Increasing the Applicability of Local Employment Dynamics
WORKSHOP SUMMARY

Urban Markets Initiative, The Brookings Institution
November 16, 2005

The Dynamite Dozen

The 12 most important items uncovered through the course of the Local Employment Dynamics (LED) Workshop:

1. *Data users have a high level of excitement about the LED program.* Users value the potential of this program and are anxious to use it, particularly if it can implement some of the changes proposed herein. Users also value being listened to.

2. *The program needs to be more transparent* in its methodology and in the strengths and limitations of the data. The program can provide greater transparency through improved communications with users and improved documentation on the website. Such documentation should be clear, consistent, and up-to-date.

3. *Users particularly value data regarding the dynamics of employment change and earnings.* Through a voting process, the category of employment change indicators received about one-third of all votes; the category of earnings indicators received over a quarter of all votes. Employment and job growth indicators split the remainder of votes.

4. Of the thirteen indicators that received the *most votes* in a prioritization exercise, *six are among the eight current Quarterly Workforce Indicators ("QWI").* "Beginning-of-Quarter Employment" received the most votes, perhaps indicating the need for a baseline measure to help understand the balance of the measures as well as recognition that this serves as a denominator for many ratios. The two current QWI that did not rank highly through the voting process were "Turnover, Stable Jobs" and "Hires, New Stable Jobs, Average Monthly Earnings."

5. *Advanced users have a very strong desire for an LED web application that provides access to all 26 QWIs.* This could take the form of a multi-tier web site in which the first tier is the data category (e.g. employment, employment change, job growth, earnings) and the second tier shows the specific workforce indicators.

6. At the same time, users recognized that *novices might find viewing the full set of 26 indicators overwhelming.* A popular alternative was to provide a multi-level interface organized by indicator groupings that would allow the user to "drill down" to some subset of the 26 indicators. Indicators could be grouped by the existing four indicator categories (employment, employment change, etc.), by user type (e.g., workforce developer), and/or by specific topics (e.g., retention and turnover). Additional ideas for aiding novice users include: retaining the current QWI framework and allowing users to select "show all indicators;" displaying information that "QWI users who viewed this indicator also viewed these indicators" (modeled on the Amazon.com approach to recommending books); and providing "automated" narrative profiles that describe an area's basic characteristics in text and charts similar to American Community Survey profiles), and teach novices how to interpret the indicators.

7. *Users had limited suggestions for change in the language, but there were a few about which they felt strongly.*

    - There was the near universal belief that "turnover" should become "job churning."
    - Participants thought "recall" was confusing because most people think of it as layoffs from manufacturing when in fact, it includes seasonal workers. The national group suggested changing the term to "rehire."
    - The suggestion was made to include the time frame for some of the indicators, such as "Full quarter employment" or "Rehires within four quarters."
    - Alternatives for the term "stable" was discussed at length, the feeling being that the term conveyed a longer length of time than the indicator actually measured.
    - Consensus emerged that showing how the indicators are constructed would help to ease questions about methodology, names, and definitions, e.g., showing that "Hires All" is the sum of "Hires New" and "Hires Recalls."

8. *Federal data partners had specific concerns around the accuracy and usability of the data.* Their concerns centered largely on UI wage record and industry coding issues. There seems to be a ripe opportunity for LED to work closer with federal agencies to better understand and address these concerns, much as the ACS staff has done through an interagency committee. *National users suggested that showing the distribution of earnings would help users* better understand which income groups are experiencing job churning and a distribution would additionally serve as a surrogate for occupation data and job quality. *Local and state users suggested the need for more training regarding the analysis of LED data.*

9. *Users have a strong desire to create a users' community.* This could be a part of the LED web page or through a third party. Users seemed ready to participate right now, and the workshop could be the starting point for launching such a group. Users also expressed a strong willingness to register with the national or state sites and receive e-mail notices regarding the availability of updated data. In addition, users were interested in knowing about common templates and queries that other users develop.

10. *Users want to see more outreach and training directly to the business community.* Many of the indicators, such as separations and new-hire earnings, seem to have particular value to employers. Intermediary groups, such as the Society for Human Resource Managers, could be helpful.

11. While the workshop's focus was on current indicators and not the development of new ones, *many users would like to see underlying data not now available on the public or Cornell web sites.* In particular, there was a sense the program could be used to understand job flows within and across industries, leading to better information around career ladders across industries (e.g. what industries are most likely to hire those dislocated by BRAC?). Many of these studies would be most useful if the indicators were available at the city level. There were requests by the national group for as much age detail for older workers as there is for younger workers (especially, 62+ and 65-69 although the most desirable would be 55-59, 60-64, 62+, 65-69, and 70+).

12. *Many suggested improvements are now being addressed* (much like Industry Focus was developed as a response to user feedback). For example, Census' DataFerrett application will provide users the ability to customize and aggregate across indicators (e.g. aggregate age groups, counties, sub-sectors). An on-line training application is in the works that will improve LED clarity and transparency. The mapping application will allow for customized geographic analysis at the sub-county and "radius" levels.

