LEHD Newsletter

We'd like to update you on what we've done about the key issues
raised at the last workshop.Please remember that nothing in this is "official" Census Bureau data: this is
an informal update on the LEHD program's activities.

Volume 1 Issue 2	April 2002

Special points of interest:

1. BLS has agreed that EDE estimates no longer need to be benchmarked to ES202 data. We are working with the Census Disclosure Review Board to see what level of detailed industry and county level data we can provide without breaching confidentiality requirements.

2. The successor/predecessor work (Entity Demography Editing) is being extended to all states. We have some preliminary results for the temporary help industry, about which we are requesting feedback from the Entity Demography Editing team.

3. LEHD measures of human capital for businesses will be presented at an NBER conference this month at the Federal Reserve. Alan Greenspan will open the conference; Katharine Abraham is the discussant.

4. The SSN editing work is being refined and extended

Inside this issue:

I. State Employment Dynamics Estimates (EDE's)

A. Version 2 Enhancements

1. *Revision of Raking*

Phil Hardiman's work on the EDE's (which led to a news conference by his director and a piece in the San Francisco Chronicle!) resulted in a revision of our raking to ES-202 data. The original raking procedure attributed too much of the excess variation in net jobs flows (the difference between un-raked EDE and the BLS ES-202 estimates) to sex – we now treat sex and age symmetrically. State partners have alerted us to other changes that need to be made in our processing, for which we are very grateful. Look for Version 2.3 to be distributed in the next few months.

B. Version 3.0 Research and Development

1. *Disclosure Proofing*

The old approach, Version 2, had two levels of protection: one at the cell and one at the table level. Version 2 currently protects individual cells by adding noise to all business-entity level micro data by a percentage determined by the number of establishments in a cell (county x SIC division). As we discussed in the January workshop, the amount of noise added depends on how many establishments are in a cell. LEHD adds a flag "significantly distorted to protect confidentiality" if the confidentiality-protected estimate differs from the actual estimate by more than a fixed percentage or there are fewer than a given number of establishment or employees. We do not do complementary suppression at the cell level because all the other estimates in the confidentiality-protected table are already protected.

Version 2 currently protects tables by suppressing all estimates for any county or industry whenever BLS suppresses the month 1 employment estimate for the same county or industry. Version 2 also rakes table-level estimates so that the LEHD beginning-of-quarter employment estimate for a given industry or county matches the month 1 estimate from the BLS CEW series. LEHD flow statistics are also raked for consistency. The new approach has to be approved by the Census Disclosure Review Board (DRB). We have asked them to consider the following:

- .Elimination of the raking procedure
- Modification of the table-level suppression as follows
    - release any table level estimates that are based on noise addition to the state LMI directors PROVIDED THAT the state LMI directors agree that whenever they publish any LEHD estimates, they will also publish the associated confidentiality flag. *This confidentiality flag is the one you already receive with Version 2 data; so, this is not a new requirement.* The state LMI directors have the final decision on what table-level suppressions to apply when they publish their data.
- Permission for the release of Employment Dynamics Estimates for
    - More detailed geographic areas
    - More detailed industry classifications
    - Geographic classification x industry detail if its methodology meets Census Bureau data quality standards. The LEHD Program will perform the necessary data quality research, not the Census Disclosure Review Board.
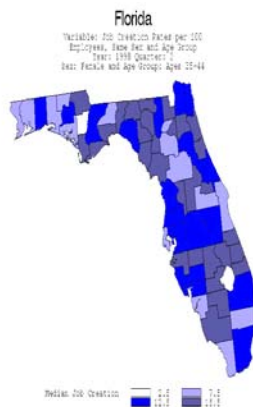
2. Assignment of Place of Work

The statistical analysis of the relation between residential location and work place, based on the Minnesota UI data, has been completed. The statistical model, which is fully integrated into the model for imputing work place, uses three different size classes of UI accounts (SEINs) as its initial cut of the data. Within each SEIN size class, the model computes great circle (not commuting) distances to each of the places of work for each person. Controlling for the size distribution of the work places, the model estimates the conditional probability that the individual works at each of the establishments within the SEIN as a function of the distance from the individual's residence to the work place. For the smallest SEIN size class, the effect of distance is to decrease the odds that an individual works at a particular site monotonically until the site is more than 25 miles away. For the smallest SEIN size class, sites more than 25 miles away have a negligible probability of being the correct work place. For the largest SEIN size class, the effect of distance is also monotonic but sites up to 50-75 miles away have non-negligible probabilities. The intermediate SEIN size class show a monotone relation to distance that dies out in the 25-50 mile range.

