

# **The Demography of Economic Recession Through Labor Force Analysis**

**Yanyi K. Djamba**

**Director, Center for Demographic Research  
Auburn University Montgomery**

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## Purpose of the study and data

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- Analyze the demographic impact of economic recession:
  - Different recessions for different ages?
  - Does fertility increase/or decline during recession?
- Data source:
  - Quarterly Workforce Indicators (QWI) from the Census Bureau's Local Employment Dynamics
  - Fertility data from Alabama Dept. of Public Health



## Variables

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- Economic recession variables:
  - Employment: total employment and net job flows
  - Earnings: average monthly earnings and average new hire earnings
- Demographic variables
  - Age groups: 14-24, 25-34, 35-44, 45-54, 55-64, 65+
  - Total Fertility Rate (TFR)

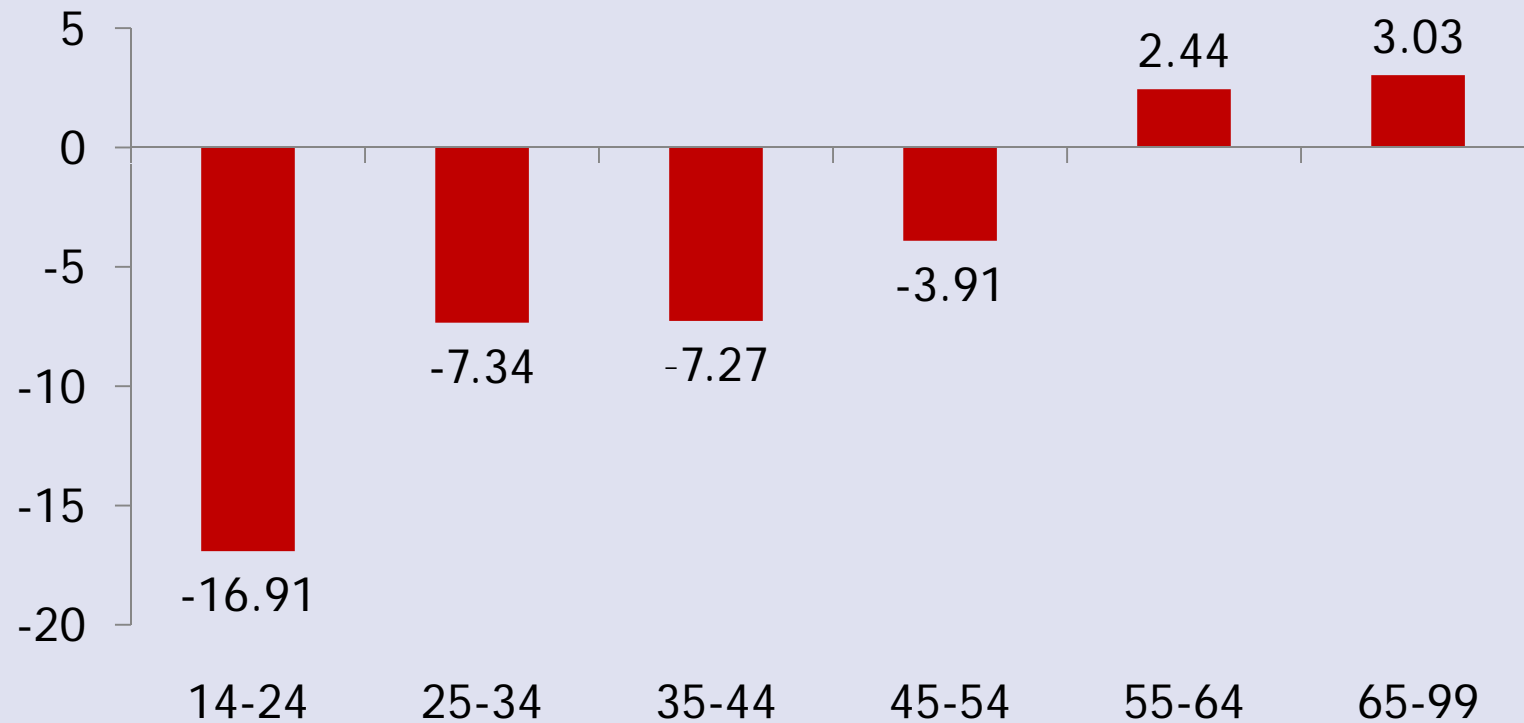


## Methods

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- Comparison years: 2007 and 2009, based on the level of recession (unemployment)
- Impact of recession on various age-groups:
  - Changes in employment between 2007 and 2009.
  - Changes in earnings between 2007 and 2009.
- Impact on fertility:
  - Calculate percent change in TFR between the 2 years
  - Run correlations between QWI variables and fertility