Background

On November 16, 2005 the Urban Markets Initiative (UMI) of the Brookings Institution hosted a workshop "Increasing the Applicability of Local Employment Dynamics," attended by over 40 users representing federal agencies, national users, and state and local users (See Appendix A). Andrew Reamer from UMI served as the host; Jeremy Wu from the Census Bureau represented the LED program; John Dorrer from the State of Maine represented the partners from State Labor Market Information (LMI) offices. The meeting was facilitated by Gary Yakimov, Corporation for a Skilled Workforce, and Cynthia Taeuber, Jacob France Institute, University of Baltimore. UMI agreed to serve as host in light of its mission of increasing the availability and accessibility of federally provided data on small areas.[1]

Purpose

The LED Quarterly Workforce Indicators effort has reached a critical turning point in its evolution. Over the past 15 months, there has been an increased emphasis on outreach and training. A cadre of training consultants (including the Corporation for a Skilled Workforce, the National Center on Education and the Economy, and Advanced Workforce Systems) has trained approximately 600 users across the nation in a variety of settings. These include national meetings and conferences of workforce leaders, a national conference of economic development researchers, a national conference of continuing education leaders from community colleges, and state-specific training in Maine and Alabama. In Alabama alone, over 300 users have been trained.

In these trainings, participants regularly raised issues regarding LED nomenclature and definitions and the clarity of LED data and methodology. It seemed appropriate for the LED program to address these issues by obtaining feedback and guidance in a more structured setting from a diverse group of existing and potential LED users.

Given the program's recent growth and development, it also seemed appropriate to gather user input regarding a next phase of programmatic improvements. The workshop organizers recognized that the more the program is understandable and useful, the greater its influence on policy makers, non-profit groups, and business leaders across the nation.

Therefore, the purpose of the workshop was to improve the understanding and usability of the LED program. The workshop agenda consisted of four major portions:

- Providing an overview of the LED web site and current QWI indicators, names, and definitions;
- Establishing priorities among the 26 currently available QWIs;
- Determining how best to package the QWIs on the web site; and
- Increasing the understanding and usability of the QWIs.

The first portion was intended to provide participants with a common baseline of understanding prior to the three-part discussion of priorities, packaging, and usability.

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[1] See http://www.brookings.edu/metro/umi/federalinformation.htm.

Workshop Components

Overview

The overview session began with an introduction to the current LED web site and the major modules – Quarterly Workforce Indicators, Industry Focus, and On the Map. During this presentation, several improvements were suggested, including:

1. Provide state-level data in the QWI Comparison Reports (e.g., along with metro area comparisons, include comparable state-level information).

2. Allow users to view the Industry Focus at the 2-digit NAICS level.

3. For the Industry Focus report, allow industries that have suppression in some, but not all, of the selected indicators to appear in the output table.

4. Allow users to define their geographic level (e.g., a 50-mile radius around x).

5. Consider a more obvious site name for a URL, such as www.LocalEmploymentDynamics.gov.

Participants then were given an overview of the 26 QWIs, including names, and general and technical definitions (see Appendix B). Participants had considerable confusion about the indicators and the technical definitions. Many were frustrated at the names and details, and found it difficult to identify the eight publicly available Quarterly Workforce Indicators within the list of 26. John Abowd identified which indicators are the current QWIs (noted in bold in Appendix B).

Priorities

After a discussion, users voted on their priorities among the 26 indicators. The indicators were listed on a series of easel pad sheets taped to a wall. Each user was given 6 dots and asked to put dots next to their top priorities. Users could place more than one dot with one indicator, if they wished. *Attendees voted with the assurance that none of the currently available indicators would be dropped from the LED website.*

Votes for each indicator are provided in Appendix B (note: demographics and time indicators were not part of the voting process). Below is a summary of the total votes by the four categories of indicators, as well as 13 indicators that received at least ten votes.

Voting Results[2]

Employment (44 votes)

Employment, Beginning of Quarter (22)

Employment, Stable Jobs (14)

Employment Change (72 votes)

Separations (13)

Hires, All (also called "accessions") (11)

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[2] Those indicators that appear in italics are currently in the series of eight publicly available Quarterly Workforce Indicators.

Hires, New Stable Jobs (11)

Hires, New (10**)**

Separations, Stable Jobs (10)

Job Growth (41 votes)

Firm Job Gains (13)

Firm Job Change, Net Change (13)

Earnings (63 votes)

Hires, All Stable Jobs, Average Quarterly Earnings (16)

Employees, Stable Jobs, Average Quarterly Earnings (13)

Total Quarterly Payroll (11)

Hires, All – Average Change in Monthly Earnings (10)

Interpreting the Voting Results

1. Users have a clear desire for indicators concerning Employment Change and Earnings.

2. Of the eight QWIs now on the website, six received double-digit votes. The two that did not appear are "Turnover, Stable Jobs" (receiving 8 votes within the Employment Change category), and "Hires, New Stable Jobs, Average Monthly Earnings" (receiving 5 votes within the Earnings category).

