



North Carolina

State of Technology

2017 Industry Report

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Methodology

- 87 separate 6-digit NAICS code sectors to characterize the Total Technology Sector
- 65 separate 5-digit Standard Occupational Classification (SOC) codes
- The Total Technology Sector was further broken down into four sub-categories:
 - **Energy Technology**
 - **Environmental Technology**
 - **Life Sciences**
 - **IT, Telecom, Hardware & Software (Tech Core)**

Economic Modeling Specialists International (EMSI), based on the US Bureau of Labor Statistics (BLS) Quarterly Census of Employment and Wages

The Difference Between Tech Industry Workers and Tech Occupational Workers



87 separate 6-digit NAICS

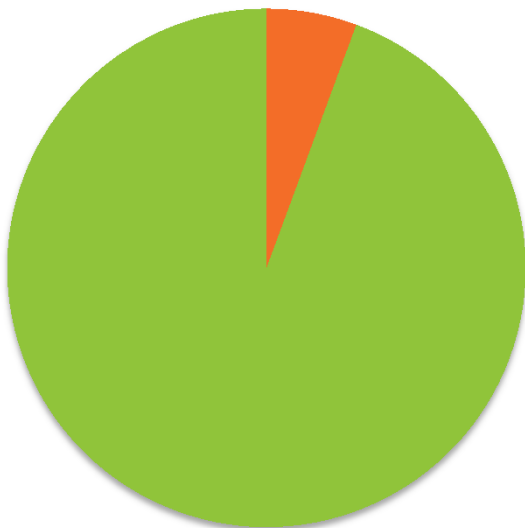
65 separate 5-digit (SOC) codes



Tech Industry in North Carolina

Employees

239,687



5.8%

Establishments

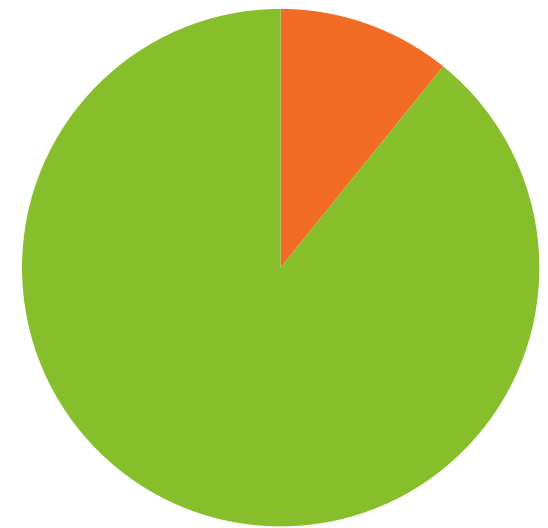
18,224



6.8%

Wages

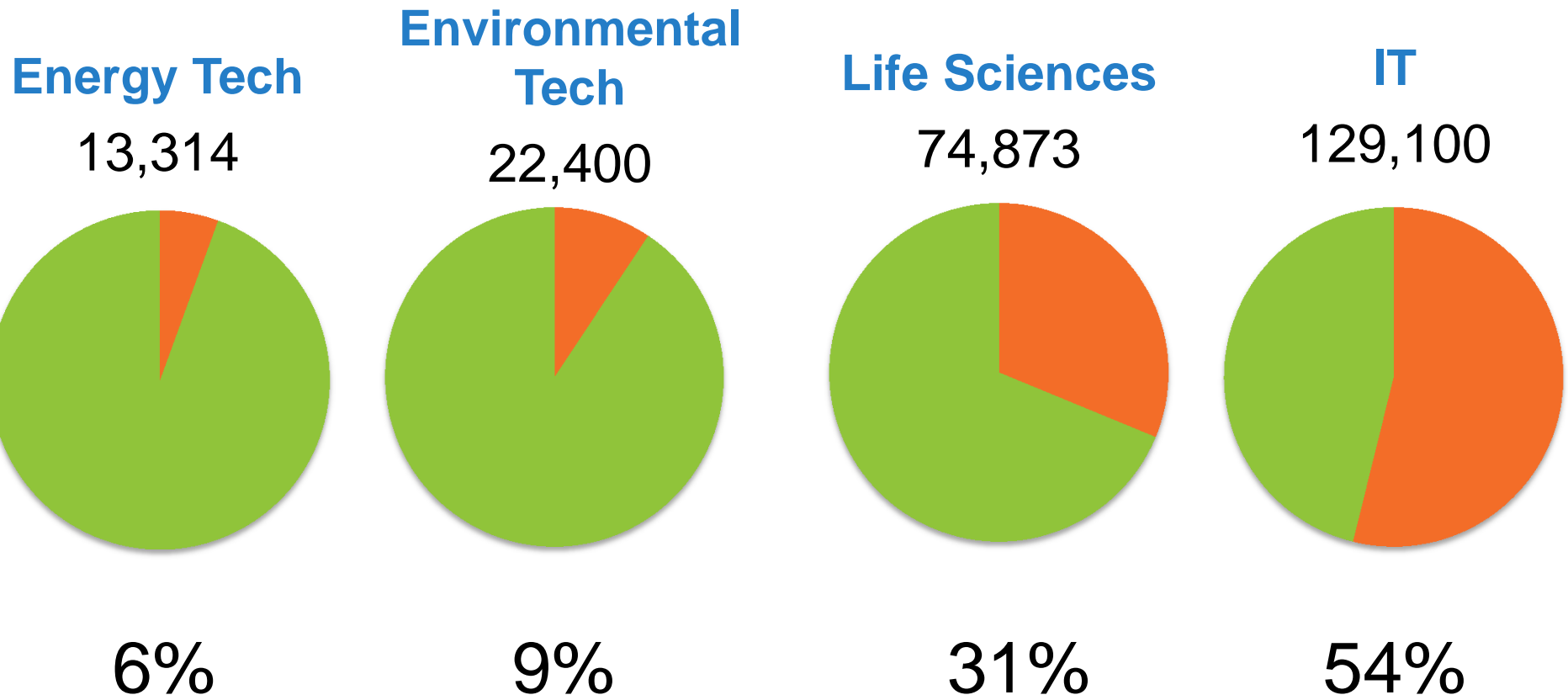
\$23,817,000,000



11.1%

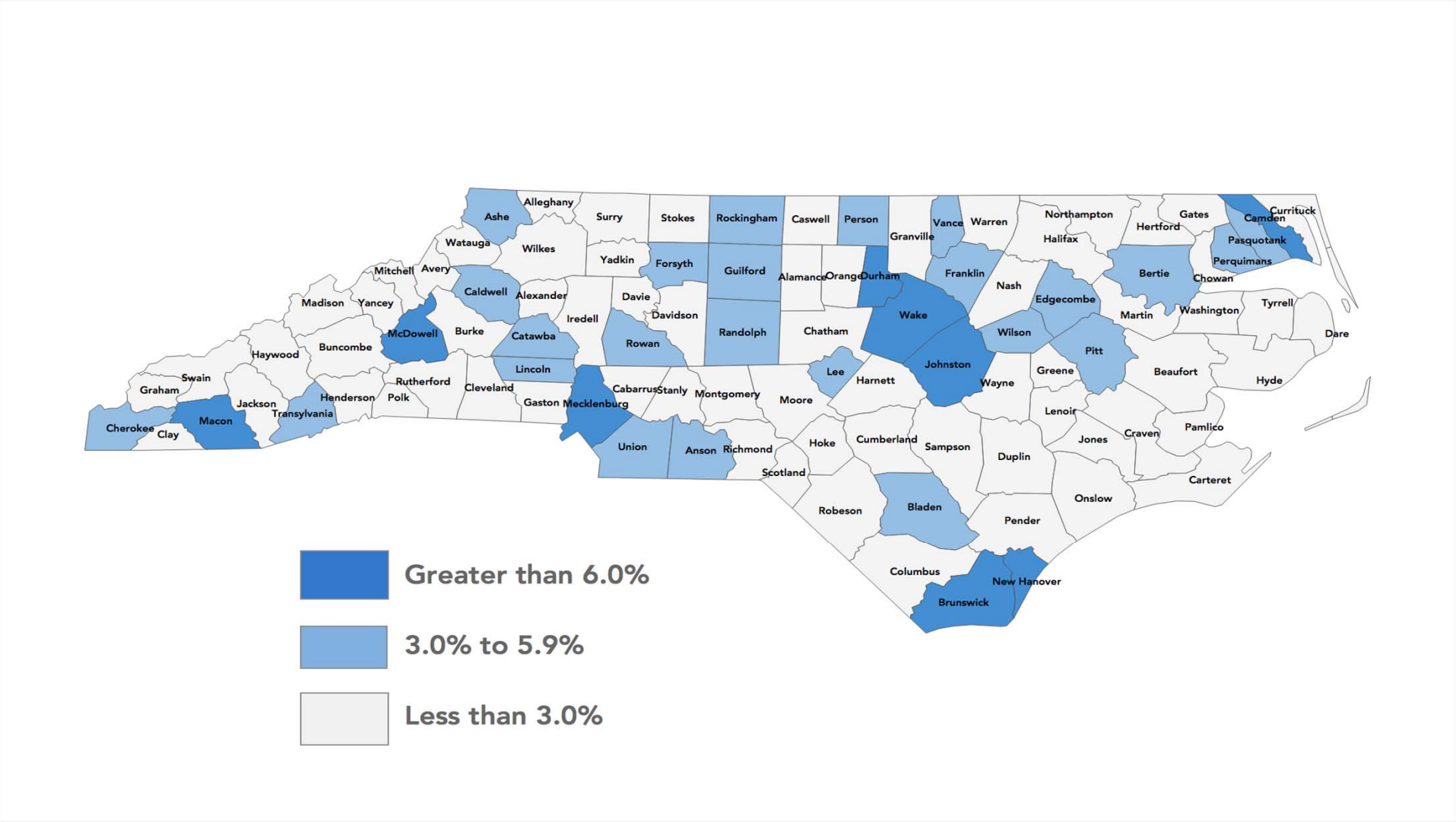
Percentage of Total North Carolina Economy