## Change in total employment between 2007 and 2009, Alabama (%)



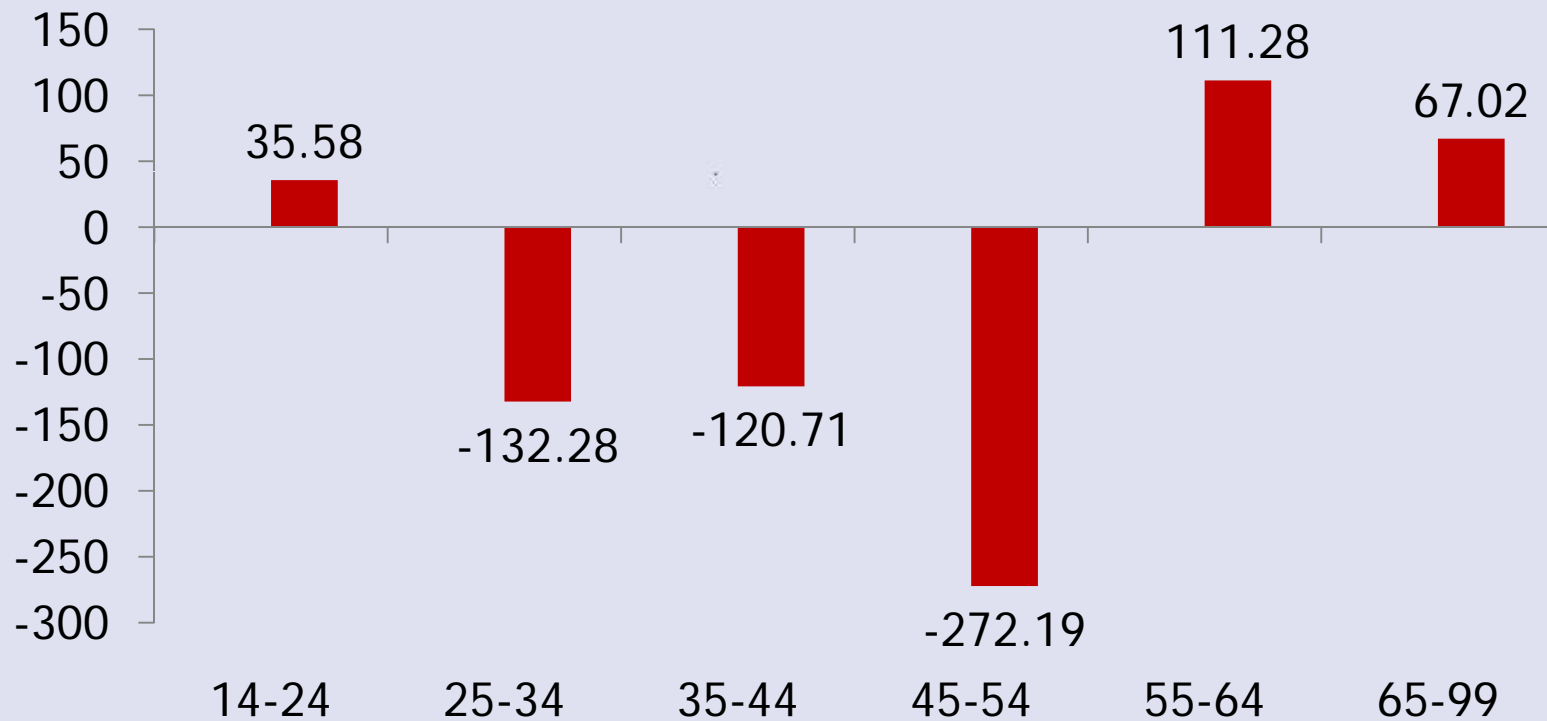


## Change in total employment at county level

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- County with positive change in all age-groups:
  - Bullock.
- Counties with negative changes in all age-groups:
  - Autauga, Barbour, Bibb, Butler, Chambers, Chilton, Clay, Conecuh, Crenshaw, DeKalb, Fayette, Greene, Henry, Lamar, Marion, Morgan, Pickens, Shelby, Tallapoosa, and Wilson.