We are now working on incorporating the effects of the wage distribution on the work place selection and refining the way we use these statistics in the work place imputation model.

3. Graphical Delivery System

Russ Marshall has asked for input from team partners on the delivery system. We are purchasing a collaborative software package. There are some other more expensive packages with greater features – but these features typically do not work correctly, or at all, through the firewall. The website for this is http://www.vbulletin.com/ . You can see it in action on www.i-club.com   (the Subaru site) under "forums."

C. Entity Demography Editing (Successor/Predecessor Firm Research)

The LEHD staff has worked with the Florida ES202 data (1994 – 1998) using the initial guidelines discussed at the January state workshop. The goal is to use UI wage record data to shed light on the births/deaths/mergers and acquisitions of businesses (entity demography editing), with the goal of using the information for ES202 successor/predecessor editing. The state partners expressed particular interest on flows for temporary help services (7363) and personnel supply companies (7361). We have sent Florida a report; the other state partners will be receiving their reports within the next two months.

We identify four categories of linkages:
1. Predecessor firm dies, more than 5 workers and more than 80% of predecessor's employment moves to successor;
2. Predecessor firm dies, and more than 5 workers but less than 80% of predecessor's employment moves to successor;
3. Predecessor firm lives, more than 5 workers and more than 80% of predecessor's employment moves to successor;
4. Predecessor firm lives, and more than 5 workers but less tan 80% of predecessor's employment moves to successor.

"The outcome for ..our Local Workforce Investment Boards is a portfolio of never before available labor market measures at a level of geography never before available" (Deputy Governor of Illinois)

Key Findings

- Total linkages identified by ES202 and UI data, and their concurrence:
  - The ES202 data identify 10,449 linkages; the UI data almost four times as many: 44,596.
  - The files agree on 3, 274 of the links—although this may be due to data entry errors on either the successor or predecessor field in the ES202 data.

- The most commonly occurring industry links in the UI data:
  - The industry with the most successor/ predecessor changes (category 1) is eating and drinking establishments, followed by 8011 (Offices and Clinics of Doctors of Medicine). All of these firms stay in the same industry, as would be expected.
  - The industry into which most businesses are acquired (category 2) is industry 7363 (temporary help), followed by eating and drinking establishments.
  - Almost no firms fall into category 3.
  - The industry which absorbs large numbers of workers from other industries (primarily 7363, 5810, 5411 and 5311) is temporary help services (7363).

- The most commonly occurring industry links in the ES202 data:
  - The industry with the most successor/ predecessor changes (category 1) is eating and drinking establishments, followed by 8011. This is consistent with the UI data. Just as with the UI data, all of the firms stay in the same industry, as would be expected.
  - The industry into which most businesses are acquired (category 2) is industry is eating and drinking establishments.
  - The role of industry 7363 is much less pronounced than in the UI data
  - Almost no businesses fall into categories 3 and 4.

- An analysis of industries 7361 and 7363:
  - The main predecessor firms for industry 7363 are in eating and drinking establishments, firms with no industry provided, 7363 itself, and construction firms.
  - When the predecessor firm continues, and still sends large numbers of employees to 7363, they are predominantly in industries 7363, 5810, 5411, 5311 and 7361.
  - The main activity for industry 7361 is category 4: where a substantial portion of employees from one firm move into a firm in industry 7361
  - The most dominant industries sending employees into 7361 are 7363, 5810, 7361 and 5411.

The most dominant industries sending employees into 7361 are industries 7363, 5819, 7361 and 5411

D. Cornell Support Site

Final specifications of the network layout, including firewall specifications, have been defined.

1. Low Wage Work

A Russell Sage/Rockefeller Foundation/HHS sponsored research program is studying the labor force dynamics of low-wage workers using the LEHD individual characteristics, employer characteristics, and employment history files from cooperating partner states (CA, FL, IL, MD, MN, NC, TX). The project is continuing to develop sets of descriptive tables using different sets of assumptions to define low-wage workers. New findings since the January workshop include:

> Staying with the same firm is not the best way to "grow out" of low-wage work. The returns to job tenure are the same for low-wage and non-low-wage workers.