3. Only two of the 26 indicators received more than 14 votes. Those were "Employment, Beginning-of-Quarter" (22 votes) and "Hires, All Stable Jobs" (16). Based on the discussions, the fact that "Employment, Beginning-of-Quarter" received so many votes may not contradict the earlier assertion that "Employment" as a category has a lower priority than other categories. Likely, it is the result of needing a "baseline" indicator from which to better understand all of the subsequent indicators.

4. Users prefer "all hires" data as opposed to "new hires" data. In the Earnings category, "Hires, All Stable Jobs" received 16 votes compared to 5 votes for "Hires, New Stable Jobs."   In the Employment category, the indicator "Hires, All" received one more vote than "Hires, New."

Packaging

Following the tabulation of votes, users were asked to discuss how the LED program might package the QWIs most effectively. Specifically, they were asked whether they like the current series of publicly available QWIs or if they prefer to see the data packaged in a different way.

One user made the comment that the LED program should show how the indicators aggregate and relate to one another. Participants thought this change would greatly improve the understanding of names and definitions. For example, "Hires, All" should defined as the sum of "Hires, New" and "Hires Recalls," and that it could be illustrated in some way to ease packaging, nomenclature, and definitions. John Haltiwanger, University of Maryland, concurred that this should and could be done.

There was an extremely strong sentiment across the groups in the room that *all 26 indicators should be available to users.* The user community made clear it wants access to all the indicators and be able to select the ones that most interest them. The question becomes how best to organize the full array of indicators, particularly to aid novice users. Participants offered a number of ideas for consideration.

There was general call for a multi-level interface grouped by *QWI indicator category.* The first level interface would ask users to select from the four broad categories of indicators (employment, employment change, job growth, and earnings). The second level interface would provide them with the specific list of indicators in the chosen categories.

Many indicated a preference for a multi-level interface on the website grouped by *user type.* The first level interface would ask the user to identify a broad category (e.g., workforce developer, business, economic developer, community college, researcher) and the second level interface would then provide indicators appropriate for that user type. It was suggested that meetings of stakeholders in specific categories be held to identify the appropriate indicators for display by category.

Participants also liked the idea of organizing indicator choices by *topics.* Suggestions for subjects included:

- Stable jobs

- Workforce demographics by industry sector

- Older workers

- Retention and turnover indicators

- Supply indicators for workforce available by industry sector (and occupation)

Additional ideas for organizing the indicators to help novice LED users included:

- Keep current QWI format but allow the users to check category boxes (as suggested above) that "expands" to indicators in that category.

- Provide a "most popular data" option that users can check to see what most people are looking at, and a referral option (similar to Amazon's "people who purchased this book also purchased the following books…"), "people who look at this indicator also looked at these indicators."

- Provide a "retail" version of the indicators for novices, by either topic (e.g., stable jobs) or user (e.g., workforce developer), and a "wholesale" version by the four indicator categories, for analysts.

Participants said they want to have the option to *download all 26 indicators.* There could be different download tools for novice users and advanced users. Many participants were interested in a selective download option to customize the presentation.

Participants provided a series of comments regarding the data *documentation.* Suggestions included:

- Make user-friendly descriptors of the data elements within the page. Users thought that the definitions available by clicking the "i" icon next to an indicator were insufficiently detailed. To obtain the desired level of detail, a user now must work through a series of background papers to understand the data descriptors. Users are interested in a hybrid between basic and advanced definitions that would be embedded on the web page with the data.

- Be consistent in documentation. Users find that the names and detailed definitions and methodologies do not appear the same way in various places on the web page and background documentation. Users are confused by differing nomenclature, e.g., "job creation" in one document and "firm job change" in another. It appears that some documentation is out of date and has not been removed or replaced.

- Provide comparisons with other sources of data, including detailed origin and methodology. For example, users want to know how the employment definition differs from that for the BLS Quarterly Census of Employment and Wages. John Abowd and John Haltiwanger have begun to address this; users would like this work completed as soon as possible.

- Indicate the limitations of the data. For example, users want the data limitations described in a prominent and understandable way. In particular, users want to know how data accuracy and usability differ among the LED partner states. Particular concern was voiced regarding the varying accuracy of establishment addresses for multi-establishment firms; some states rigorously determine actual street addresses, while others are content to use one address for all of a firm's establishments.

- Provide a user-friendly guide online, similar to the *Guide to Socioeconomic Data* previously developed by Joseph Cortright and Andrew Reamer. Perhaps the on-line training modules are a start to this, but they would need to be tweaked or supplemented to reach the "user guide" format desired.

Participants had a number of suggestions regarding *QWI geography options:*

- Give high priority to providing place-level (i.e., sub-county) data; these data would be valuable to help deal with economic dislocation as well as general economic development.

- Allow geography to be customizable by the user (e.g. industry zones, empowerment zones, radius around a city).

