LED NEWSLETTER

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QWI UPDATE

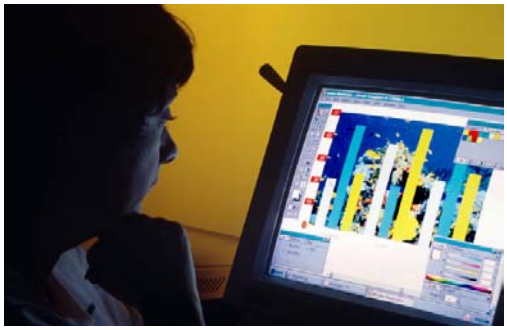
The LED program moved into full production in the second part of 2003-moving from a research and development operation to a full fledged production operation. We produced and distributed V3.1 of the Quarterly Workforce Indicators for 21 partner states in December under the direction of our new production manager, Greg Weyland. We hope to be producing indicators for all 27 partners (and more!) by the end of 2004. The next production run will include indicators by detailed industry within counties, metro areas and WIAs.

As a reminder, we ask that all state partners send their updated wage record and ES202 files at the beginning of every quarter. States are asked to send files that go back to the last quarter of data that is currently at LED, with one quarter overlap (to permit updates). Our protocol that permits states to transmit files via FTP as well as CD's is now available—please contact Greg for the information on this.

The listserv for QWI questions has been quite active. To subscribe, go to http://lists.census.gov/mailman/listinfo/led-qwi - a username and password will be required.

FEBRUARY TRAINING

The LMI Training Institute sponsored a very successful training session in June, 2003. A second session will be offered February 22-24, 2004 in Washington DC, focusing on understanding and applying the QWI data to create useful labor market information. There will also be presentations on the disclosure proofing system, the weighting approach and the multiple imputation methodology. Full use will be made of the remote access at the Cornell Restricted Access site.



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State Workshop

Our annual state workshop is scheduled for February 26 and 27 at the Grand Hyatt in Washington DC. The aims of the workshop are:

1 To report on and consolidate last year's progress
2 To discuss and decide on priorities for next year
3 To expand awareness of the LEHD partnership to federal agencies and national representatives of state organizations.

In order to achieve these aims, the workshop has two parts. The first part, the business meeting, provides the basis for the policy and the technical direction for the upcoming year. We discuss both marketing and outreach as well as such technical matters as what new indicators should be developed in 2004. The state partners will also formalize the federal/state partnership and elect a committee to provide year-round input into the program.

The second part will be more customer oriented. We will first showcase the proposed new GIS approach to delivering LED data. LED state partners will then showcase how they have used the QWI's to provide information to WIB's and economic developers, as well as how they can be used for strategic planning.

We hope that the workshop will facilitate the sharing of new information and new ideas on how to fully exploit these new data. To this end, we've invited a number of representatives from federal agencies—such as HHS, BTS, ETA and BLS—and from national organizations—such as NASWA, NAWB and NGA—to give feedback and advice.

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Other Deliverables

Successor/Predecessor Files: These files were shipped to partner states in mid-July and another shipment will be sent out this month. We hope they help in data processing, and we would also like feedback from partner states about ways to improve the links.

Edited Wage Records: This process was slowed as a result of the intense focus on moving to full production in a timely fashion. We expect all historical records to be processed in the current production round. However, future rounds will overlap with previous returns by at most 4 quarters, plus any new data of whatever duration (1-4 quarters). Because of the sizable computer resources needed to do the wage record editing, we will implement a rotating schedule for the processing of each state's data—the details on this will follow as we determine the size of the files and computer constraints.

Low wage work book

A first draft of the low-wage work book was finished in December. Entitled **Moving Up or Moving on: Workers, Firms and Advancement in the Low-Wage Labor Market,** it represents the result of the Russell Sage/Rockefeller Foundations/ETA/HHS sponsored low-wage work project that began over two years ago. It represents the first major use of multi-state wage records combined with demographic data in the analysis of the low-wage labor market, and there are a number of very interesting findings.