> Changing jobs is an important source of wage growth for low-wage workers. The average job change generates a percentage wage change of about .31 to .33 for low income workers; -.03 to -.08 for non-low-wage workers.

> Changing jobs hurts some non low-wage workers – particularly non-whites and older workers

> The distance between place of residence and high wage firms work is an important factor in explaining the ability of workers to move out of low wage work.

Current work is focused on refining measures of low-wage work using CPS, ACS and decennial Census information, as well as place of residence data..

Availability: Interim report to states will be finished by August 2002.

2. Demand for Older Workers

NIA sponsored research on the demand for older workers has begun. We are focusing on linking in the 5500 file on pension benefits, examining labor demand for older workers, and examining workforce composition in the nursing home industry

Availability: Interim report to states will be provided August 2002

3. Displaced Workers

This is a side-by-side comparison of person-incidence of displacement in the CPS Displaced Worker Supplement and administrative data. The results are favorable -showing a slightly lower incidence in the administrative data. This will influence the final version of any analysis on displaced workers. A more formal research program using individuals who are both CPS respondents and are observed in the administrative data is being

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II. BLS-ETA Census Prototype Expansion of the EDE

A. Inclusion of Minnesota, New Jersey, North Carolina and Pennsylvania

The program has received data from Minnesota and North Carolina. Minnesota has received EDE's; North Carolina has received edited UI wage records and will shortly receive EDE's. The LEHD Program also received data from Pennsylvania in late April. An MOU is in progress in New Jersey.

B. Inclusion of Additional States

The LEHD is awaiting additional ETA funding before expansion is possible.

III. LEHD Infrastructure

A. Individual Characteristics, Employer Characteristics, and Work Histories.

The LEHD Program, as a part of its Title 13 mandate and under NSF, NIA and the Sloan Foundation support, creates, maintains and enhances data products that permit the integration of Census Bureau demographic products (surveys like the SIPP, CPS, and ACS), administrative data (Federal tax information, state UI wage records, ES-202 records) and Census Bureau economic data (Business Register, Economic Censuses, and Economic Surveys). These data products are then used directly to improve the Census Bureau's demographic censuses and surveys and the economic census and surveys.
Availability: ongoing.

B. SIPP, CPS, SSA Integration.

Continuing Title 13 research projects study the quality of the administrative data integration into the SIPP and CPS.

Availability: report available upon request

### C. Business Register, Economic Censuses and Survey Integration.

Continuing Title 13 research projects study the quality of the integration of the business units defined by the Business Register, Economic Censuses, and Economic Surveys with the Census Bureau's demographic products. This research involves the testing of different methods of exact (identification number) integration and statistical integration (using name and address information). UI and ES-202 data to firm-level data files collected by the Census Bureau. The business files we integrate include: the Economic Censuses collected every five years, the Business Register, and data collected from various less extensive establishment surveys such as the Business Expenditure Survey (which collects detailed capital spending data among non-manufacturers). In addition, we have integrated in Compustat data on large employers.
Availability: report available upon request

LEHD ...directly improves the Census Bureau's demographic censuses and surveys, and the economic census and surveys
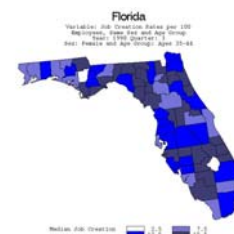
IV. Human Capital, Worker Flows and the Definition of a Business
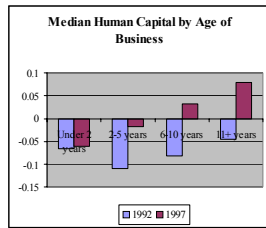
Median Human Capital by Age of Business

A. Measuring Workforce Composition

The combination of UI data with ES-202 and Census Bureau business data provide us with more detail on each worker's place of employment and allow us to draw a very vivid picture of the collection of workers attached to each firm. Both enhancements to existing data create the potential for new areas of research that should be of interest to policy makers and businesses themselves as well as to the academic community.

