Figures 11-14.

[13] See Hernando De Soto, 1989, The Other Path, New York: Harper and Row.

[14] In these suburban counties the gap between CPS and EDD data is even higher than in Los Angeles County. While some of this differential could be attributed to informal economic activities, a significant part can be linked to the fact that many local residents commute to Los Angeles for work.

[15] The US Census Bureau's 2000 PUMS commuting data show that:

a. 3,668,000 residents live and work in Los Angeles County
b. 10.5% of Los Angeles County's labor force, or 431,800 workers, reside outside the county and commute in to work
c. 7.2% of employed Los Angeles County residents, or 285,400 workers, commute out to other counties to work
d. Using Census 2000 employment figures, this means that Los Angeles County is a net importer of 146,400 workers.

[16] The 4.2% factor for subtracting the additional jobs held by multiple job holders and thereby converting number of jobs to number of workers is from the March 2000 Current Population Survey for Los Angeles County. The March sample is substantially larger than samples for the other eleven months and provides a more reliable data set for producing this factor.

[17] US Census Bureau 2000, PUMS 5% sample for California shows that 10.5% of the people who work in Los Angeles County live outside the county.

[18] The 4,407,600 employment number is for people employed and at work and employed and absent from work, and is from the CPS Local Area Unemployment Statistics for April 2000.

The 7.4% factor for self-employed persons is from Census 2000 PUMS data for Los Angeles County. This is the lowest of three rates for self-employment in Los Angeles County from three different data sources. The other two rates are: Current Population Survey data March 2000, which shows 11.9% of employed persons being self-employed, and Bureau of Economic Analysis REIS data for 2000 (Table CA04), which shows 19.8% of employed persons as proprietors. It seems likely that many residents who are self-employed or have proprietors' income are part of the informal economy. This is the most logical category for them to fall into. Therefore, we used the lowest rate for self-employment, the rate from PUMS, to minimize the inclusion of informal workers in this category.

[19] The 7.2% factor for residents who commute out of Los Angeles County to work is from Census 2000 PUMS data for Los Angeles County.

[20] The 0.04% factor for the difference between annual average employment in 2000 and April 2000 employment is from the California Employment Development Department's monthly employment estimate for Los Angeles County, 2003 Benchmark.

[21] The ES-202 labor force of 3,908,652 wage and salary workers combined with our midrange estimate of 647,500 informal workers comes to a total wage and salary labor force of 4,556,100 workers, with informal workers making up 14.2% of this total labor force. Our mid-range estimate of informal employment amounts to 13.3% of the estimated 4,881,200 wage and salary workers shown in BEA REIS data, and 15.9% of the Current Population Survey labor force of 4,083,500 wage and salary workers (with 7.4% of the total CPS labor force excluded as self-employed).

[22] State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000–2050*. Sacramento, CA, May 2004.

[23] California Employment Development Department, Labor Market Information Division, annual average employment in 2004 (March 2004 Benchmark), less 4.2% to convert jobs to workers.

[24] Los Angeles County's estimated informal labor force is equal to undocumented workers plus 6.46% of workers shown by ES-202 data. This formula was used to estimate informal employment in the City of Los Angeles in 2000. LA City's informal employment number and rate for 2004 are both calculated by applying the ratio with LA County from 2000 to LA County's informal number and rate in 2004.

[25] See:

- Aponte, R. (1997). Informal Work in the US: Case Studies and a Working Typology. The International Journal of Sociology and Social Policy 17: 18 – 36.
- Leonard, M. (2000) Coping Strategies in Developed and Developing Societies: The Workings of the Informal Economy. Journal of International Development 12: 1069-1085.
- Williams C.C. and J. Windebank (2003). Reconceptualizing Women's Paid Informal Work: Some Lessons from Lower-Income Urban Neighborhoods. Gender, Work and Organization 10(3): 281-300.

[26] Hart, K. (1973). The informal income opportunities and urban employment in Ghana. Journal of Modern African Studies, 11: 61-89.

[27] Portes, Alejandro, Manuel Castells, and Laura Benton (eds), 1989, The Informal Economy: Studies in Advanced and Less Developed Countries, Baltimore, MD: Johns Hopkins University Press.

[28] Sassen, S. (1997). Informalization in advanced market economies. Issues in Development Discussion Paper 20. Geneva, Switzerland: International Labour Organization.

[29] Burns, P. et.al. (2003). Prisoners of Hope: Welfare to Work in Los Angeles. Los Angeles: The Economic Roundtable, p. 185. Visit http://www.economicrt.org to download an electronic version of the report.

[30] The US INS uses 10% for unauthorized U.S. residents and 2.5% for authorized U.S. residents in their calculations of undocumented persons residing in the U.S. in 2000. See the U.S. INS Office of Policy and Planning Publication (2003), "Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990 - 2000".

[31] See Losby, J.L. et. al. (2002). Informal Economy Literature Review. The Aspen Institute Microenterprise Fund for Innovation, Effectiveness, Learning and Dissemination: Washington D.C.