The day's introductory remarks stressed that the workshop focused on improving the current set of indicators and indicators; due to a limited budget, it is not currently possible to explore new indicators. Even so, participants provided comments regarding *desired additional types of measures*:

- It is clear that the power of the underlying LED data can be more fully utilized. For example, the data can be used to identify the flow of workers between jobs in various industries, and to identify career ladders across industries. The program can do more to measure self-employment, one of the most desired indicators by all types of users.

- Users would like to see the publication of annual data, rather than just only quarterly comparisons. They believe that offering an annual time series would greatly increase the utility of the program.

Suggestions regarding LED web site *functionality* included:

- Develop a query system that has the ability to save previous or popular queries.

- Allow for the layering of demographic and data views to enable easier comparisons.

- Differentiate the "Industry Focus" module – it is already more usable and powerful than the "QWI" module.

Several participants noted the value of getting business input into QWI packaging. Suggestions for contact included the Society for Human Resource Managers and the American Society of Training Developers.

In general, participants indicated the importance of allowing the web site to grow and change with the user base, which would require ongoing communications between the LED program and users.

Usability

For the final session, users were separated into three facilitated workgroups, organized by type – federal users, national users, and state and local users. Groups were asked to discuss the following:

- What challenges do you have regarding names and definitions?

- What improvements do you suggest?

- What additional obstacles, if any, prevent the Quarterly Workforce Indicators from being useful to you?

Groups took the opportunity to focus on a variety of issues, some of which dealt with names and definitions and many of which did not. Across the groups, there was a sense that people liked the name "Local Employment Dynamics" but that the term "Quarterly Workforce Indicators" was misleading since they were about more than just the workforce. There were no suggestions for an alternative title.

Federal Users Workgroup

The discussion focused on three areas of concern about the data and what factors might diminish its usefulness: 1) wage record data as a major source, 2) industry coding and its impact on time series, and 3) definitions.

To assist Census in establishing priorities, this group voted to determine the most important indicators. The facilitator's comments are included as "suggestions" at the end of some items.

Industry Coding Issues

1. Coding of employee leasing (Professional Employer Organizations) and staffing companies. This is a significant issue in Florida, where it appears more than a quarter of the PEOs operate. Recognized as a difficult issue to solve. Potential for distorting (underreporting) employment in industries which use significant numbers of temporary or leased employees.

2. Incorrect industry coding problems can cause significant problems.

3. Successor firm impacts on time series.

4. Impact of differential treatment of reporting units (firm versus establishment). The impact is likely to be most seriously found in origin-destination usage of the LED data. **Suggestion** – the questionnaire from #2 in the prior section could be used to disclose firm/establishment issues.

5. Non-economic recoding. The general issue is determining when the recoding is a result of a real shift in industry or reflecting simply a correction of a previous miscoding.

6. The transition from SIC to NAICS. Primarily a concern about time series consistency. More of an issue if corrections are not pushed backward in the data set. **Suggestion** – the questionnaire can be used to address the method used to address coding changes.

7. Internal shifts of employees occasioned by outsourcing of certain functions. For example, shift of large fractions of the engineering staffs from within the domestic auto industry to external vendors.

UI Wage Record Issues

1. Variations in the coverage of unemployment insurance (UI) laws in the various states. Knowing the coverage is critical in terms of understanding the data presented in LED. Guide books are available, but they tend to be vague. Census did have a detailed analysis done on the coverage issues in the first six states. Suggestion – make answers to a standard questionnaire about UI law coverage a condition of joining or renewing participation in the LED project.

2. Definition of wages. It was noted that in some states and in some occupations benefit payments are reported as part of the wage. Treatment of corporate officers varies in some states. Stock options and certain other payments are often not included. Bonus payments will distort wage amounts in certain quarters. Payments from non-qualified pension plans are treated as wages in some areas and could distort commute pattern data. **Suggestion** – to deal with bonus distortions, produce a median monthly wage as well as a mean. Make the wage definitions part of the questionnaire suggested in #2 above.

3. Lack of federal government employment data. Primary issue appears to be the civilian civil service, which is "lumpier" in terms of geographic location, and larger than the other groups. Census noted that the Postal Service tends to be spread more evenly around the country. Active duty military is concentrated at specific locations where the lack of data might distort commute patterns.

4. Lack of data on the self-employed (sole proprietorships, certain S corporations and LLP/LLC's). The lack of wage data on these entities distorts industry data (e.g., likely underreporting of firms/wages/workers in various business service industry classes where solo practitioners and independent contractors are significant).

Names and Definitions

1. Turnover should be renamed "job churning."

2. General sense that calculation of wage is not intuitive. Since it represents average wages for workers in "stable" employment only (where the reference quarter was bracketed by quarters where wages were also earned in the same establishment), it is likely to be distorted (probably higher) than the wages for all workers in the same industry. The distortion is likely to vary depending on the level of "stable" employment within the industry.

