183, Garicano and Hubbard, "Specialization and Organization in Legal Services"

A. Criteria

The study will increase the utility of Title 13, Chapter 5 data of the Census Bureau by meeting the criteria listed below and as described.

Criterion 3. Enhancing the data collected in a Title 13, Chapter 5 survey or census, for example by improving imputations for non-response or developing links across time or entities.

An important benefit to the Census Bureau is that this project centers on microdata that have not yet been used by CES staff. The primary data will come from the Legal Services part of the Census of Services. The most important variables are responses to questions from the Miscellaneous Subjects part of the Survey, questions that ask law firms how many of their lawyers work in various specialties, and how many individuals within the firm are partners, associates, and paralegals. Although the Census Bureau has asked law firms these questions as part of the Economic Census since at least 1972, no one at CES or elsewhere has worked extensively with the microdata.

As the researchers develop research data files and conduct preliminary analyses, they will learn better the strengths and weaknesses of the existing data. For example, for which questions are responses particularly informative? For which classes of establishments are the data most reliable? The researchers plan to share what they learn about these and other questions with Census Bureau staff, including suggestions for improvements to the survey. For example, the research may also suggest what other survey questions would generate valuable information regarding the organization and growth of this and other service sector industries.

Further, the researchers plan to use the Longitudinal Business Database (LBD) to merge the individual establishment data across different Census years, thus enabling them to track these establishments across time. They will inform CES staff of any anomalies they find, enabling CES to improve the LBD and the usefulness of the Legal Services data. In circumstances where there are missing variables in one or more of the Census years, they may be able to impute or interpolate values for these variables based on the establishment's reports for other years. They will provide any such results to CES staff, enhancing the Legal Services data.

Finally, the researchers' work with the data may be the first step in a much larger process that would result in the production of a new and valuable data set. In the long run, the Census Bureau Legal Services microdata could be combined with information from the Martindale-Hubbell Law Directory to provide a matched worker-establishment database of lawyers and law firms. Part of this project would involve preliminary, or

"pilot," matching between the Census Bureau's microdata and Martindale-Hubbell. This matching would proceed by attempting to link the name and address information on lawyers' firms in Martindale-Hubbell to name and address information in the SSEL. This preliminary linking would help the researchers determine whether a larger-scale project would be feasible.

The Martindale-Hubbell Law Directory has been published for many years. It contains some information about individual firms, including their address and specialties. It also contains extensive information about the individual lawyers within each firm, including their age, education, practice areas, and title within the firm. Martindale-Hubbell claims to have data on nearly all of the law firms in the United States. In contrast, the Census microdata contain information about firm revenues and payroll, employment of non-lawyers such as paralegals and non-legal staff, and the distribution of lawyers' primary specialties within the firm.

Combining these two datasets would provide data that would share many attributes of the Census Bureau's Worker-Establishment Characteristics Database (WECD), and thus would provide labor and organizational economists a way to address many issues that require knowledge of the match between individuals and firms. There would be at least three important differences between this unified data on legal services and the WECD. First, these data have the potential to provide close to a comprehensive look at a single industry. Both the Census microdata and the Martindale-Hubbell directory claim very high response rates. In contrast, the WECD has only a small set of workers from any particular industry, and there are concerns that the sample is not representative. Second, these data would be from a single service industry rather than many manufacturing industries. Third, they contain good information about the nature of individuals' skills through the specialization variables. Many labor economists are forced by the data to equate skills with education. More detailed information about specialization would enhance the value of worker-establishment databases by enabling researchers to study how individuals and organizations match according to more detailed characteristics.

This project would be the first step toward enhancing the data collected in the legal services part of the Census of Services. Links to other, publicly available data sources could lead to the creation of a WECD for Legal Services.

Criterion 7. Preparing estimates and characteristics of population as authorized under Title 13, Chapter 5.