B. Technological Investment and the Demand for Skill

This project characterizes the distribution of "human capital" of the economies of several states and shows how this distribution changes between the economic census years of 1992 and 1997. The human capital measure used here is a composite of each worker's "skill" combined with their labor market experience. We find that, on average, the within-firm mean of this composite human capital rises for the entire Illinois economy (and for each major industry group within the economy) between 1992 and 1997. We distinguish high human capital industries (such as Finance, Insurance, and Real Estate) from low human capital industries (retail, for example) and show which industries show highest growth in human capital. The integrated data are then used to examine the link between changes in use of technology by firms and these changes in human capital. We find that the demand for skilled labor is positively related to capital intensity (stronger positive relationship in manufacturing than in other sectors) and that increased spending on newer technologies (such as computer software and data processing) increases the demand for skilled workers (principally in the non-manufacturing sector).

C. The Relationship Between Worker Skill and Firm Competitiveness

We distinguish high human capital industries..from low human capital industries and show which industries show highest growth

This project explores which worker traits are most strongly connected to labor productivity (defined as sales per worker) at a business and to the market value of the firm. For this project, we use a much richer characterization of the human capital of each business. For example, we explore the impact of workers' experience (both in the labor market and at the specific business) separately from our measure of workers' skill. This allows us to identify the precise worker traits that help make a business more productive. For example, we find that firms with workers who are more diverse in terms of labor market experience are, all else equal, more productive.

D. Sloan Foundation Workshop and Grant Proposal

We are working with the Sloan Foundation and selected Sloan Industry Centers (Finance, Trucking, Steel, Software, Semiconductors, and Retail Food) to develop more insights into why firms choose high skill (or low skill) workforces. Our workshop (April 18/19) was attended by almost all partner states, and will result in a proposal to the Sloan Foundation to fund this work. LEHD, the partner states, and the Sloan Centers will request three year funding for a book and a conference to fund industry specific studies to understand firms' choice of workforce. If funded, the report and associated book will have the following structure for each industry

1. Why we care/understanding the issues for each industry
2. Gathering basic facts along different dimensions (EDE's by industry)
    - Age (young/old)
    - Experience
    - Sex/Race (if latter possible)
    - Immigrant
    - Skill level (Education/Occupation/Firm Job Tenure)

    All of these could be interacted with: starting wage level,as well as firm characteristics such as turnover, worker loss, entry, exit, productivity and location.

3. Describing Firm Strategies
    - High road/low road
    - Location
    - Managerial Choice
    - Heterogeneity

4. Reasons for choice
    - Regulation
    - Competition
    - Design factors
    - Entry/exit

4. Consequences
    - Safety
    - Income inequality
    - Turnover
    - Unemployment
    - Firm productivity, growth, survival, and relocation
    - Career ladders

5. Implications for workforce and economic development
    - Education and training needs for businesses and workers
    - Placement services
    - Economic development
    - Industrial extension (Sharing best practices in Human Resources)
    - Cross-state migration in response to economic slowdown and growth
    - Business cycles
    - New/emerging job flows
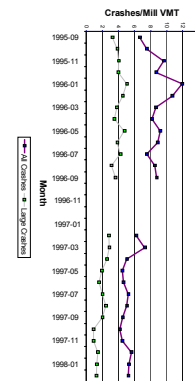
Trucking: Higher Pay: Fewer Crashes

The report and associated book will describe a specific industry structure. Each state will receive customized tables for comparison

V. Demographic Survey Improvements

A. SIPP Earnings and Work History Improvements

LEHD SIPP research is currently focused on ways to improve the SIPP using administrative data. We have successfully matched respondents in the 1984, 1990, 1991,1992, 1993, and 1996 SIPP panels to extracts from the Master Earnings File that were prepared by the Social Security Administration. These administrative records provide LEHD with a secondary source of information on job tenure, date of labor market entry, number of jobs held, and annual earnings. Differences between the administrative data and SIPP survey responses are being studied in order to determine how the SIPP survey instrument and the editing and imputation process can be improved. Current projects include the development of an improved system for integrating information given about a job over time and an investigation of measurement error in the self-reported earnings measures. The first project will produce more accurate measures of job tenure and the second will provide evidence on the statistical properties of a key income variable. Long term projects include the integration of Census Bureau firm data to jobs reported in the SIPP and the study of the relationship between type of employer and type of worker. The characterization of the firm/worker relationship will provide important additional information to those studying outcomes which are the result of the interaction of employer and employee decisions such as health insurance coverage, retirement decisions, and returns to education.