3. The definition of hires is not intuitive. (No specific vote but viewed as the most important definitional issue.) Without context (e.g., knowing that new hires do not represent all hires or accessions), the indicator title is likely to give a false impression. There was no consensus on a name change. General sense that if an intuitive naming convention cannot be found that at least

two "hiring" data elements might need to be displayed to avoid confusion. **Suggestion** – perhaps "employees new to the firm" would work.

National Users Workgroup

This group divided its efforts into names and definitions, and all other issues. Voting was not done.

Definitions

1. "Employment, Stable Jobs" might use the term "Continuous" rather than "Stable." However, the group recognized that since the measure referred to four quarters only, "Continuous" might be misleading. Several suggested being specific about the time period.

2. Provide different levels of definitions for novices and experienced data users – specifically, a drill-down from a short, plain-English definition to a very detailed definition, complete with mathematical notations.

3. Duration – incorporate the number of quarters directly into the definition.

4. Blending of indicators concerning "jobs" and "employees" on one page is confusing.

5. "Turnover, Stable Jobs" should be renamed as "Job Churning."   Also, it would be useful to have a term "Job Churning - All" to capture all jobs.

6. It needs to be clear that the indicator for Employment refers to all jobs; otherwise, the indicator may be used incorrectly.

7. Change "Employment" to "Payroll Employment"; once LED has data on self-employed workers, have an indicator called "Payroll employment + self employment" so data users will be able to compare the indicators over time.

8. Hires Recalls (NEmpHirR) **–** Need clarity around the definition because the meaning of "recall" can differ by industry. An alternative name could be "Rehire" and it could be more specific if the title were, "Rehired within 4 quarters."

Other Improvements and Suggestions:

1. Distribution of earnings – this was a very popular suggestion. This would allow users to better understand which income groups are experiencing job churning. It also would serve as a surrogate to occupation data, and so help data users get a better sense of job quality.

2. Data Profiles – users would like to be able to click on simple narrative reports that use the LED data to describe trends in a specific area, such as the "automated demographer" narrative profiles from the ACS web page.

3. Provide more hands-on training.

4. Provide documentation that explains:

   ➢ The comparability of the LED data to other measures. For example, how LED employment estimates compare with BLS employment numbers, and estimates from Job Openings and Labor Turnover (JOLT) and Business Employment Dynamics.

   ➢ Suggestions for how to use data in place of, or in combination with other datasets (e.g., Census documentation on differences between CPS and ACS poverty rates and appropriate uses for each).

5. Market LED data as an extension of other existing data sources.

6. Include population data, so user can construct employment/population ratios.

7. Market to and train new groups of potential LED customers, including human resources planners, businesses, strategic planners.

8. Work with researchers to demonstrate how data can be used by healthcare professionals, HR professionals, etc. to better understand the local labor market.

9. Provide a more refined list of age groups, specifically: 62 and over (useful because of social security) and 65 to 69 years (useful because of the increase in the retirement age). In addition, provide an older worker template.

10. Clarify job churning and turnover definitions.

11. Take steps to help clarify quality of job.

12. Seek to include all 50 states in the LED program to enable national and regional analysis.

State and Local User Workgroup

This workgroup spent little time on definitions and instead focused on overall needs, particularly related to analysis and building a users' community. They did not vote.

1. There is a need to allow users to produce data for meaningful regions. This might be sub-county data, industrial corridors, enterprise zones, or others. The On The Map tool will help for those states that participate, but what of the others?

2. The group talked briefly about definitions. They liked Local Employment Dynamics for the name of the program. They also felt that questions should key the names and definitions, e.g. "do you want to know which industries have created the most new jobs?" This group also liked the idea of changing "turnover" to "job churning."

3. There was some discussion about the need for state Labor Market Information offices to start using LED systematically. They thought LED products should focus on state and local end-user needs more so than on just academics and researchers trying to answer their own questions.

4. The group felt very strongly about the importance of forming a user group; one could be formed as a result of the workshop. They are willing to register on the national or state web pages and want to receive notification of new data or templates. They also want users to share "best practices" and "templates." There was a sense that "if you build it they will come."

5. The interface of the program needs to be more "jazzy," eye catching, and appealing.

6. There is a need for more training workshops, not just about the website and data content, but also on how to analyze the data.

Next Steps

1. Establish internal meetings of LED staff to address user feedback in light of time and budget resources. Provide feedback to conference attendees about decisions so they will know their efforts were valued.

2. Establish a technical team to address technical issues of program developers and LMI partners.

3. Work with state partners to better understand and implement suggested changes.

4. Update progress and revisit future issues at the state workshop in January 2006. Keep conference attendees and other data users informed.

Workshop Feedback

After the workshop, participants were e-mailed a feedback form. Thirteen responses were received. An average score for each question is provided in Appendix C. In summary:

- Knowledge of the QWIs prior to the workshop was relatively low. (On a scale of 1-7, with 7 being the highest, prior knowledge of QWI web tool averaged 3.8, of the full array of 26 QWIs, 2.3.)

- The current value of the QWI web tool is moderate (averaged 4.1).