Makeup of Tech Industry



Percentage of Total North Carolina Tech Sector

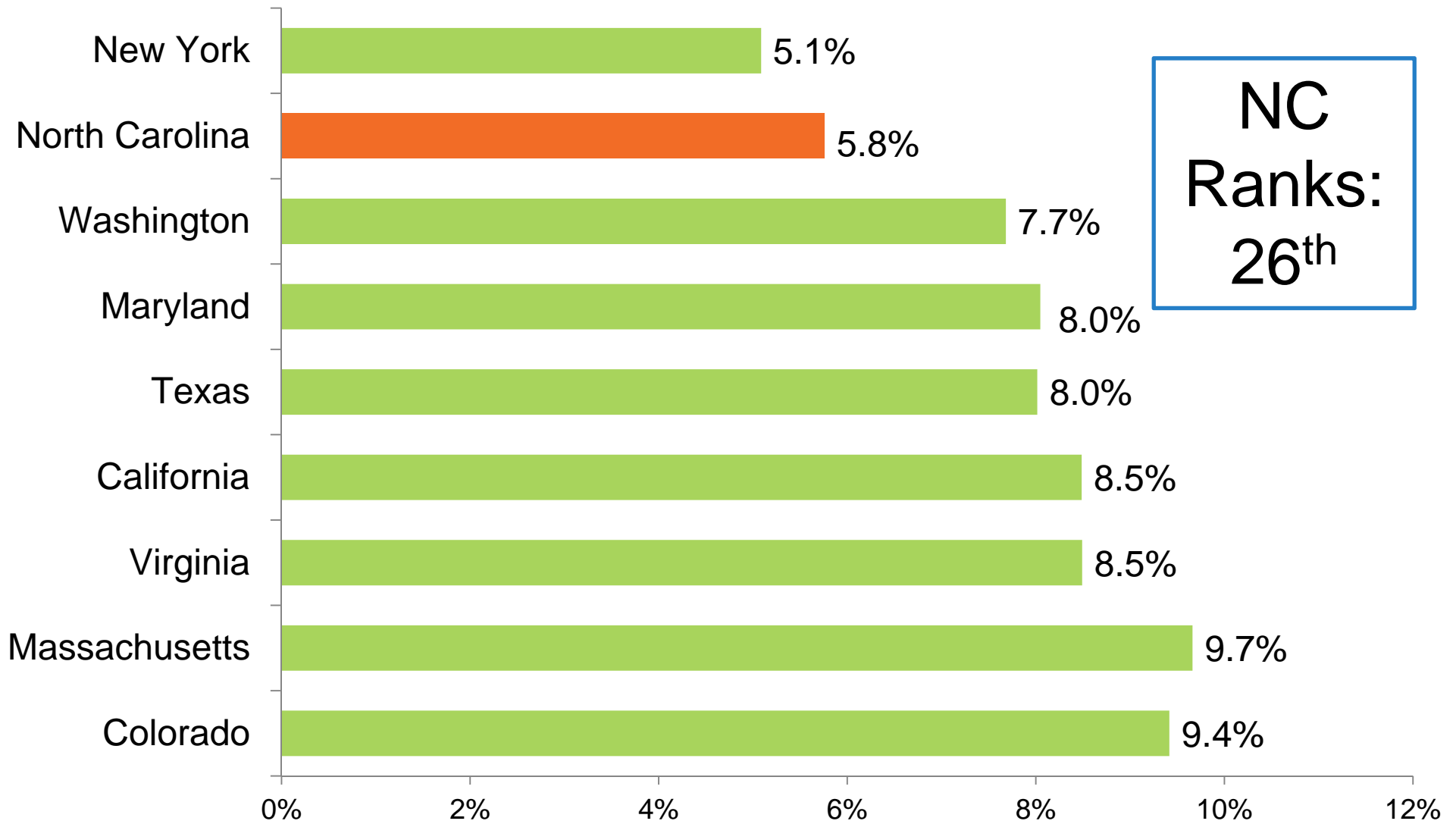
Tech Industry Jobs by County in North Carolina