## Change in net job flows between 2007 and 2009, Alabama (%)





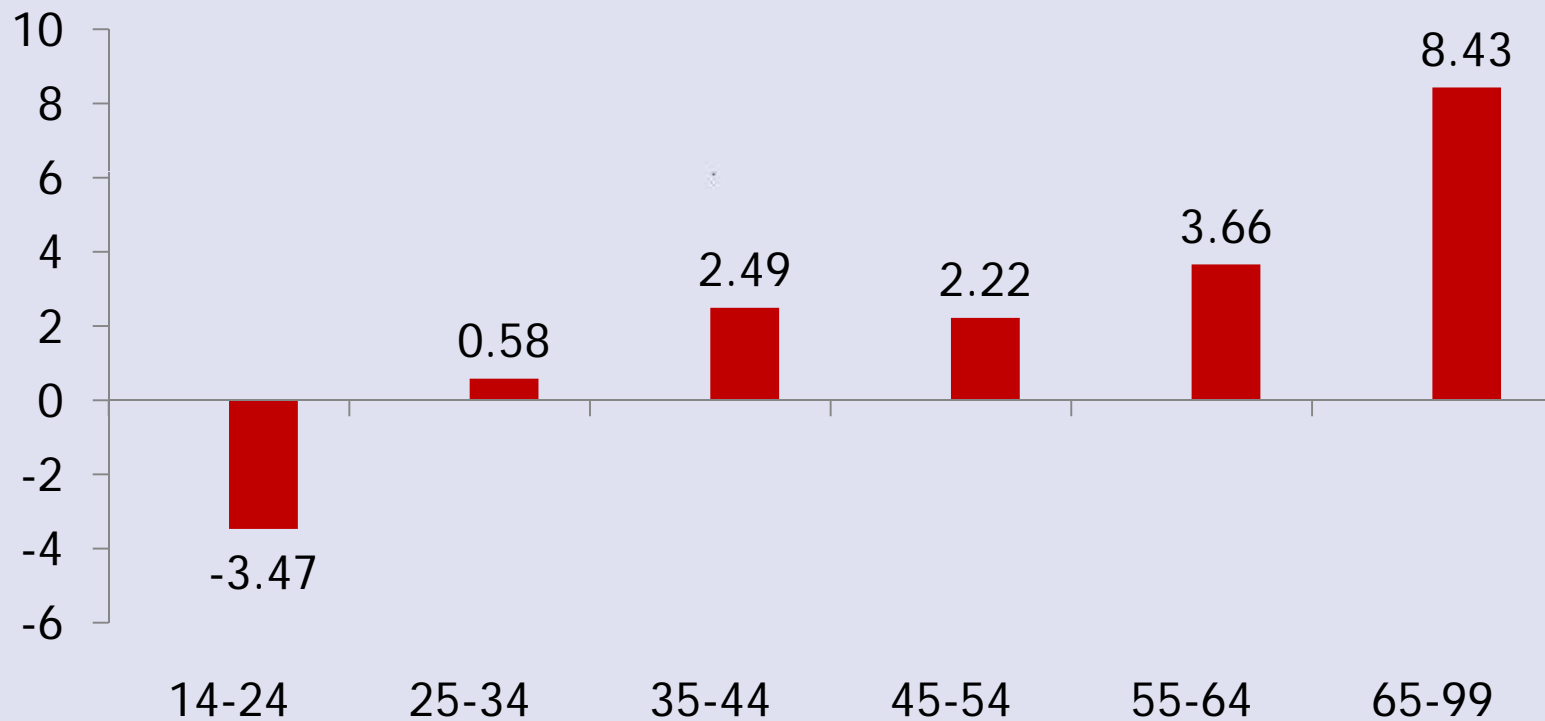
## Change in net job flows at county level

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- County with positive change in all age-groups:
  - None.
- Counties with negative changes in all age-groups:
  - Bibb, Butler, Chambers, Cherokee, Conecuh, Elmore, Franklin, Lauderdale, Lowndes, Macon, Russell, St. Clair, Sumter, and Wilcox.