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B. CPS Research

With the conversion of March CPS collection to a computerized instrument in March 1995, aggregate wages increased by 6% relative to independent estimates. LEHD research, based on integrated earnings records form the Social Security Administration, demonstrated that a substantial portion of this increase occurred because of greater reporting of underground wages and of misclassified self-employment income. Interestingly, no similar change was noticed in SIPP although the same instrument change occurred in 1996.

C. SIPP/SSA/CBO Public Use Data Project

LEHD's Title 13 mandate includes researching the feasibility of creating a public use file that combines some SIPP variables with federal information from the Social Security Administration on employment histories and earnings from the SSA master earnings and benefit files. This research is being done in collaboration with the SIPP branch at the Census Bureau SSA, and the CBO. The Census Bureau, CBO, SSA and IRS have agreed to investigate the masking approach described in the John Abowd and Simon Woodcock chapter of the book "Confidentiality, Disclosure and Data Access: Theory and Practical Applications for Statistical Agencies".
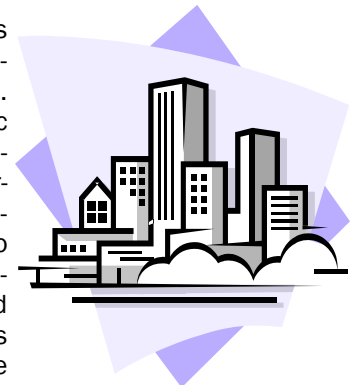
VI. Geocoding

LEHD is prototyping the development of an Address Master File. When complete LEHD's Address Master File will provide a list of unique business and residential addresses contained in all of LEHD's files complete with current and historical geocoding references. The relevant input files include the ES-202, the Census Business Register (economic census and survey frame), the Census Bureau's Master Address File (demographic census and survey frame), and frame updates provided by current survey products, in particular the American Community Survey. We are building this file to support the geocoding needs of the Employment Dynamics Estimates. This work will provide insights into how much LEHD can improve address frames and reduce field operation costs. Our approach to building this file reflects an important paradigm shift from building survey and census frames based on the geocoding of mailing addresses to the building of frames based on the latitude and longitude locations of physical structures. We will treat these structures as geographic features that possess attributes such as physical and mailing addresses, and usage characteristics such as business, residential, group quarters, or multipurpose. Units contained within these structures will possess the same set of attributes. This approach facilitates future simultaneous updating and geocoding of address frames with satellite imaging.

We are integrating our input files by using a series of software products, including Group1 Code1 and Vality, that sanitize, standardize, and unduplicate all addresses. In addition to the basic address information, i.e. street address, city, state, and zip, the final data set will also include detailed geocoding information (political and statistical geocodes as well as latitude and longitude measures) and a series of identifiers. We plan to maintain historical geocodes in order to provide researchers the ability to separate the impact of geopolitical changes from socioeconomic changes. Furthermore, historical usage characteristics will provide researchers the ability to measure the changeover time in the usage characteristics of a physical location.

The production of the Address Master File (AMF) will aid in a number of other economic and demographic research projects at LEHD. By using the AMF in conjunction with LEHD's other data files, researchers will be able to determine the business and demographic composition of detailed geographic areas and will be able to create tabulations based on custom geography, and generate spatial regression models. In addition, the detailed geographic information produced by the AMF is one of the inputs into Version 3 EDE estimates.

The preliminary work presented at the January workshop reported on the results of geocoding in Illinois. We identified "good" geocodes as those we could code to rooftop or zip+4. The results by employment size and by location are detailed below. We are able to get "good" codes for about 80% of addresses. Research is continuing into how much value we can add to the geocoding by including other sources of data – particularly ABI/INFORM

