

RESEARCH UPDATE

Institute for Economic Advancement

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Little Rock's Index Posts 4th Quarter Gain

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The Little Rock–North Little Rock (LR–NLR) economic activity index is 108.6, up 0.7% from last quarter's revised index of 107.8 (Figures 1 and 2).¹ Each of the four indicators that make up the index went up from last quarter:

- Real personal income increased by 1.45%
- Retail sales increased by 0.13%
- Total nonfarm employment increased by 0.27%
- Residential permits increased by 8.76%

Overall, the index indicates increased economic activity for the LR–NLR MSA from last quarter (which had a slight downward revision from the 3rd Quarter index value of 108.7). The index is up from this time last year by 3.1%. This continues as the national economy is slowing down. There continues to be good growth in permit activity; however, the level of permits is still below 2005 and early–2006 levels.

The 1st quarter 2007 release of the LR–NLR Economic Activity Index will be in late–June or early–July of 2007. The standardization factors will be updated at this time (consistent with the annual benchmark revision of The Conference Board).

¹ The Little Rock–North Little Rock MSA consists of six counties. Those counties are Faulkner, Grant, Lonoke, Perry, Pulaski, and Saline.

LR–NLR ECONOMIC ACTIVITY INDEX

Index (4 th Qtr. 2006)	108.6
Q/Q %	+0.7%
Y/Y %	+3.1%

Note: See Technical Appendix on page 2 for calculation details.

Figure 1. LR–NLR Economic Activity Index

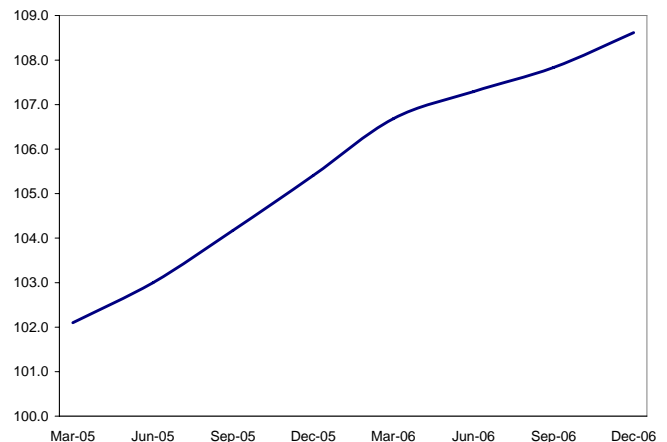
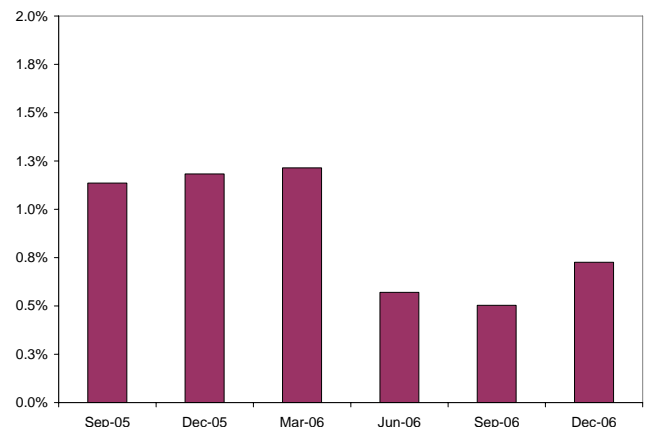


Figure 2. Quarter–to–Quarter % Change



Technical Appendix

In constructing the composite index of economic activity, the methodology outlined by The Conference Board in the Business Cycle Indicators Handbook (<http://www.conference-board.org/>) was employed. This composite index of economic activity is a single summary measure to provide insight into how Little Rock’s economy is doing. That is, an increase in the index indicates an overall expansion in economic activity, while a decrease is indicative of a contraction in economic activity. This index is computed using quarterly data on real personal income, total nonagricultural employment, total residential permits, and total retail sales for the region. The steps are outlined as follows:

The first step is to calculate quarter-to-quarter symmetric changes for each seasonally-adjusted component (i.e., employment, personal income, permits, and retail sales).

$$(1) \quad \Delta x_i = \frac{200 * (x_{i,t} - x_{i,t-1})}{(x_{i,t} + x_{i,t-1})}$$

The next step is to adjust the quarter-to-quarter changes via the component’s standardization factor, s_i .

The adjustment is designed to give each component a similar opportunity to contribute to the change in the index. To equalize the volatility of each component, calculate the inverse of the standard deviation and normalize to one. These standardization factors are updated once a year consistent with the annual benchmark revision of The Conference Board. This annual benchmark also allows for data revisions that occur during the four previous quarters.

A preliminary index using the symmetric percent change formula is calculated recursively. The index starts at a value of 100 in the first quarter of 2000. That is, let $I_1 = 100$ so the second quarter of the preliminary index is calculated as follows:

$$(2) \quad I_2 = I_1 * \frac{(200 + s_2)}{(200 - s_2)}$$

Finally, the index is rebased to average 100 in the base year (i.e., 2004). The preliminary index is multiplied by 100 and divided by the mean of the preliminary levels of the index in the base year.



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