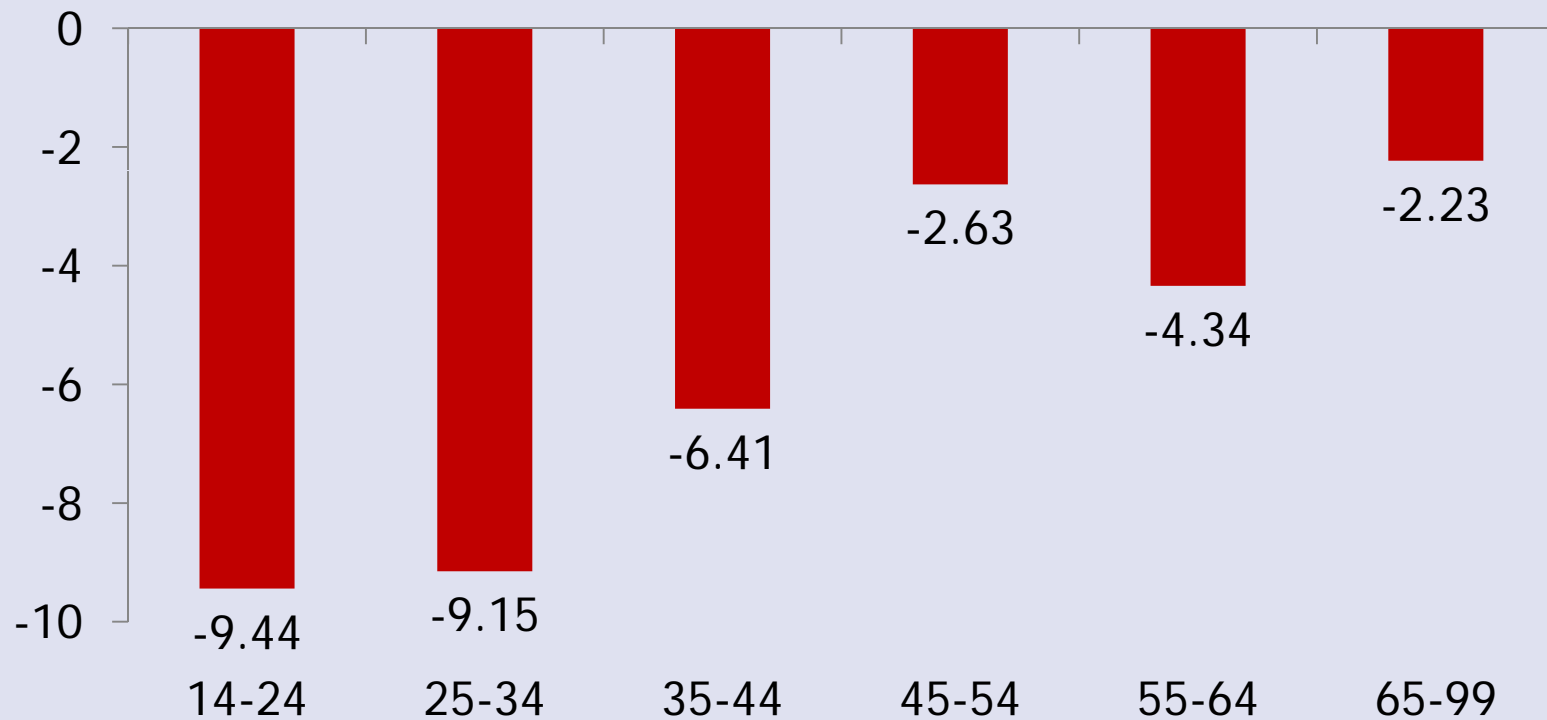
## Change in average monthly earnings between 2007 and 2009, Alabama (%)



## Change in average monthly earnings at county level

- Counties with positive change in all age-groups:
  - Conecuh, Covington, Dale, Dallas, Geneva, Greene, Macon, Pickens, Pike, Sumter, and Washington.
- Counties with negative changes in all age-groups:
  - Choctaw and Lowndes.