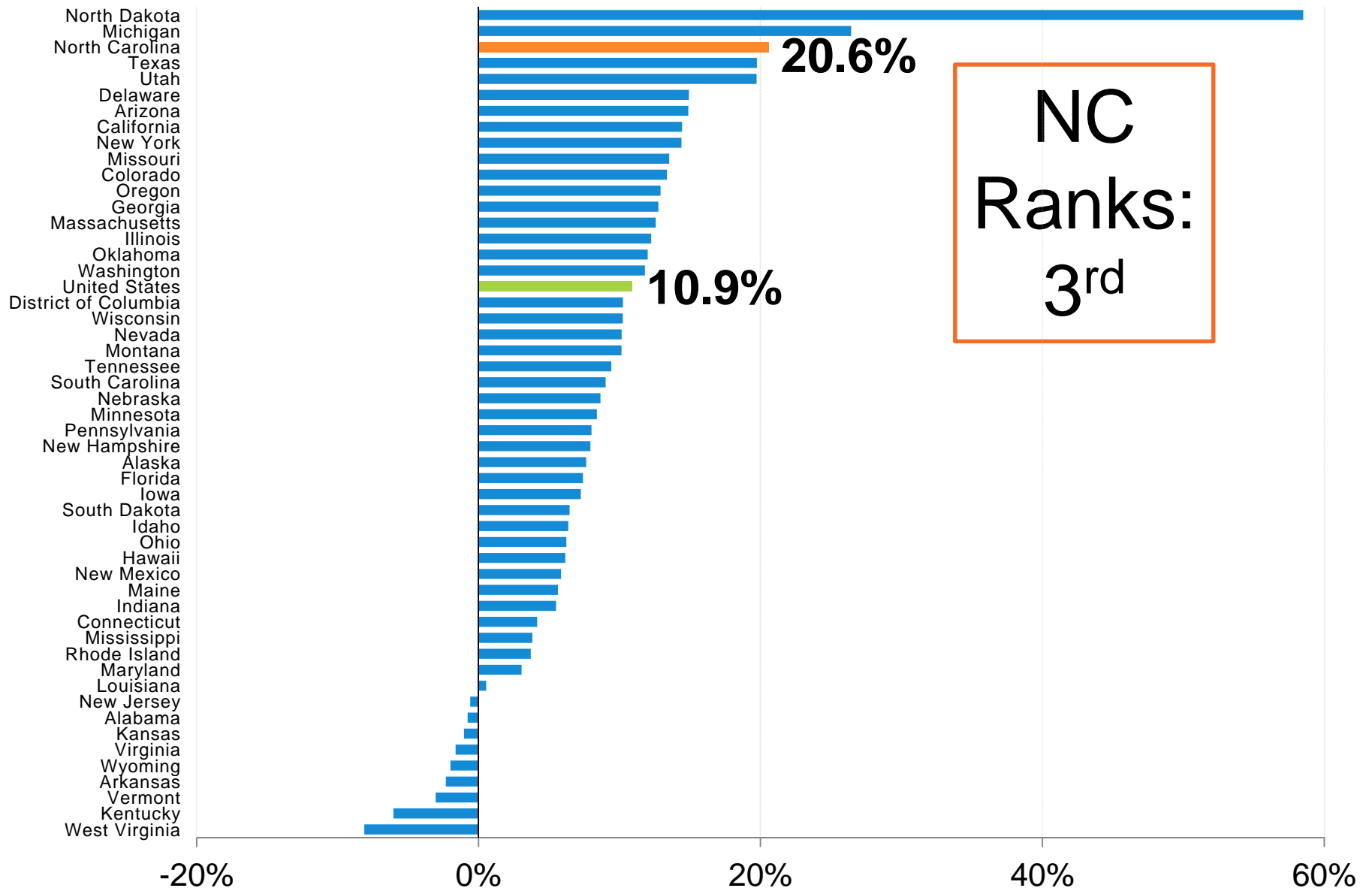
Average Annual Earnings per Worker by Subsector

Tech Category	North Carolina	North Carolina (With Purchasing Power)	National Average
Energy Tech	\$129,102	\$140,786	\$138,451
Environmental Tech	\$95,695	\$104,355	\$77,238
Life Sciences	\$115,792	\$126,271	\$122,748
IT	\$107,785	\$117,540	\$128,674