Much of the researchers' basic work with the data will analyze specialization patterns of lawyers and the organization of legal services. The publicly available data in the Census of Services provides some information on this: for example, the Census reports the number of establishments and tabulates the number of lawyers in fourteen different specialties by MSA. From this one can relate average firm size within an MSA to the composition of lawyers in the MSA. However, one cannot investigate how

particular specialties tend to be organized or how specialists are grouped into firms. For example, one cannot tell whether individual firms consist of a group of similar specialists (all corporate lawyers) or different specialists (corporate lawyers and tax lawyers). Similarly, while one can calculate associate-partner ratios at the MSA level and relate them to the market-level composition of specialists, one cannot tell how associate-partner ratios vary with the specialties of lawyers at individual firms.

As part of the project, the researchers will prepare estimates of relationships between specialties, associate-partner ratios, and firm size.

The researchers project that much of their initial research output will come in the form of simple regressions and frequency tables. So little is known currently about relationships between specialization and organization that this study must start by establishing a series of "stylized facts." The researchers would therefore begin by examining a series of simple relationships that depict how specialization is organized. These would, for example, report:

-- How does the probability that an individual works with no other lawyers vary with the field in which he or she specializes?

-- What is the frequency with which one observes different combinations of specialties within the same firm?

-- What is the probability that a law firm has no associates or paralegals (i.e., no hierarchy) as a function of the specialties of the lawyers?

The researchers would report these relationships either as regression results or as highly aggregated frequency tables. These frequency tables would relate organizational characteristics (firm size, associate-partner ratios, etc.) to lawyer specialties. While the researchers' main results would present these from the entire sample, they also plan to report some results from narrower classifications (MSAs versus non-MSAs, large versus small MSAs, urban centers versus suburbs, regions with law schools versus those without, for example).

The researchers would then move beyond simple stylized facts to hypothesis testing. They anticipate that this would involve regression analysis exclusively. These regressions would relate variables that depict how firms are organized to the characteristics of their local markets. For example, the researchers would extend their preliminary analysis (using published data) on how specialization affects firm size to the microdata, and regress firm size on the specialties of the lawyers within the firm, using local white-collar wages and the characteristics of local law schools as instruments. Likewise, they would examine how individual firms' hierarchies reflect the composition of local demand by regressing the firm's associate-partner ratio on variables that depict the size distribution and regulatory exposure of firms in the market.

One major goal of these hypothesis tests is to analyze what determines firms' boundaries in professional services. The Census Bureau faces the problem of developing a sensible definition of a firm. Its current definition is based on physical asset ownership: a firm is a "business organization or entity consisting of one domestic establishment or more under common ownership or control." While this definition may be reasonable when physical assets located at establishments are important in production, such as in manufacturing, it is less applicable in contexts such as professional services where physical assets are less important.

As the United States economy becomes more service oriented, developing a sensible definition for firms' boundaries that does not depend crucially on the presence of physical assets will be more and more important. Part of this project seeks to investigate exactly this issue: what defines firms' boundaries in situations where, as in legal services, physical assets are not important?

One of the researchers (Garciano, with a colleague, Santos) has proposed an alternative definition for professional service firms' boundaries: firms consist of a collection of individuals who have standing arrangements to share the revenues they receive from clients. Individuals who have such arrangements (such as partners) are part of the same firm; those who do not are part of different firms. The researchers propose to test various hypotheses from their previous work, using the Census microdata. Evidence from these tests would benefit Census Bureau projects, because it would help refine sampling methodologies so that they better capture distinctions between firm and non-firm relationships among individuals and establishments.

In particular, finding evidence in favor of Garicano and Santos' theory implies that the Census Bureau may be able to improve its definition of professional service firms by adopting the following two tests:

(1) The joint billing test: are two professionals (such as two lawyers) jointly billing their clients, even clients that only one of them actually served?

(2) The revenue sharing test: are two professionals sharing the proceeds from individual clients, even clients that one of them never actually served?

Such tests would be easily workable, and may better capture professional service firms' boundaries than simply looking at whether they bought a location together. As an illustration of this point, consider the following situation. Suppose that two lawyers decide to work out of their homes rather than at a common, fixed location, relying on information technology to communicate. Suppose that nothing else about their contractual or production arrangements changes: they continue to cooperate on briefs, refer clients to each other when necessary, and split the proceeds from their client work. From the perspective of the current Census definition, such a pair of lawyers would be two firms, since the establishments themselves are not under common ownership or control. From the perspective of the definition above, they would be continue to be one firm as long as they jointly bill clients and share the revenues because nothing

substantively changed from an economic perspective: they just communicate by phone, fax, and email rather than in person.