- The value of the web tool would rise significantly to a high level if the tool were modified in light of suggestions offered at the workshop (average 5.7).

- The workshop was rated high in terms of improving participant understanding of the QWIs and the web tool (6.0) and generating valuable ideas for improving them (5.8).

- Participants are quite willing to participate in a second workshop to evaluate the next iteration of the QWIs and web tool (5.7).

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Appendix A: LED Workshop Participant List

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Appendix B: LED Workshop Voting for QWI Indicators

i = individual worker; t = quarter; j = specific employer
Indicators in Bold are in the Current QWI

Votes	Employment Indicators (indicator name)	Description	Technical definition[3]	Types of questions QWI answers
22	**Employment -(also called Beginning of Quarter Employment) (Emp)**	Estimate of the total number of jobs[4] on the first day of the reference quarter. *Beginning-of-quarter employment counts are similar to point-in-time employment measures, such as the QCEW*	A worker *i* is beginning-of-quarter employed with employer *j* in *t* if worker has positive earnings at *j* in *t-1* and *t*.[5]	-Top area industries? -Who is filling what jobs? Who are the top employers of young workers? older workers? female workers? -Where are similar local economies?
4	Employment -End-of-quarter (EmpEnd)	Estimate of the number of jobs on the last day of the quarter.	A worker *i* is end-of-quarter employed with employer *j* in *t* if worker has positive earnings at *j* in *t* and *t+1*.	Same as for beginning-of-quarter employment, but about workers employed on the *last* day of the quarter.
14	Employment -Stable Jobs (also called Full Quarter Employment) (EmpS)	Estimate of stable jobs, i.e., the number of jobs that are held on both the first and last day of the quarter. *This is*	A worker *i* is full quarter employed with employer *j* in *t* if worker has positive earnings at *j* in *t-1*, *t*, and *t+1*.	Same as for employment measures above, with emphasis on workers in more stable jobs.

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[3] For a more rigorous mathematical treatment of the construction of the QWI employment, job flow, non-employment and earnings statistics see Chapter 7 of LEHD Technical Paper TP-2002-05, The Longitudinal Employer Household Dynamics Program Employment Dynamics Estimates Project Versions 2.2 and 2.3, available at: http://lehd.dsd.census.gov/led/library/techpapers/tp-2002-05-rev1.pdf

[4] A 'job' in the QWI refers to a match between the records of a worker and a firm or establishment and shows the worker has wages in the specified quarters.

[5] QWI statistics are undefined in any quarter where there are not enough job records in the time series to compute the statistic. Beginning-of-quarter employment is undefined only in the first quarter of data available for any state (as the data for t-1 is unavailable). Correspondingly, end-of-quarter employment is undefined in the last quarter of available data.

		often, but not necessarily, the same as being employed for a full quarter (e.g., an on-call substitute teacher may have earnings in each of 3 consecutive quarters but intermittently).		
4	Employment - Reference Quarter: Counts (EmpTotal)	This is a count of people employed in a firm at *any* time during the quarter. It is *not* a count of jobs.	A worker *i* is flow employed with employer *j* in *t* if worker has positive earnings at *j* in *t*.	This measure is provided for informational purposes for interested state partners. For total employment we recommend using Beginning-of-quarter employment.

Votes	Employment Change Indicators (Indicator name)	Description	Technical definition	Types of questions QWI answers
11	Hires - All (HirA) (also called "accessions")	Estimated number of workers who started a job in the specified quarter.	A worker i is defined as acceding to employer j in t if has positive earnings at j in t but no earnings from j in t-1.	-What industries are hiring the most workers and in what geographic areas? -Which industries are hiring older workers? Young workers?
10	**Hires - New (HirN)**	Estimated number of workers who started a new job. More specifically, total hires that, while they worked for an employer in the specified quarter, were not employed by that employer in any of the previous four quarters.	A worker i is defined as a new hire for employer j in t if has positive earnings at j in t but no earnings from j in t-1, t-2, t-3, t-4.	Same as above but refers to newly hired workers.
3	Hires - Recalls (HirR)	Estimated number of workers who returned to the same employer where they had worked within the previous year. Total hires that are not new hires (i.e. they had some earnings at same establishment in one or more of the quarters t-2, t-3, t-4).	A worker i is defined as a recall for employer j in t if has positive earnings at j in t but no earnings from j in t-1, and positive earnings at j in one or more of the quarters t-2, t-3, t-4.	-What industries are most likely to recall workers? -Of those recalled, are younger or older workers more likely to be recalled? Men or women?
6	Hires - All stable jobs (also called Flow into	Estimated number of	A worker i is defined as a flow into full-	-Which industries are hiring stable