- Many prime-age workers who have been low earners for at least three years move out of low wage status in the next three years.
- The employer matters: Transitions out of low earnings are associated with subsequent employment in high-wage industrial sectors, larger firms, those with lower turnover, and especially in high-wage firms.
- Transitions out of low earnings occur much more frequently among those *changing* jobs than those s*taying* in jobs.
- Working for a *"temp" agency can be a plus*: Early work experience at a "temp" agency is associated with higher subsequent earnings.
- There are *enormous differences across employers*, even within narrowly defined industries in the hiring and advancement of low earners. Such firms can be identified on the basis of past performance.
- Geography matters: Low earners live further away from good job opportunities than non-low earners, and their commuting behavior is more limited.

A policy brief based on parts of the book was released by the Brookings Institution and is at http://www.brookings.edu/es/urban/publications/200310_holzer.htm.

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Sloan foundation grant

The Sloan project has just finished its first year. The first draft of the book entitled **Firms, Workforce Quality, and Economic Growth: New Data, New Approaches, and New Evidence** is expected to be finished by March 2004. The Sloan Centers and LEHD staff presented their preliminary results on earnings inequality, career ladders and firm performance—the core chapters in the book—at the Allied Social Sciences Assocations meetings in San Diego in January, and received very positive feedback. Some highlights so far include:

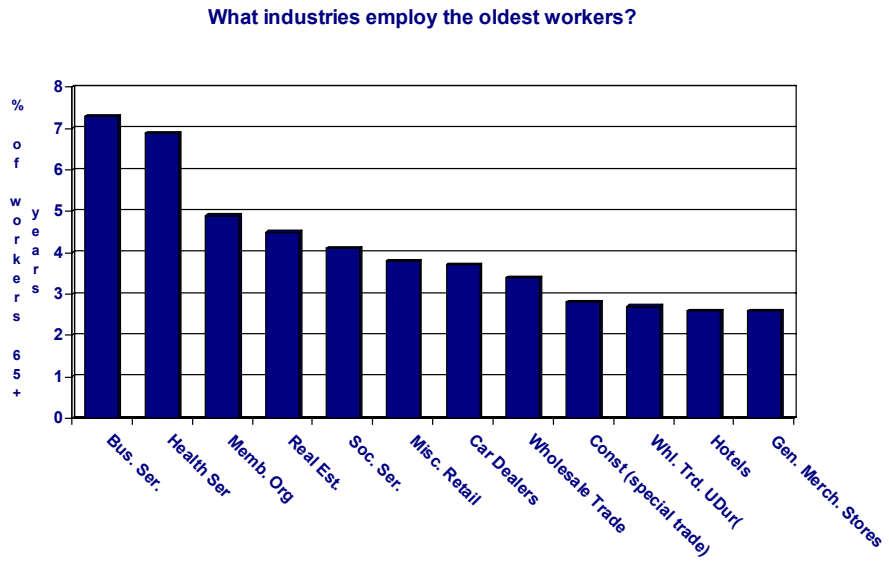
Wage inequality: Human capital *levels* and firm pay setting practices *levels* are important contributors to *levels* of earnings inequality but human capital *changes* and firm pay setting practices *changes* are not primary contributors to *changes* in earnings inequality.

Career ladders: The evidence suggests there are substantial returns to firm-specific job tenure but the most rapid wage gains observed in the labor market are for those who have changed jobs.

Firm performance: Even after controlling for firm productivity, firms with a larger fraction of workers with high human capital and lower excess worker turnover are much more likely to survive.