[32] US Census 2000 PUMS industry codes and titles and shown in Figures 17 through 21 and Data Appendix Tables A through D. These industry classifications are established by the Census Bureau and correspond with NAICS industry classifications, with one or more NAICS 4-digit codes typically corresponding to each PUMS code. A crosswalk between PUMS and NAICS codes is available from the Census Bureau web site.

[33] Lower share of the labor force in employer-reported data than in locally-reported household data: We compared the percent of the city and county labor force shown by ES-202 data for April 2000 to work in each industry to the percent of residents reporting to the Census Bureau in April 2000 that they work in the same industry. This ratio is calculated by dividing the percent of total county or city ES-202 employment in an industry by the percent of county or city residents reporting to the Census that they work in the same industry. When this calculation produces a value less than 1.0 it indicates the industry is under-represented in the formal economy. It should be noted, however, that some of these variations may be accounted for the fact that ES-202 data is from employers, and their employees may or may not reside locally, whereas Census data is from residents, who may or may not work in the county or city. Furthermore, some anomalies may occur in aggregating ES-202 data to correspond with industry classifications used by the Census Bureau. To the extent that wage and salary employment data from the ES-202 actually show a smaller share of employment in an industry than the PUMS data, we may account for the missing share of labor by employment in the informal

economy. The average ratio of these two percentages is 1.0. We consider it to be an indicator of informal employment practices if the ratio of employer-reported employment to household-reported employment in an industry is 0.9 to 1 or less.

[34] We compared data on total industry employment in Los Angeles County (including self-employment) that is produced by the U.S. Bureau of Economic Analysis' Regional Economic Information System (REIS) and further disaggregated by IMPLAN, to formal wage and salary employment (ES-202) data for the county. This data is not available at the city level, but we extrapolated county results onto the city based on the city's share of county employment. Projections of possible informal employment in the county that were derived from REIS data were extrapolated to the city based on the percent of county employment in each industry that is in the city, as shown by PUMS data. If a smaller share of county employment shows up in formal employment data for an industry than in REIS data, the missing share of labor may be accounted for by employment in the informal economy. We consider it to be an indicator of informal employment if the ratio of the percent of employer-reported employment in an industry to the percent of REIS-reported employment is 0.9 to 1 or less.

[35] The Bureau of Economic Analysis (BEA) produces regional accounts (REIS) data that show total employment (including self-employed persons) for counties broken out into 24 broad sectors that correspond with 2-digit NAICS sectors. Sources of information for this comprehensive accounting of employment include ES-202 reports of wage and salary employment and census data, with adjustments made by the BEA to account for employment and wages not covered or misreported. Sources for these adjustments include Internal Revenue Service tax data. The Minnesota IMPLAN Group takes this data a step further by using a variety of other industry data sets as benchmarks to create an estimated disaggregation of Regional Accounts data into 494 industry sectors for economic analysis. This disaggregated REIS data is produced by data and input-output software from the Minnesota IMPLAN Group, 1725 Tower Drive West, Suite 140, Stillwater, MN 55082. We used IMPLAN's disaggregated REIS data from 2001 rather than from 2000 because the 2000 data was linked to the Standard Industrial Classification (SIC) coding system whereas the 2001 data was linked to the North American Industry Classification System (NAICS), greatly reducing the technical problems entailed in matching employment with PUMS industry classifications from the 2000 Census.

[36] When one or both of these benchmark percentages (i.e., the percent of the labor force shown by REIS/IMPLAN or PUMS data to be employed in an industry) were higher for an industry than the corresponding percentage of ES-202 employment shown for that industry then we used the following steps to estimate the number of unreported jobs in the industry:

- Subtracted the ES-202 percentage from the benchmark percentage.
- Multiplied the residual percentage amount by total ES-202 employment, with total employment expanded by 15 percent to reflect our mid-range estimate of how large ES-202 employment would be if there was no informal employment.
- Averaged the results if the above calculation was made for both of the two benchmark percentages.
- Used this result as an estimate of the possible level of unreported point-in-time informal employment in the industry.

[37] The 22% gap between employment in Los Angeles County shown by Census PUMS data and BEA REIS data is based on the following calculations:

The Census 2000 PUMS 5% sample for Los Angeles County shows:

a. 3,953,400 residents Reporting Employment at the time of the 2000 Census
b. 285,400 residents commuting out of Los Angeles County to work in another county
c. Thus, PUMS shows 3,668,000 Los Angeles County residents working in the county at the time of the 2000 Census.

The US Bureau of Economic Analysis REIS 2000 data for Los Angeles County shows:

a. 5,499,200 average monthly jobs in Los Angeles County in 2000

b. Based on PUMS data for California showing that 9.85% of Los Angeles County's labor force is made up of residents from other counties commuting into Los Angeles County to work, this leaves 4,920,100 jobs in Los Angeles County that are held by residents of the county.
c. Based on Current Population Survey data from March 2000 showing that 4.2% of jobs in Los Angeles County are additional jobs held by multiple jobholders, the number of employed persons in the county is estimated to be 205,883 fewer than the number of jobs.
d. Thus, REIS Data shows a total of 4,715,800 Los Angeles County residents working in the county IN 2000.