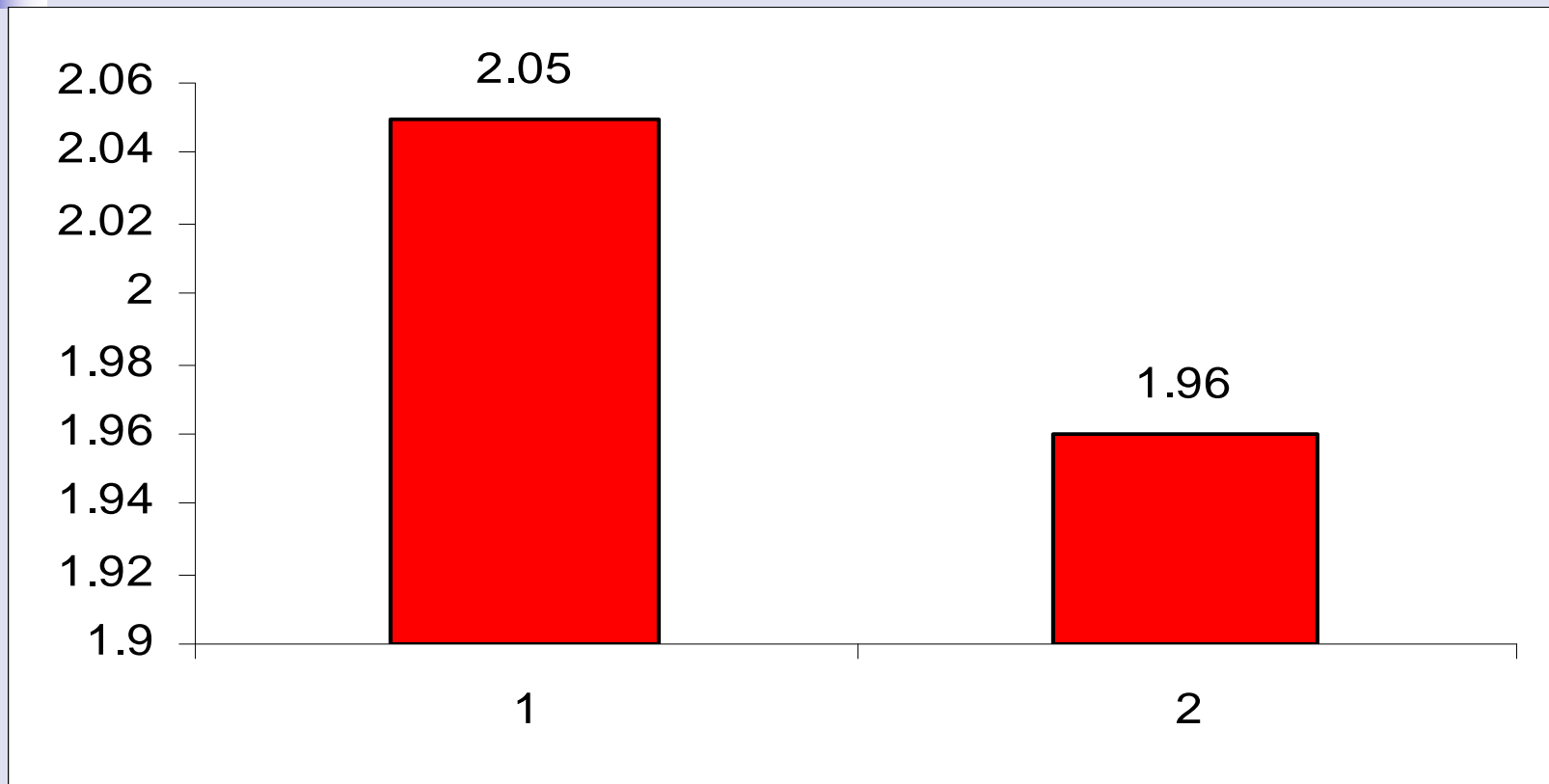
## Change in average new hire earnings between 2007 and 2009, Alabama (%)