REPORTS ON THE AGING WORKFORCE

Across the country, firms are beginning to plan for the large wave of workers born during the Baby Boom of 1946 to 1964 leaving the workforce over the next few decades. It is possible that a larger share than in past generations will "retire" to collect the pensions they earned over their work life and then continue working part time or in more flexible working arrangements. Decision-makers need to know which industries and regions of the state will be most affected by changes in the size and composition of the labor force in coming decades. Businesses need to make more informed plans for the transitions they face and to pinpoint both potential problem areas and new opportunities. Older workers who want to continue working need to know in what industries and in what areas jobs are available, how flexible businesses are about their working arrangements, and the level of earnings they can expect. The LED program data are ideally suited to answer these questions. The Census Bureau has teamed up with a number of partner states to develop a jointly distributed product customized for each state that can be disseminated through state and Census Bureau channels.



Source: U.S. Census Bureau and Oregon Department of Employment

These reports answer such key questions as:

- What is the age composition of the workforce and what are the changes?
- Which industries are most affected by the aging of the workforce?
- How stable are the jobs of older workers?
- In which industries are older workers most likely to be employed?
- How much do older workers earn?

This project is sponsored by the National Institute on Aging—other customized reports on low-wage workers, specific industries and immigrants will be forthcoming in the next year.

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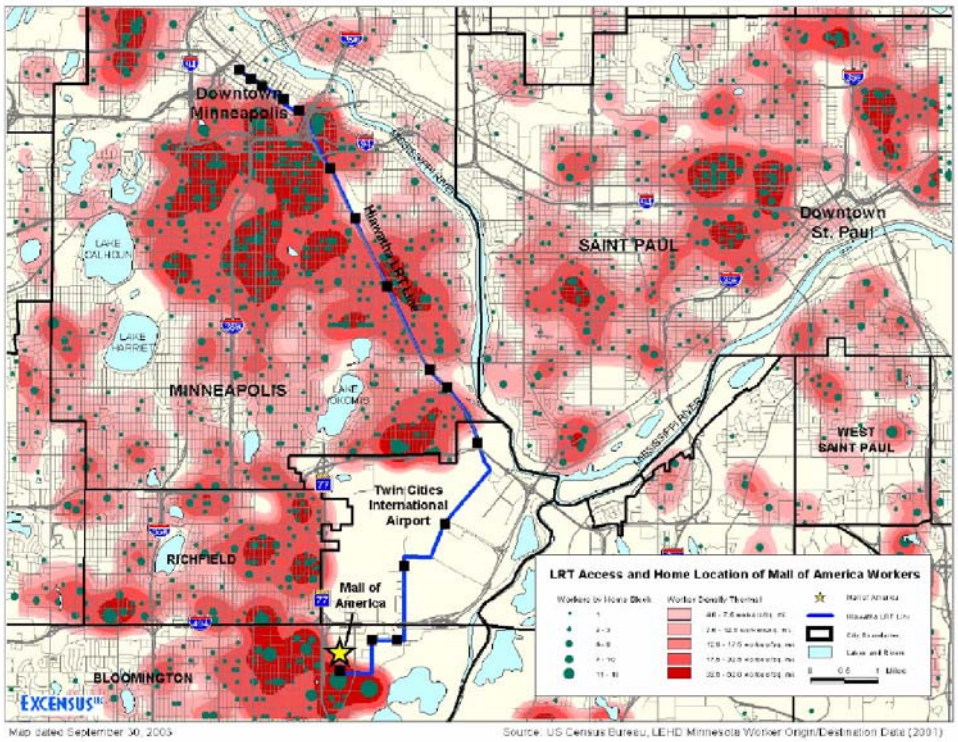
GIS WORK

An important component of the LED Program data is the ability to describe the geographic interaction between workers and firms. Because the data have information on both the place of work and place of residence of workers – and how these change over time – the value of the data infrastructure for researchers in transportation, economic development and regional planning is unsurpassed. Indeed, initial research in cooperation with the states of Florida, Illinois and Minnesota and the Bureau of Transportation Statistics have enabled the production of a variety of releasable statistics: block level origin to destination flows of employee numbers from household to place of employment; information on the characteristics of workers by block residence (the number of workers living on each block; the proportion of workers earning low, medium, or high annual wages and mean annual wages) and information on the characteristics of businesses by block (mean monthly pay per worker and the industry classification of firms operating on each block).