		Full-Quarter Employment) (HirAS)	workers that started a job that became a stable job. It is the estimated number of total workers who began work with an employer in the last quarter and are full-quarter employed in the current quarter.	quarter employment with employer j in t if has positive earnings at j in t, t-1 and t+1 but no earnings from j in t-2.	workers?
11		Hires New stable jobs (also called Full-Quarter New Hires) (HirNS)	Estimated number of workers who started a job that they had not held within the past year and the job turned into a stable job. Total number of workers who were new hires by the employer in the last quarter and are full-quarter employed in the current quarter.	A worker i is defined as a full quarter new hire with employer j in t if has positive earnings at j in t, t-1 and t+1 but no earnings from j in t-2, t-3, t-4, and t-5.	-Same as Flow into Full-Quarter Employment, but with emphasis on new hires.
13		**Separations (Sep)**	Estimated number of workers whose job ended. Total number of workers that separate from an employer in the specified quarter, that is, the worker was employed in the specified quarter but not in a	A worker i is defined as separating from employer j in t if has positive earnings at j in t but no earnings from j in t+1.	-What types of workers are leaving jobs? -What types of industries are workers leaving?

		subsequent quarter.		
10	Separations - stable jobs (also called Flow out of Full-Quarter Employment) (SepS)	Estimated number of workers whose stable jobs ended. It is the total number of workers full-quarter employed in previous quarter but leave their employer in the current quarter.	A worker *i* is defined as a flow out of full-quarter employment with employer *j* in *t* if has positive earnings at *j* in *t, t-1 and t-2* but no earnings from *j* in *t+1*.	-What industries are stable workers leaving?
8	**Turnover Stable Jobs (TurnOvrS)**	Turnover of workers in the stable workforce. It is an average of the number of new workers and number leaving. That average is divided by average employment at the firm to obtain a turnover rate.	One half times the sum of full-quarter accessions and full-quarter separations, divided by the number of full-quarter employees.	-What industries have the highest turnover in workers? The lowest? -What industries have the lowest and highest turnover rates for older and for younger workers? For men compared with women?

Votes	Job Growth Indicators (indicator name)	Description	Technical definition	Types of questions QWI answers
13	**Firm Job Gains (FrmJbGn)**	Estimated number of jobs gained at firms that either opened or increased in employment. This compares beginning of quarter employment with end of quarter employment and displays only the job gains.	End-of-quarter Employment in t minus Beginning-of-quarter Employment in t, or 0, whichever is larger	-Regions with most new jobs-Industries most likely to create jobs
9	Firm Job Loss (FrmJobLs)	Estimated number of jobs lost at firms that either closed or declined in employment. This compares beginning of quarter employment with end of quarter employment and displays only the job losses.	End-of-quarter Employment in t minus Beginning-of-quarter Employment in t, or 0, whichever is smaller, (reported in absolute value).	-Regions where job loss is highest -Industries most likely to contract employment.
3	Firm Gain stable jobs (FrmJbGnS)	Estimated number of full-quarter jobs gained at firms.	Full-quarter employment in t minus full-quarter employment in t-1, or 0, whichever is larger.	- Same as for job creation but the focus is on stable jobs
1	Firm Loss stable jobs (FrmJbLsS)	Estimated number of full-quarter jobs lost at firms.	Full-quarter employment in t minus full-quarter employment in t-1, or 0 whichever is smaller (reported in absolute value).	- Same as for job destruction but the focus is on stable jobs
13	**Firm job change: net change (FrmJbC)**	Difference between firm job gain and firm job loss.	End-of-quarter employment in t minus beginning-of-quarter employment in t	-Regions where employment growth is fastest. -Top expanding industries.
2	Firm change stable jobs (FrmJbCS)	Net growth in stable jobs. Change in net estimate of	Full-quarter employment in t	- Same as for net job flows but the

		full-quarter jobs at firms	minus full-quarter employment in $t-1$.	focus is on stable jobs

Votes	Earnings Indicators (indicator name)	Description	Technical definition	Types of questions QWI answers
13	**Employees stable jobs: Average monthly earnings (EarnS)**	Average monthly earnings of employees with stable jobs (i.e., worked with the same firm throughout the quarter).	Sum of quarterly earnings at j in t for all i who are full quarter employees, divided by the number of full quarter employees at j, divided by three (number of months in a quarter)	-Highest and lowest paying industries in an area. -Average earnings for employees in a particular industry
5	Employees end-of-quarter: Average monthly earnings (EarnEnd)	Average monthly earnings of employees who worked on the last day of the reference quarter.	Sum of quarterly earnings at j in t for all i who are end-of-quarter employees, divided by the number of end-of-quarter employees at j, divided by three.	-Similar to average earnings in stable jobs but includes jobs that lasted less than the entire quarter. -Because this includes people who did not work the entire quarter, avg. monthly earnings tend to be lower than for full-quarter workers
16	Hires All stable jobs: Average monthly earnings (EarnHirAS)	Avg. monthly earnings for workers who started a job that turned into a stable job. That is, average monthly earnings of full-quarter employees who started working with a firm in previous quarter.	Sum of quarterly earnings at j in t for all i who are accessions to full-quarter status employees, divided by the number of accessions to full-quarter status at j in t, divided by three.	-What are average starting wages for different types of workers in a particular industry?
5	**Hires New stable jobs: Average monthly earnings (EarnHireNS)**	Average monthly earnings of newly stable (i.e., full-quarter employees who were new hires	Sum of quarterly earnings at j in t for all i who are full-quarter new hires, divided by the number of full-quarter new hires at j in t, divided by three.	-What are the best paying industries for new hires? In what regions can new hires get the best pay, on average?