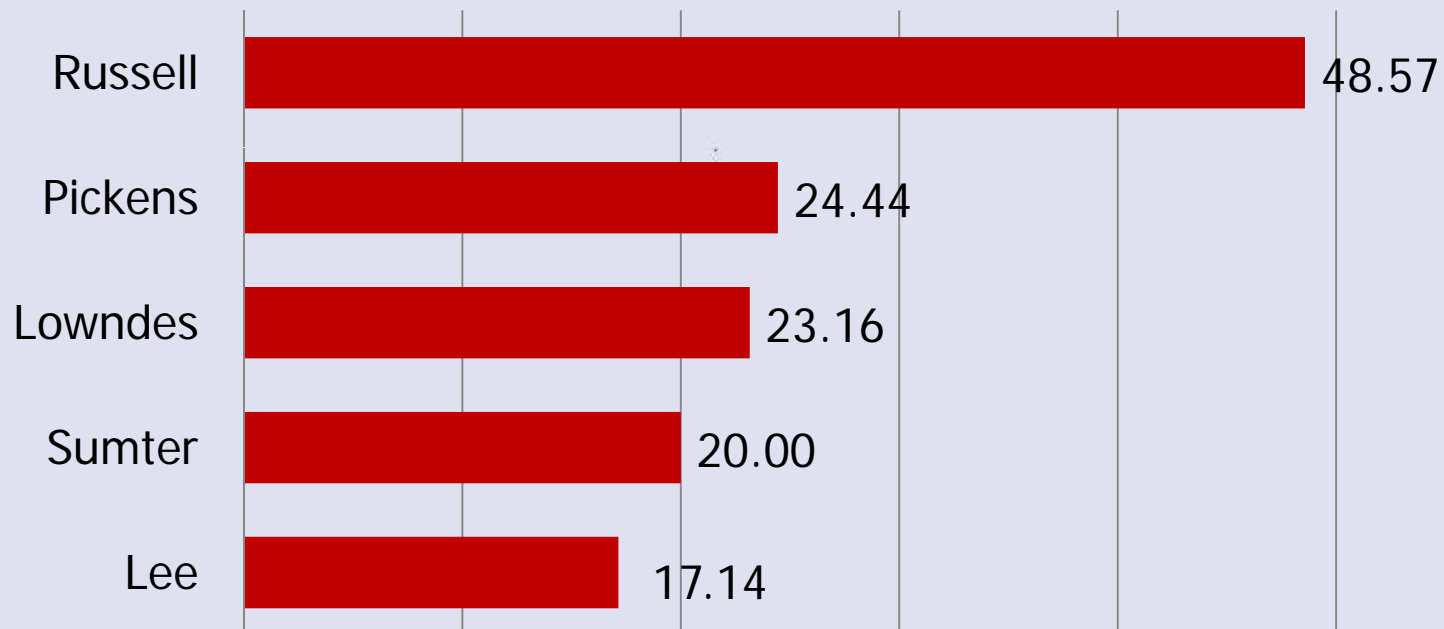
## Change in average new hire earnings at county level

- County with positive change in all age-groups:
  - Dale.
- Counties with negative changes in all age-groups:
  - Chilton, Choctaw, Cullman, DeKalb, Elmore, Jefferson, Limestone, Monroe, and Russell.

## Total fertility rate, Alabama: 2007 (1) & 2009 (2)



## Top five counties with highest increase in total fertility rate, percent change 2007- 2009





## Conclusion

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- These results show that younger workers were disproportionately hit by the economic recession.
- Possible explanations:
  - Employers' preference for older workers
  - Older workers' experience with previous economic recession
- Our results also show that the fertility of Alabama is positively associated with employment opportunities.