

**JOINT LEGISLATIVE OVERSIGHT COMMITTEE  
ON UNEMPLOYMENT INSURANCE**

**FEBRUARY 5, 2014**



LABOR & ECONOMIC  
ANALYSIS DIVISION

**NORTH  
CAROLINA**

DEPARTMENT OF COMMERCE

# MEASURING THE ECONOMY

- Each month a multitude of information is released regarding the status of the economy
- Information is released by national and state governmental entities.
- Information includes Key Economic Indicators of **EMPLOYMENT, UNEMPLOYMENT AND OTHER LABOR FORCE CHARACTERISTICS**
- Various Geographies
  - **NATIONAL**
  - **STATE**
  - **SUB STATE**

# NATIONAL LABOR FORCE STATISTICS

- **CURRENT POPULATION SURVEY (CPS)**
  - National Monthly Household Survey Conducted by the U.S. Census Bureau for the Bureau of Labor Statistics (BLS)
    - Based on Residence
    - 60,000 Households
    - 110,000 Individuals
  - Provides a Range of Information (Statistical Estimates)
    - Working Aged Population (16 years or older)
    - Number of People in the Labor Force
    - Number of People who are Employed
    - Number of People who are Unemployed
    - Persons Not in the Labor Force
    - Other Labor Force Characteristics

# CURRENT POPULATION SURVEY (CPS)

- Basic Concepts
  - **REFERENCE WEEK**
    - Typically the Week Containing the 12<sup>th</sup> day of the month
  - **WORKING AGED POPULATION**
    - Aged 16 and Over
    - Civilian
    - Non Institutionalized
  - **EMPLOYED**
    - People with jobs
  - **UNEMPLOYED**
    - People who are jobless,
    - Looking for jobs, and
    - Available for work
  - **LABOR FORCE**
    - Employed
    - Unemployed

# CURRENT POPULATION SURVEY (CPS)

## ■ EMPLOYED

- Individuals who worked for pay or profit, **OR**
- Self employed, **OR**
- Worked at least 15 unpaid hours in a family business, **OR**
- Those temporarily away from work due to reasons such as illness, vacation, training, or labor dispute, etc.

## ■ UNEMPLOYED

- Individuals who are without a job, **AND**
- Are available for work, **AND**
- Actively looked for work sometime during the four weeks ending in the reference week.

## ■ LABOR FORCE

- Employed
- Unemployed

# CURRENT POPULATION SURVEY (CPS)

- **NOT IN THE LABOR FORCE**
  - People who are neither employed or unemployed
  - People who are not available and/or not actively looking for work
    - Retirees
    - Homemakers
    - Discouraged Workers

# SEASONAL ADJUSTMENT

- There are seasonal fluctuations that occur in both employment and unemployment and tend to reflect:
  - Seasonal weather patterns (construction, tourism, etc.)
  - Hiring patterns (holiday season, summer vacation, etc.) and
  - Occur year after year.
- These variations make it difficult to tell whether changes are due to normal seasonal patterns or to changing economic conditions.
- Statistical Techniques are utilized to deal with these limitations.
  - Use past history of a series to identify seasonal patterns and to calculate the size and direction of the fluctuations. These patterns are utilized to create a seasonal factor that is applied to the estimates. This helps to smooth out the seasonal fluctuations so that the data can be compared from month to month.

# UNEMPLOYMENT RATE

- **NATIONAL UNEMPLOYMENT RATE**
  - **Bureau of Labor Statistics (BLS)**
  - **Produces and Publishes the Estimates**
  - Released Typically on the 1<sup>st</sup> Friday of the Month
  - Statistical Estimates Derived from Information Obtained through the CPS
  - Compiled on a Monthly Basis
  - Seasonally Adjusted and Not Seasonally Adjusted

$$UR = \left( \frac{\textit{Number of Persons Unemployed}}{\textit{Labor Force (Unemployed + Employed)}} \right) \times 100$$