John Carpenter, from Excensus in Minneapolis, is working with the LED program to use the basic block-level data and develop a GIS system. One example of what he will be producing is provided in Figure 2: it shows where workers at the Mall of America in Minneapolis live—and whether they are served by the new light rail line that is being constructed. Our aim is to create a web-based interface that permits workers to find out where firms are located; and firms to find out where potential workers might be.



The LED program has produced disclosure-proofed block level origin-destination matrices, as well as the characteristics of workers and employers on each block for Florida, Illinois and Minnesota.

LEHD/LED?

We've had a number of people ask us whether the name of the program is LEHD or LED. The program itself is the LEHD (Longitudinal Employer-Household Dynamics) program—and that is how it is referred to internally at the Census Bureau and by other federal agencies. However, that name is a bit difficult to say—and so we use Local Employment Dynamics (LED) for products related to the QWI's.

WEBSITE UPDATE

The Quarterly Workforce Indicators are available on-line. The LED website has been market tested and will be moved onto the Census Bureau's website this month. Users of QWI data can now query local labor market information using this new interactive feature. Partner states can use data tools available on the new site to download key indicators, obtain information about data and other state products, and obtain research reports on ongoing LED research.

One of the most interesting uses of the data for customers is finding out what the top industries are for different age groups and what the earnings are for these industries. In many states, the top ten employers for each age group are very different—for example, national commercial banks are not in the top ten employers for all age groups, but they are for 35-44 year old women! And the picture for hires is very different from the picture for employment—again as can be seen in the table for New Mexico, the top ten hiring industries do not include either national banks or commercial physical/biological research!

What are top ten industries in NM?

Industry	Employment	Industry	Hires
Eating/Drinking	48,879	Eating/Drinking	7841
Department Stores	20,934	Department Stores	1935
Grocery Stores	16,576	Hotels/Motels	1935
General Hospitals	14,436	Grocery Stores	1766
Hotels/Motels	14,292	Help Supply	1760
Commercial Physical/Bio Research	13,096	Doctors' Offices	1079
Doctors' Offices	12,184	Ind/Fam Soc. Ser.	1020
Semiconductors	9,224	Farm Labor	965
Ind/Fam Soc. Ser.	9,065	Gen. Bus. Ser	910
Help Supply	9,012	General Contractors	886

What are top ten industries in NM for 35-44 year old women?

Industry	Employment	Industry	Hires
Eating/Drinking	4,609	Eating/Drinking	606
General Hospitals	3,270	Dept. Stores	300
Dept. Stores	3,037	Doctors' Offices	253
Doctors' Offices	2,635	Hotels/Motels	250
Grocery Stores	2,591	Grocery Stores	209
Hotels/Motels	2,164	Help Supply	201
Ind/Fam Soc. Ser	1,789	Ind/Fam Soc. Ser	191
Natl. Comm. Banks	1,192	Home Health Care	145
Comm. Phys/Bio Research	1,147	General Hospitals	138
Legal Services	1,074	Residential Care	125

Source: US Census Bureau and New Mexico Department of Labor

Users of QWI data can now query local labor market information using this new interactive feature

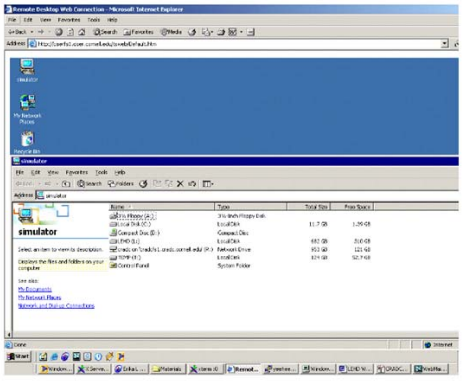
CONFIDENTIALITY RESEARCH

As you know LEHD developed a new confidentiality protection system for the QWI's in order to permit the release of very detailed geography and industry classifications in those indicators. In addition, the system used on the QWI's will permit the release of NAICS-based indicators on both a current and historical basis very soon. All of this was accomplished without compromising the confidentiality of the underlying UI wage records, ES-202 data, and Census Bureau Title 13 data.