We are able to get "good" geocodes for about 80% of addresses

ES-202 Address coding using the best address (physical or mailing)				
Geography: Six Chicago Metro Counties			*Geography: State of Illinois*	
Coding Type	Records	Percent	Records	Percent
Good	178274	87.9%	248333	76.9%
Bad	24650	12.1%	74537	23.1%
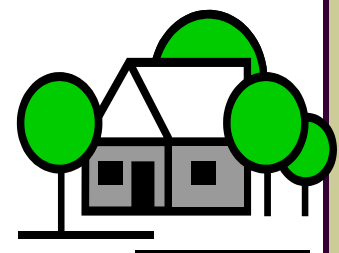
VI. Geocoding (continued)

EIN Employment Size										
Coding Type	1-4	05-09	10-19	20-49	50-99	100-249	250-499	500-999	1000+	Unknown
Good	77110	28695	20184	15132	6152	4122	1076	441	255	25107
Bad	9166	4051	3149	2476	1053	749	246	108	80	3572
Percent	89.38%	87.63%	86.50%	85.94%	85.39%	84.62%	81.39%	80.33%	76.12%	87.54%

VII. Wage Record Editing

The LEHD Program ..may allow the Census Bureau to produce more timely and detailed estimates of the foreign born population

Sensitivity analysis has been performed on Texas and North Carolina files, and updated parameters used for all current and future processing. Revision of parameter allowed for a typical increase in contingent match rates by two percentage points. Texas files have been re-processed using the new parameters, and are ready for shipment pending the evaluation of an update algorithm. North Carolina has been processed, and is ready for shipping (expected shipping date: third week of April). Florida files are currently in processing, and California files, originally processed in July 2001, will be re-processed using the new parameters.

An economic analysis of the wage record edit is expected to be ready in draft form by mid-May, contingent on EDE processing of edited California Files.

VIII. Population Estimates

The Census Bureau produces annual estimates of the foreign born population using decennial census long form data and the Current Population Survey (CPS). Both data sources possess advantages and disadvantages; the census provides large sample sizes, but is only conducted once every ten years while the CPS is conducted monthly, but is a relatively small survey. The LEHD Program has data resources that may allow the Census Bureau to produce more timely and detailed estimates of the foreign born population.
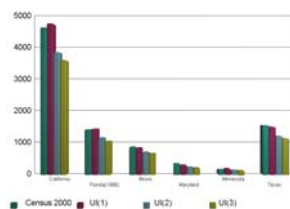
Number of Immigrant Workers by State

In order to compare census data with UI data, we need to first make the measures consistent. In column two of each of the tables, we calculate the number of workers that live in each state for whom Employment Status Recode (ESR) is equal to 1, 2, 4, or 5. In columns three, four, and five in both tables we present various definitions of employment for the UI data. In column three we select all workers that had a job in that state with a covered employer at any time during 1999. In Column four we only include workers that had at least a job in the first quarter or in the first and second quarter. Finally, in the last column we select workers that were employed in at least the first and second quarter. In general it appears that the census worker totals agree most closely with the second definition of employment on the UI. However, for the foreign born, the first definition is generally closer.

VIII. Population Estimates (continued)

Total Population and Workers by State (in thousands)					
	Census 2000		Unemployment Insurance (1999)		
State	Population	Workers	Workers (1)	Workers (2)	Workers (3)
California	33,052	14,713	16,807	13,514	12,521
Florida(1998)	15,593	7,017	7,983	6,381	5,735
Illinois	12,097	5,795	6,866	5,686	5,363
Maryland	5,162	2,615	2,597	2,065	1,846
Minnesota	4,784	2,550	2,946	2,374	2,187
Texas	20,290	9,264	10,784	8,833	8,201

Foreign Born Population and Workers by State (in thousands)					
	Census 2000		Unemployment Insurance (1999)		
State	Population	Workers	Workers (1)	Workers (2)	Workers (3)
California	9,070	4,579	4,700	3,807	3,558
Florida(1998)	2,777	1,409	1,428	1,145	1,037
Illinois	1,573	855	832	692	656
Maryland	559	333	290	224	199
Minnesota	280	150	178	130	119
Texas	3,059	1,540	1,487	1,204	1,124

Staff Notes

Lars Vilhuber's joint work with Audra Bowlus has been accepted at two international conferences.

Work by John Abowd, John Haltiwanger, Julia Lane, Paul Lengermann, Kevin McKinney and Kristin Sandusky (together with Ron Jarmin and Kristin McCue of the Center for Economic Studies) on the relationship between firm choice of human capital and firm productivity and market outcomes is to be presented at the National Bureau of Economic Research/ Conference in Research in Income and Wealth April 27. Alan Greenspan will open the meeting. Katharine Abraham is the discussant.