# OTHER LABOR FORCE MEASURES

- **LABOR FORCE PARTICIPATION RATE**

$$\text{LFP} = \left( \frac{\textit{Labor Force}}{\textit{Civilian Non Institutionalized Population}} \right) \times 100$$

- **EMPLOYMENT TO POPULATION RATIO**

$$\text{EPR} = \left( \frac{\textit{Number of Persons Employed}}{\textit{Civilian Non Institutionalized Population}} \right) \times 100$$

# SUB NATIONAL LABOR FORCE STATISTICS

- **CPS Sample is too small to yield reliable sub-national monthly estimates**
- **LOCAL AREA UNEMPLOYMENT STATISTICS (LAUS) PROGRAM**
  - Cooperative Statistical Program between the States and the Bureau of Labor Statistics
  - Utilizes CPS Concepts and Definitions
    - Labor Force
    - Employed
    - Unemployed

# LOCAL AREA UNEMPLOYMENT STATISTICS (LAUS)

- Statistical Estimation
  - BLS is responsible for the concepts, definitions, technical procedures, and validation of the LAUS methodology and estimates.
  - Utilized by all States
- Geographic Areas
  - Over 7,000 Areas
    - All States, Washington, DC and Puerto Rico
    - Metropolitan Statistical Areas (14 in NC)
    - Micropolitan (26 in NC)
    - Small Labor Market Areas (1 in NC)
    - Counties and County Equivalent (100 in NC)
    - Cities and Towns in New England
    - Cities and Towns with Populations over 25,000 (42 in NC)
    - City Parts

# LAUS METHODOLOGY

- Monthly estimates for state and sub-state areas
- Three different estimation methods
  - Statistical Time Series Models – States and Select Metro areas
  - Handbook Estimation Method – Labor Market Areas
  - Disaggregation Method – Counties, Cities and Towns
- Different Input data based on estimation methods
  - CPS employment and unemployment estimates
  - Current Employment Statistics (CES) employment estimates
  - Quarterly Census of Employment and Wages (QCEW) employment counts
  - Census Data
  - UI Claims data
  - Railroad Claims

# STATE MODEL ESTIMATES

- Statistical Model
  - Inputs
    - CPS estimate of Employed
    - CPS estimate of Unemployed
    - Current Employment Statistics (CES) estimate of Total Nonfarm Employment
    - Unemployment Insurance Claims
      - Regular UI Continued Claims without earnings.

# STATE ESTIMATES

- **LEAD Staff enter information into BLS system**
  - CES Total Nonfarm Employment
  - Total Number of Regular UI Continued Claims without Earnings
- BLS
  - Utilizes state inputs along with the CPS information
  - Calculates estimates using a statistical model
  - Provides Estimates to State Staff
  - **Smooth Seasonally Adjusted and Not Seasonally Adjusted Estimates**
    - In addition to seasonal adjustments, additional adjustments (Smoothing) are utilized to help adjust for volatility in monthly estimates
    - **Employment**
    - **Unemployment**
  - **Estimates are used to produce**
    - **Labor Force**
    - **Unemployment Rate**
  - Additional Information from CPS

# LABOR MARKET AREA ESTIMATION

- **BLS HANDBOOK METHOD**
  - **LEAD STAFF UTILIZE BLS SYSTEMS TO COMPLETE THE PROCESSING**
  - **Metropolitan (14 in NC) and Micropolitan (26 in NC) Areas**
  - **Multi-county area (1 in NC)**
  - **Remaining Counties (27 in NC)**
- **Building Block Approach**
  - Aggregations of components using data to derive
    - Employment
    - Unemployment
  - **Inputs**
    - Information from CPS
    - Employment Information from CES and QCEW
    - Census – self employed, unpaid family workers
    - Unemployment Insurance Continued Claims without earnings
      - Regular UI, Unemployment Compensation for Federal Employees (UCFE) and Railroad
    - Unemployment Insurance Exhaustions
  - **Estimates are adjusted to Statewide Model Estimates**
- **Not Seasonally Adjusted Estimates**
  - Metropolitan, Micropolitan, Multicounty
- **Smooth Seasonally Adjusted Estimates**
  - Metropolitan Areas