Now we've turned our attention to the problem of confidentiality protecting the micro-data themselves for research use outside of the Census Bureau. Our micro-data protection system is based on the idea of inference-valid synthetic data, which is a concept that's been around the statistics literature for about a decade. Synthetic data are a method of releasing micro-data that have been simulated in a manner that reliably reproduces many of the complex relations in the original confidential micro-data without actually releasing any of those data. Producing inference-valid synthetic data is a computationally intensive process but using these data is straightforward--they look just like the original confidential data and can be analyzed with the same programs.

The LEHD Program at Census is the first major statistical project to develop a workable synthetic data system. Our prototype project is a public use file based on the Census Bureau's Survey of Income and Program Participation, the Social Security Administration's Master Benefit Record (and other benefit data), and other administrative records. The prototype has been under development for more than two years. In December, LEHD released the first draft (still confidential) for testing by SSA and the Congressional Budget Office. Refinements and additional drafts will be produced over the next six months. We hope that the public use file will be released in July.

At the same time LEHD was developing the application for the SIPP-SSA public use file, we were experimenting with synthetic data for the underlying micro-data in the QWI system. Certain technical challenges slowed our attempts to synthesize the core files that form the basis of the QWI. Most of these difficulties have been addressed by the second-generation synthesizing software we developed for the SIPP-SSA project. Once the Census Disclosure Review Board approves the synthesizing for the QWI micro-data, we're planning a major upgrade to the Cornell Restricted Access Data Center Simulator machine so that authorized users will be able develop applications directly on the synthetic QWI data.



17.CRADC environment

All of this was accomplished without compromising the confidentiality of the underlying UI wage records, ES-202 data, and Census Title 13 data.

Production Reminders

LED just completed its first set of production processing of QWI's during the fourth quarter of 2003. All states that supplied 2003 first quarter data by the middle of the quarter had their QWI's shipped by December 31.

For current quarter processing, containing data through 2003 second quarter, we will adhere to the same schedule and deliver data on a flow basis throughout the quarter. Our experience during the last quarter suggests that, particularly for smaller states, the processing will be quicker than originally estimated . We will process the data in the same order in which it is received.

We have two major enhancements planned for this round of processing. First we will switch over to the NAICS industry codes. Please remember that we will need to receive a copy of your LDB file that you recently received from BLS in order for this conversion to occur. Greg's recent e-mail to the state technical contacts outlined this process. Let him know if you need any background information on this (301 763-3790 or gregory.d.weyland@census.gov).

Second, we plan to provide detailed industry estimates (detailed NAICS codes) for substate geography with the newest set of QWI's. The same e-mail mentioned above provides details of the changeover and also discusses various delivery options for these greatly expanded set of QWI's. Feel free to contact Greg if you have any questions of comments about the new production processes.

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Team News

We welcome our new production manager **Greg Weyland** who will be taking over the management of our new production system. Greg worked on getting the Current Population Survey data out every month, so he has lots of experience in meeting deadlines!

Beth Long, Anja Decressin and **Martha Stinson** all delivered healthy baby boys in October.

John Abowd and Lars Vilhuber's paper describing the LEHD wage record editing procedure has not only been accepted by the Journal of Business and Economic Statistics, but is the JBES invited paper in the 2004 American Statistical Association meetings.

Participants in the Sloan project had a very productive workshop in October, and presented four papers at the Allied Social Science Association meetings in San Diego in January.

A paper by Harry Holzer, Julia Lane and Lars Vilhuber on low-wage work is forthcoming in the Industrial and Labor Relations Review.

We welcome Romain Aeberhardt from the French national statistical institute, INSEE, to LEHD to work with us for one year.