Improvements in the definition of professional service firms' boundaries are unlikely to change the Census' existing published estimates, since individuals with joint billing and revenue sharing arrangements have tended also to work out of the same physical location. But improving the Census' definition is likely to become more important in future Economic Censuses. Dramatic decreases in the cost of networking technology are likely to lead production to be organized less around physical establishments, not only in legal services but also other professional services (for example, consulting). Should this happen, the Census Bureau would be faced with the task of replacing its current definition of a firm with one that does not revolve around the geographic location of production. Our work would therefore help the Bureau address this problem by developing a sensible definition of a firm that is robust to declines in the importance of workers' physical locations.

Finally, the researchers will be able to characterize changes in the use of temporary workers in legal services. Temporary and part time workers have made up a larger share of the workforce over the past twenty years. This has created some problems for tracking employment-related statistics through the Economic Census, because individuals who work at an establishment but do not count as employees are not counted as working at the establishment. Often, the distinction between a temporary worker and an employee is a legal one rather than a substantive one related to production. The growth in temporary workers thus can result in distortions in conclusions about production. For example, it can lead one to falsely conclude that an industry or industry segment is becoming less labor-intensive.

Several accounts have indicated that temporary workers have become more prevalent in this sector, even in relatively skilled positions such as paralegals. Analysis of the job title questions in the Miscellaneous Subjects part of the Legal Services survey would provide evidence regarding the extent and incidence of temporary worker use. For example, sudden drops in the use of employee-paralegals in a particular industry segment would suggest this. One could then verify this through alternative data sources and accounts from the industry press. This analysis would thus help Census Bureau staff develop ways of accounting for temporary workers in this and other sectors by guiding it to the segments where such workers are most prevalent. Further, it would help Bureau staff improve existing estimates of the number of individuals actually working in the Legal Services industry.

This analysis has a close conceptual tie to the preceding one: both concern firms' boundaries. Analysis of temporary worker issues would help distinguish between employees and non-employees in the same way other parts of the analysis helps distinguish between firms and non-firm affiliations.

This project will increase the Census Bureau's knowledge base regarding the boundaries of firms, particularly how legal services firms organize themselves and how

they use temporary workers. This knowledge will be applicable to other professional services industries.

B: FTI Items

Only the following Federal Tax Return Information (FTI) items from the following files will be needed by the researcher to conduct this project:

Census of Services, 1977, 1982, 1987, 1992, 1997

FTI:

EIN Employer Identification Number
CFN Census File Number (includes EIN)
LFO Legal Form of Organization
IND Industry Code
ST State
COU County
TE Total Employment
APAY Annual Payroll (IRS payroll)
SSR Shipments/Sales/Receipts (IRS receipts)

Census of Manufactures (CM - included in Longitudinal Research Database (LRD)), 1972, 1977, 1982, 1987, 1992, 1997

FTI:

EIN Employer Identification Number
CFN Census File Number (includes EIN)
LFO Legal Form of Organization
IND Industrial Classification (SIC)
ST State
COU County
SW Salaries and Wages (IRS Payroll)
TE Total Employment
TVS Shipments (IRS Receipts)

Longitudinal Business Database, 1982-1998 (and 1999 when available)

FTI:

CFN Census File Number (includes EIN)
IND Industrial Classification (SIC)
ST State

COU	County
SW	Salaries and Wages (IRS payroll)
TE	Total Employment

Standard Statistical Establishment List, 1992 and 1997 (for matching purposes only)

FTI:

NM	Business Name
ADD	Mailing Address
EIN	Employer Identification Number
LFO	Legal Form of Organization
IND	Industrial Classification (SIC)
ST	State
COU	County
SW	Salaries and Wages (IRS payroll)
TE	Total Employment
TVS	Shipments (IRS receipts)

C: Project Completion

After this project is completed, the researchers will produce a CES Working Paper and related research papers to be submitted for publication in a professional journal. They will also produce a technical memorandum summarizing the key findings pertinent to Census Bureau Chapter 5, Title 13 programs, including whether/how the accomplished benefits differed from those proposed and describing their potential application.