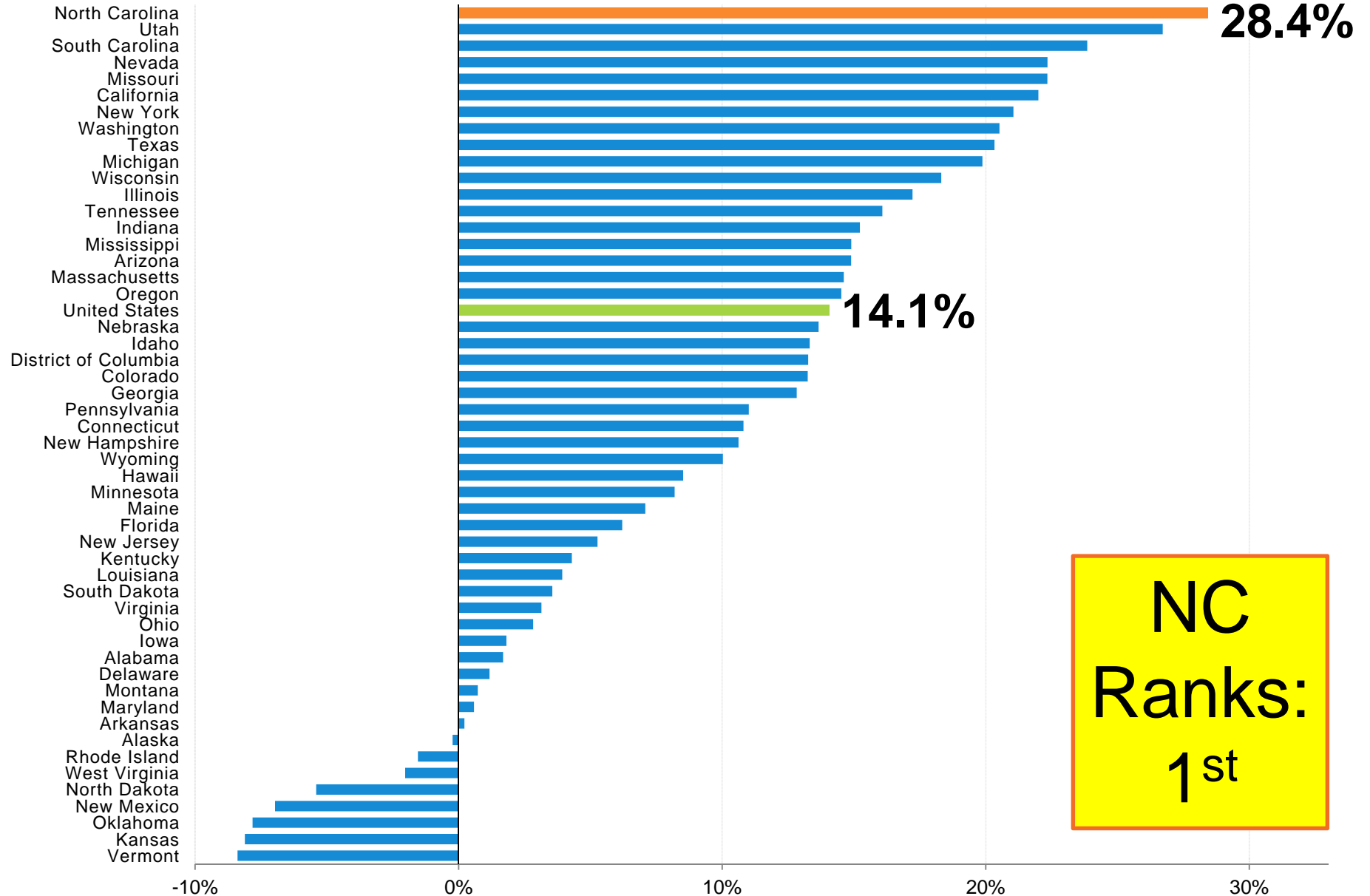
Technology Sector Employment as a Percentage of Total Employment