Work by John Abowd, John Haltiwanger, Julia Lane and Kristin Sandusky on the relationship between technology adoption and human capital will be presented at the Society of Labor Economists Annual meeting.in May

Work by Simon Woodcock will be presented at the Canadian Economics Association in June.

Paul Lengermann is expecting to graduate in June 2002, and has accepted a position with the Federal Reserve Board of Governors here in Washington.

Martha Stinson is expecting to graduate in June 2002, and has accepted a position with LEHD.

Bureau of the Census

LEHD Program
US Census Bureau

♦ 4700 Silver Hill Road

Washington DC 20233

Phone: 301-457-8305
Fax: 301-457-8430
Email:
Ronald.c.prevost@census.gov
jlane@ui.urban.org

♦ John_abowd@cornell.edu

LEHD

LEHD Project Teams

Project	Team Lead	Team Members	Milestones
Labor Market Measures	Oriane Cassell, MN	Phil Hardiman, CA; Becky Rust, FL	1. State partners submit to Oriane suggested measures by 2/28
Wage record Edit	Lars Vilhuber, Census	Bob Cottrell, NC; Mustapha Hammida, MN; Becky Rust, FL	1. Bob and Becky will develop examples of potential uses for LEHD data (with SSN edits) in WIA performance measures; 2. Census partners will develop position paper for presentation to Census Policy Committee; 3. Mustapha will investigate the usability of LEHD SSN algorithms (Lars is contact) in state environment
Liaison with ES202 Policy Council		Rick Clayton, BLS; Jay Mousa, MN; Becky Rust, FL	1. Examine alternatives for incorporation of results from entity demography editing into ES202 data file; 2. Investigate revision of BLS disclosure standards
Entity Demography Editing	Bryce Stephens, Census	Kathie Hughes, FL; Mary Mechenes, IL; George Putnam, IL	1. Develop sensitivity threshold for measures; 2. Develop alternative measures for implementation; 3. Identify data elements for return to states
Disclosure Proofing	John Abowd, Census Bureau	Rick Clayton, BLS; Phil Hardiman, CA	1. Investigate role of ownership and industry code in NAICS, implications for data processing and product development
State Access to Simulation Data	John Abowd, Census Bureau	Waleed Almousa, IL; Mustapha Hammida, MN; Phil Hardiman, CA; Sonya Williams, NC	1. Build infrastructure for state access to include state hardware/software requirements and training; 2. Develop data mining, data diagnostics and other statistical analysis capabilities
Geocoding Firm Entity	Rick Clayton, BLS; Ron Prevost, Census; Bureau George Putnam, IL	Pat Arnold, MD; Bob Cottrell, NC; Dorothy Gattis, TX; Mary Ann Regan, PA; Becky Rust, FL	1. Finalize longitude/latitude methodology; 2. Conduct pilot study for geocoding of state file; 3. Investigate alternative sources for automated geocoding coding; 4. Examine approaches to geocode updates; 5. Coordinate with GIS Apps. Project team
GIS Applications	Rick Clayton, BLS; Ron Prevost, Census; Bob Cottrell, NC	Pat Arnold, MD; Dorothy Gattis, TX; Mary Ann Regan, PA; Becky Rust, FL	1. Provide to Census states' ALMIS Database geog file; 2. Investigate alternative approaches to the use of secondary data (ES202-based and Wage Record-based) for use in GIS apps; 3. Identify implications of disclosure proofing for use of secondary data in GIS apps to maximize geographic specificity; 4. Coordinate with Product Development Project team
Product Development, Marketing	Julia Lane, Census; Bureau Mary Ann Regan, PA	Pat Arnold, MD; Dorothy Gattis, TX; Russ Marshall, Census; George Putnam, IL; Becky Rust, FL; Sonya Williams, NC	1. Develop product portfolio for product dissemination; 2. Develop LEHD marketing pamphlets for Census and States; 3. Design and implement Ferret-based data dissemination capabilities from Census to States; 4. Coordinate development of dissemination capabilities with Simulated Data Project team; 5. Design and implement Ferret-based information dis-