[38] Each record in the Census Bureau's Public Use Microdata Sample (PUMS) 5% sample is individual weighted, with a typical record representing 20 people, allowing the sample to be expanded to represent the full population. Thus, about 50 PUMS records typically represent 1,000 residents. We established this as the lower employment limit for industries included in this analysis in order to avoid basing industry estimates of informal employment on unreliably small samples.

[39] The average length of training for the labor force in each industry was determined by applying O*NET job zone ratings to an industry-occupation matrix for Los Angeles County to produce a weighted average job zone for each NAICS industry, and then rolling up these averages to produce a weighted average job zone for each PUMS industry. Industries with an average job zone rating of 3.1 or higher were excluded from the analysis. A job zone of 3.0 is equivalent to a Dictionary of Occupational Titles Standard Vocational Preparation (SVP) code of 6.0 to <7.0. An SVP code of 6 represents a vocational preparation period of over 1 year up to and including 2 years, and a code of 7 represents preparation period of over 2 years up to and including 4 years. Based on these classifications, an average job zone value of 3.1 or greater for an industry is estimated to represent an average period of vocational training greater than 2 years.

[40] The four indicators of informal employment based on discrepancies in industry data are based on the following methodologies:

a. High rate of self-employment: Employers of informal workers sometimes claim that workers who should be covered by payroll tax benefits are self-employed independent contractors. We identified possible occurrences of this practice by creating a ratio of the rate of self-employed workers in each industry locally to the rate for the entire US labor force in the same industry. The average ratio for the county is 1.2 (i.e., a self-employment rate that is 20 percent higher than the US rate) and the average ratio for the city is 1.3. For this analysis a ratio of 1.3 or higher based on Public Use Microdata Sample (PUMS) data from the 2000 Census is considered to be an indicator of informal employment.

   The PUMS data are based on the subset of households that received a long-form questionnaire for the 2000 Census. Most households received a short-form questionnaire. The long-form contained all the questions of short-form plus additional detailed demographic and housing questions. The PUMS 5 percent sample is carefully crafted by the US Census Bureau to be representative of the US population. Since this data is based on household responses rather than employer reports it includes workers in the informal economy, although these workers are probably under-represented among Census respondents because they are often difficult to locate and cautious about providing information to the government. The PUMS data includes information about the industry and occupation of workers, whether they were employed in the past year or at the time of the Census, year of immigration, citizenship status, and whether they were self-employed.

b. High level of foreign-born non-citizen workers: Immigrant workers who are not citizens are more likely than other residents to find it necessary to accept jobs in the informal sector. Consequently, a high level of foreign-born non-citizens in an industry's labor force is an indicator of possible informal labor practices. PUMS data show 24 percent of county workers and 30 percent of city workers to be foreign-born non-citizens. We consider it to be an indicator of informal employment if 32 percent or more of the workers in an industry are foreign-born non-citizens.

c. High concentration of foreign-born non-citizen workers compared to the United States: A variation of the preceding indicator is to identify industries with atypically high concentrations of foreign-born non-citizen workers compared to all US workers in the same industry. PUMS data show the county's labor force to have 3.5 times as many foreign-born non-citizen workers as the US labor force, and the city's labor force to have 4.3 times as many. We consider it to be an indicator of informal employment practices if the percent of foreign-born non-citizen workers in an industry is 4.1 times or more greater than the US percent in the same industry.

e. Lower share of the labor force in local employer-reported data than in nationally-reported household data: We compared the percent of the city and county labor force shown by ES-202 data to work in each industry (excluding the agriculture, mining, utility and manufacturing sectors, because Los Angeles' industrial structure differs from that of the US in many industries within these sectors) to the percent of all US residents reporting to the Census Bureau that they work in the same industry. For many industries in Los Angeles' distribution and service sectors the US labor market provides a reliable template for the share of the work force that we can reasonably expect to see employed in an industry, and if a lower share shows up in county or city data for the formal economy it is possible that the missing workers are in informal jobs. We consider it to be an indicator of informal employment if the ratio of the percent local employer-reported employment in an industry (outside the agriculture, mining, utility or manufacturing sectors) to the percent of US household-reported employment in an industry is 0.8 to 1 or less.

[41] Two industries shown in Tables A and B in the Data Appendix with specific estimates of informal employment stand out as improbable places for informal labor practices to occur. These are PUMS codes 687, Banking and related activities (commercial banks), and 689, Nondepository credit and related activities (credit card companies, consumer lending, real estate credit, and mortgage loan brokers). The column in Tables A and B showing the ratio of self-employment in these industries in Los Angeles compared to the United States shows that in Los Angeles, these industries use an unusually high percent of contract or temporary employees. This may explain why the percent of local residents who say they work in these industries is higher than the percent of the labor force that firms in these industries report employing. Temporary workers may report working in banking when in fact they are working for a temporary work agency.

[42] A Census Bureau analysis using new large-scale, integrated employer-employee data has found continuing up-skilling of the employed labor force. Abowd, John M., Paul A. Lengermann, and Kevin L. McKinney (August 2002), "The Measurement of Human Capital in the U.S. Economy," Technical paper No. TP-2002-09, U.S. Census Bureau, LEHD Program, Suitland, MD.