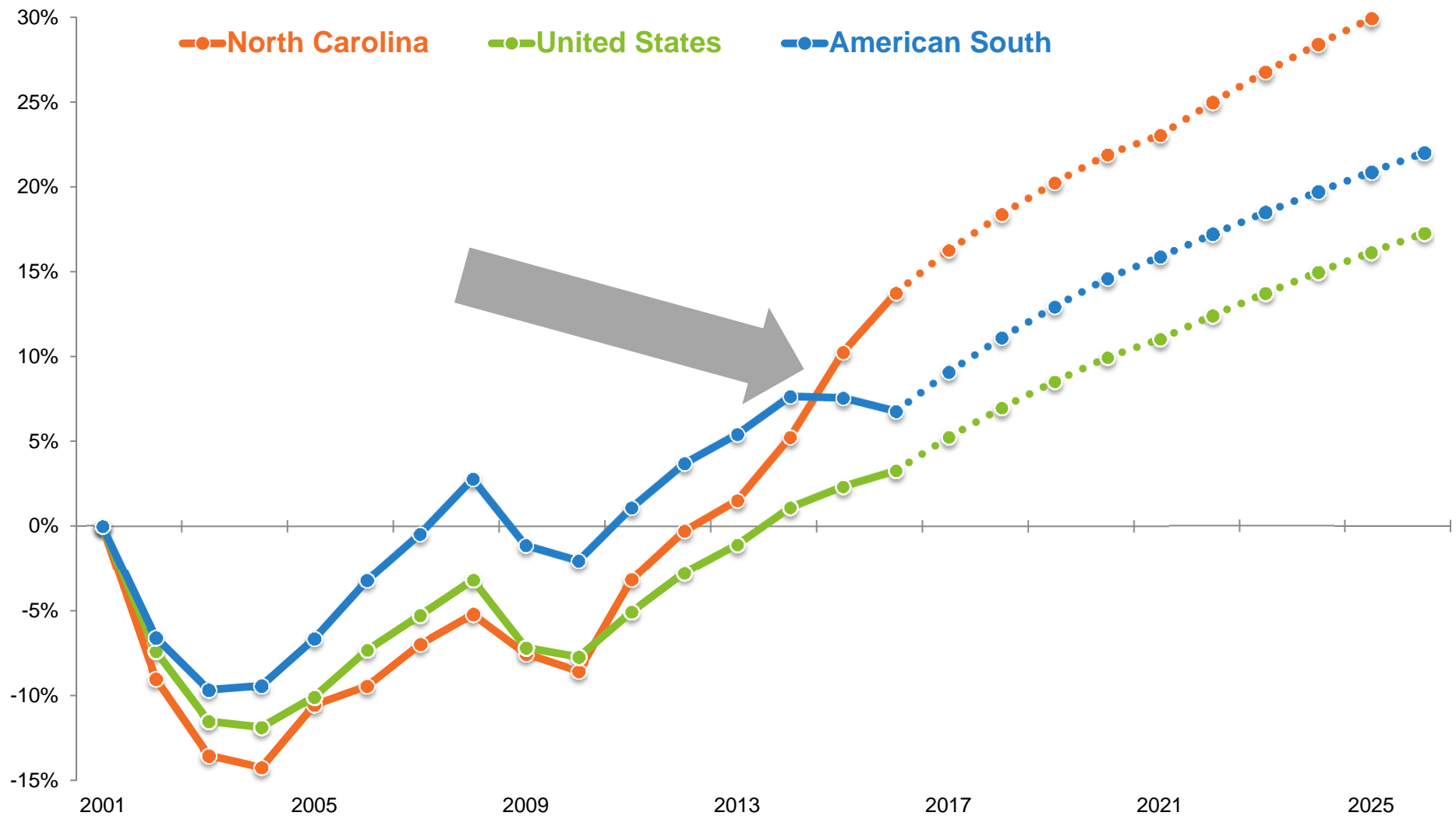
Tech Sector Employment Growth 2010-2015



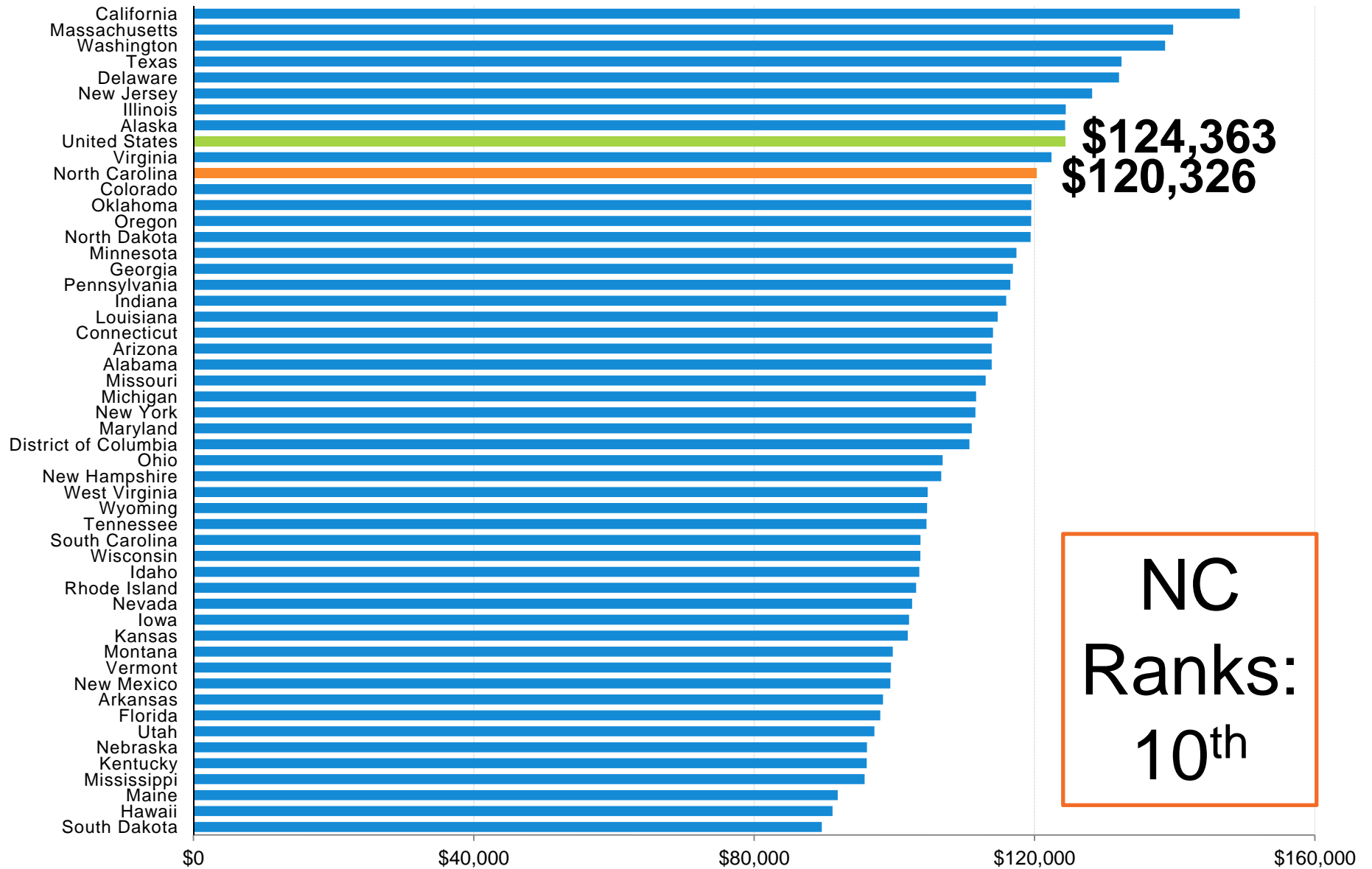
IT Sector Employment Growth 2010-2015



Long Term Technology Sector Trends (Percentage Change in Employment Post 2001)