		with a firm in the previous quarter.		
2	Separations stable jobs: Average monthly earnings (EarnSepS)	Average monthly earnings of separations from full-quarter status.	Sum of quarterly earnings at j in t for all i who are separations from full-quarter status in $t+1$, divided by the number of separations from full-quarter status at j in $t+1$, divided by three.	-What were averages wages for workers that separate from specific industries in different regions?
1	Separations: Average change in monthly earnings (EarnSepC)	Change in average monthly earnings for workers who leave an employer.	Sum of earnings for i over all j who employ i in $t+1$ minus the sum of earnings for i over all j who employ i in t, for all i who separate from j in t, divided by the number of separations from j in t, divided by three.	-To help target workers for training programs, what industries are associated with the smallest and the largest average earning losses?
10	Hires All: Average change in monthly earnings (EarnHirAC)	Change in avg. earnings for workers who started a job in the reference quarter *summed across all employers* compared with the wages *summed across all employers* in the previous quarter.	Sum of earnings for i over all j who employ i in t minus the sum of earnings for i over all j who employ i in t-1, for all i who separate from j in t, divided by the number of separations from j in t, divided by three.	-Which industry accessions are associated with the highest average earnings gains for workers?
11	Total Quarterly Payroll (Payroll)	Total quarterly payroll for all jobs	Sum of all earnings for all jobs in a quarter.	- What are the largest industries in my geographic area in terms of total payroll?

Demographic and Timing Indicators	Definition	Technical Definition	Types of questions QWI answers
Standard Industrial Classification (SIC) codes	Standard Industrial Classification code at the SIC division level, as well as the 2, 3, and 4-digit SIC level.	See SIC documentation[6] for definitions of various SIC codes.	- Top 10 area industries. - Industries associated with greatest earnings growth for new hires.
NAICS Industry codes	North American Industry Classification System (NAICS) code at all NAICS levels.	See NAICS documentation for definitions of NAICS codes.[7]	- Similar to SIC but for NAICS industry classifications.
Ownership Code	Public or private	A00=All (1-5) A05=All Private (5)	- Use to separate employment for private sector employers.
Year	Year	4-digit calendar year	- Changes in employment growth over time
Quarter	Quarter	1-digit quarter of estimate	-Shows the cyclical nature of average earnings over a year
County	County	3-digit county FIPS code	-Counties with fastest employment growth
Metro	Metropolitan Statistical Area (MSA)	4-digit FIPS MSA code	- Same as for county, but at MSA-level geography.
WIB	Workforce Investment Board (WIB)	WIB-defined level of geography.	- Same as for county, but at WIB-level geography.
Sex	Men, women, or both	0=Both 1=Male 2=Female	- Best paying industry for demographic group such as older women
Age group	Denotes which of eight age categories are covered by the data or if the data cover all ages.	0=14-99 years 1=14-18 years 2=19-21 years 3=22-24 years 4=25-34 years 5=35-44 years 6=45-54 years 7=55-64 years 8=65-99 years	-Top industries for older workers or for women workers -Best paying industry for an age group such as men 25-34 years old.

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[6] An online Standard Industrial Classification Manual is available at: http://www.osha.gov/pls/imis/sic_manual.html
[7] An online NAICS manual is available at: http://www.census.gov/epcd/www/naics.html

Appendix C: Summary of Feedback Form Ratings

Workshop: Increasing the Applicability of Local Employment Dynamics

November 16, 2005
The Brookings Institution
Washington, DC

Instructions:
- *The following is a Microsoft Word-based form. To move from field to field, use the mouse or the TAB key.*
- *When prompted for "Rating", please use a scale of 1 to 7 to answer (7 highest, 1 lowest)*
- *Use the text boxes to answer open-ended questions.*
- *Once complete, please email the form, with your responses back to **lmorales@brookings.edu**.*

Name	Organization Name	
1) Prior to attending the workshop, what was your familiarity with:		
a. the Quarterly Workforce Indicators (QWI) web tool?	3.8	
b. the full array of 26 QWIs?	2.3	
2) How valuable do you think the current version of the QWI web tool is to your work and that of your organization?	4.1	
3) a. If the Census Bureau were to modify the QWI web tool in light of suggestions provided at the workshop by you and others, how valuable do you think such a QWI web tool would be to your work and that of your organization?	5.7	
b. Why?		
c. What do you consider the three most important modifications to be made?		
4) How would you rate the workshop in terms of:		
a. improving your understanding of the QWIs and the web tool?	6.0	
b. generating valuable ideas for improving the QWIs and the web tool?	5.8	
5) What is your willingness to participate in a second workshop to evaluate a subsequent iteration of the QWIs and web tool?	5.7	