# ESTIMATES BELOW LABOR MARKET AREA

- **BLS DISAGGREGATION METHOD**
- **LEAD Staff Utilize BLS Systems to Complete the Processing**
- **Inputs**
  - Employment and Unemployment Estimates from LMA Estimates
  - Census Employment and Population Information
  - Unemployment Claims
- **UTILIZED TO PRODUCE ESTIMATES FOR THE INDIVIDUAL COMPONENTS THAT COMPRISE THE MULTI-COUNTY METRO AREAS AND CITIES AND TOWNS**
  - Counties
  - Cities
  - Towns
- **BLS Staff Reviews Processing and Approves Estimates Prior to Release**



# LAUS MONTHLY REVISIONS

- Monthly Revisions
  - Each month State and Sub-state LAUS estimates undergo a revision – release a preliminary estimate of the current month and a revised estimate of the previous month
  - This allows for updating of any information from CES and any update in UI Claims information

# ANNUAL PROCESSING

- Each year All State and Sub-state estimates undergo a major revision
  - Update inputs from CES, QCEW, Claims, and Census
  - Review by State and BLS analysts
  - Re-estimate Previous 5 year estimates (2009-2013)
  - Largest Revision for the last 2 years (2012-2013)
  - Annual Processing is carried out utilizing BLS systems and all estimates are approved by BLS prior to Publication
  - Re-release Estimates

# PUBLICATION

- **BLS Monthly Release**
  - **National Employment Situation**
    - National Estimates
    - Labor Force, Employment, Unemployment, Unemployment Rate and other Related Labor Force Statistics
    - Industry Employment information from CES (Jobs Numbers)
    - Typically 1<sup>st</sup> Friday of the Following Month – 8:30 AM
    - Data is also released into BLS Website Database – LABSTAT
  - **Regional and State Employment and Unemployment**
    - Labor Force, Employment, Unemployment, Unemployment Rate and Other Related Labor Force Statistics
    - Industry Employment information from CES (Jobs Numbers)
    - Typically 14 days after National Release – 10:00 AM
      - Due to Annual Processing January and February Releases both completed in March
    - Data is also released into BLS Website Database – LABSTAT

# PUBLICATION

- **BLS Monthly Release**
  - **Metropolitan Area Employment and Unemployment**
    - **Labor Force, Employment, Unemployment, Unemployment Rate and Other Related Labor Force Statistics**
      - Metropolitan, Micropolitan, Counties, Cities and Towns
    - **Typically 10-12 days after Regional and State Release – 10:00 AM**
    - **Data is also released into BLS Website Database – LABSTAT**

# PUBLICATION

- **State Release Schedule**
- **As part of the Cooperative Agreement**
  - **States Post Release Schedule on their Website and Make the Schedule available to the Public**
    - **State Release Typically 14 days after National Release – 10:00 AM**
      - Due to Annual Processing January and February Releases both completed in March
      - Data is also posted on Commerce Website
    - **County Release Typically 10-12 days after State Release – 10:00 AM**
      - Data is also posted on Commerce Website



# LEAD PUBLICATIONS

- **Monthly**
- **State Press Release**
  - **North Carolina Labor Market Conditions**
    - Includes Labor Force Statistics
    - Industry Employment Information
    - Claims Information
    - UI Trust Fund Information
  - **NC Today**
    - Compendium of Economic Information
  - **Monthly Economic Newsletter**
  - **Workforce Monthly Activity Report**
    - UI Claims and Benefit Payment Information
    - Labor Force Statistics, Total Nonfarm Employment

# LEAD PUBLICATIONS

- **Monthly**
- **County Press Release**
  - **North Carolina County Labor Market Conditions**
    - Includes MSA and County Labor Force Statistics
    - MSA Industry Employment Information
    - County Claims Information
    - County UI Benefit Payment Information
- **Data is Loaded to Commerce Website**