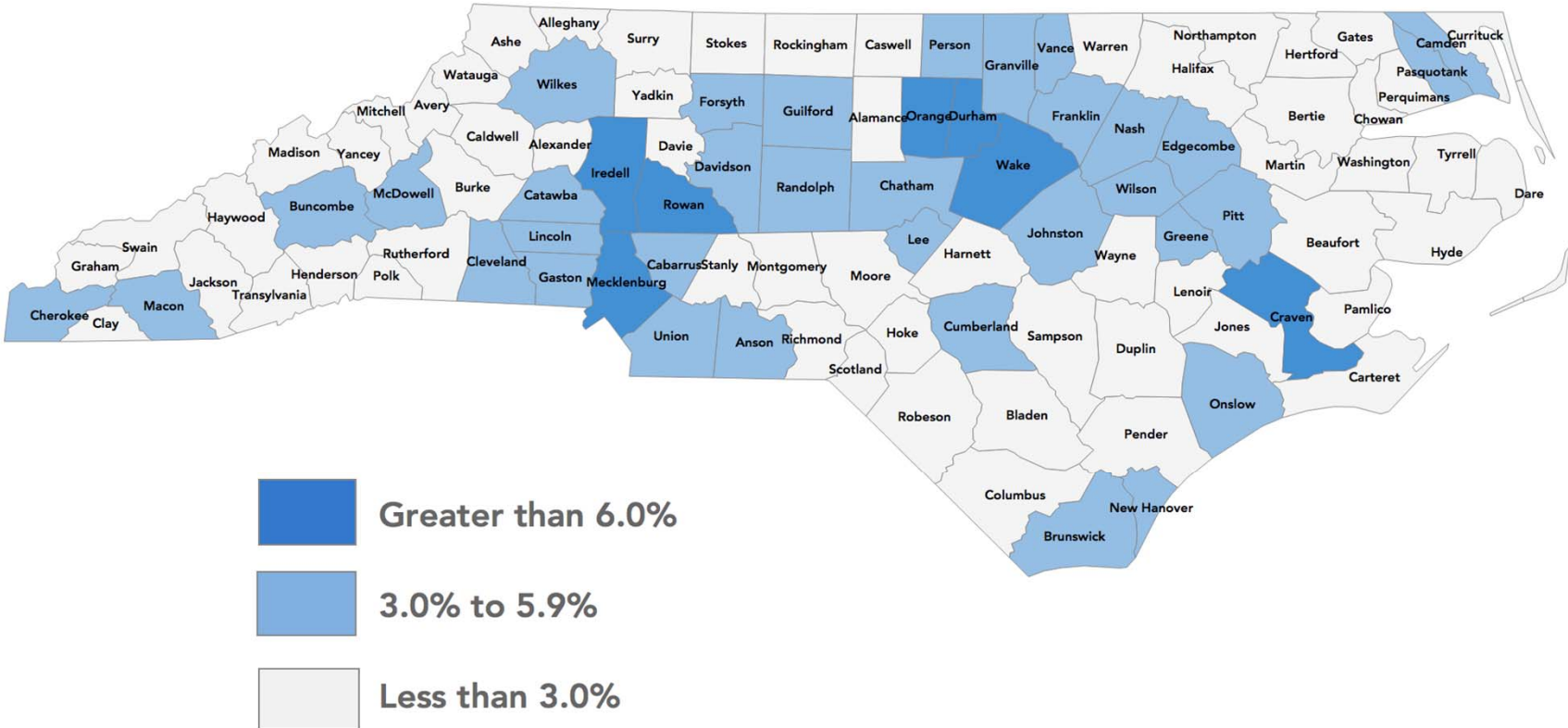


Average Annual Earnings for Tech Sector Employees Adjusted for Purchasing Power



NC
Ranks:
10th

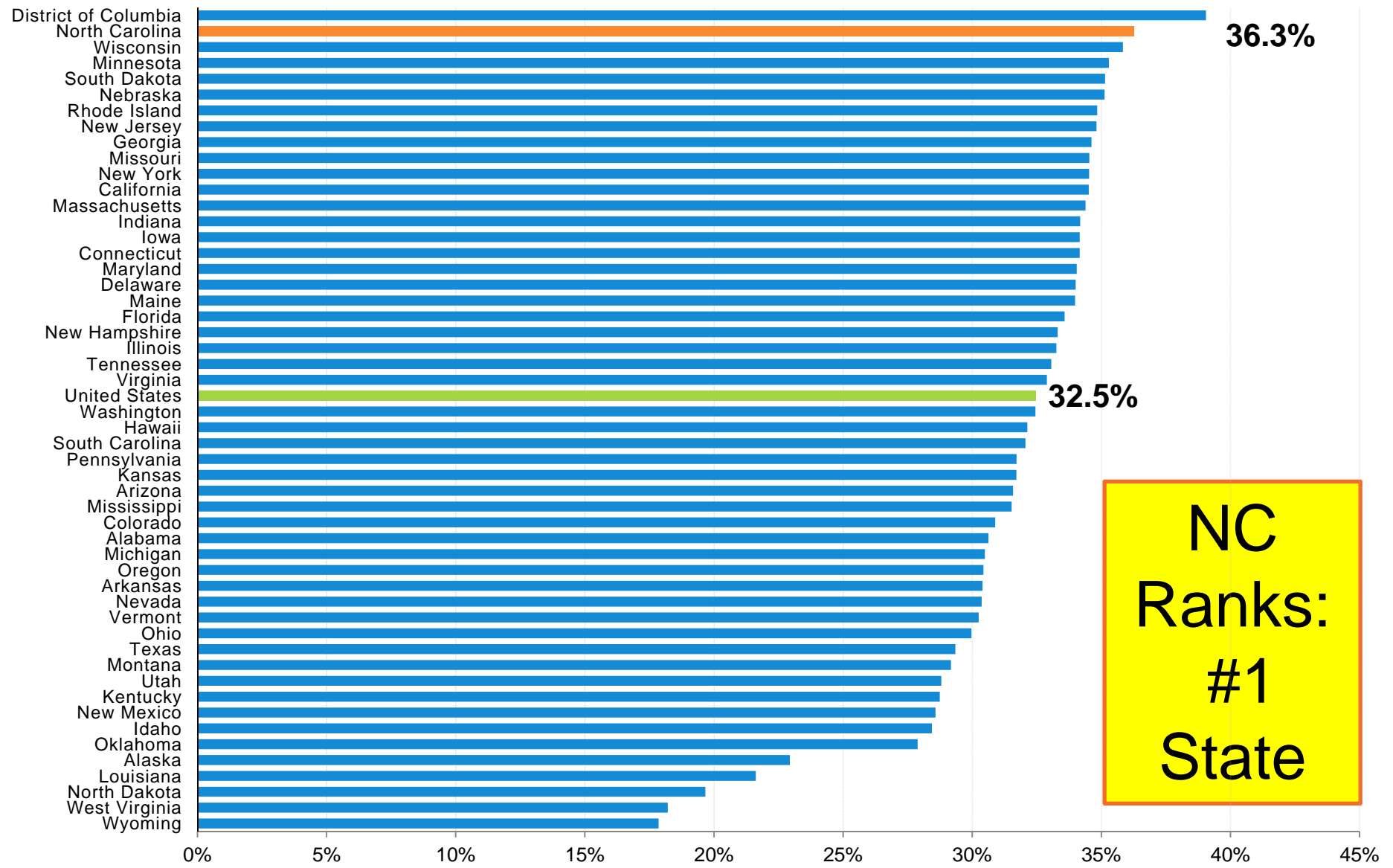
Tech Occupations by County in North Carolina



How Competitive Is North Carolina?

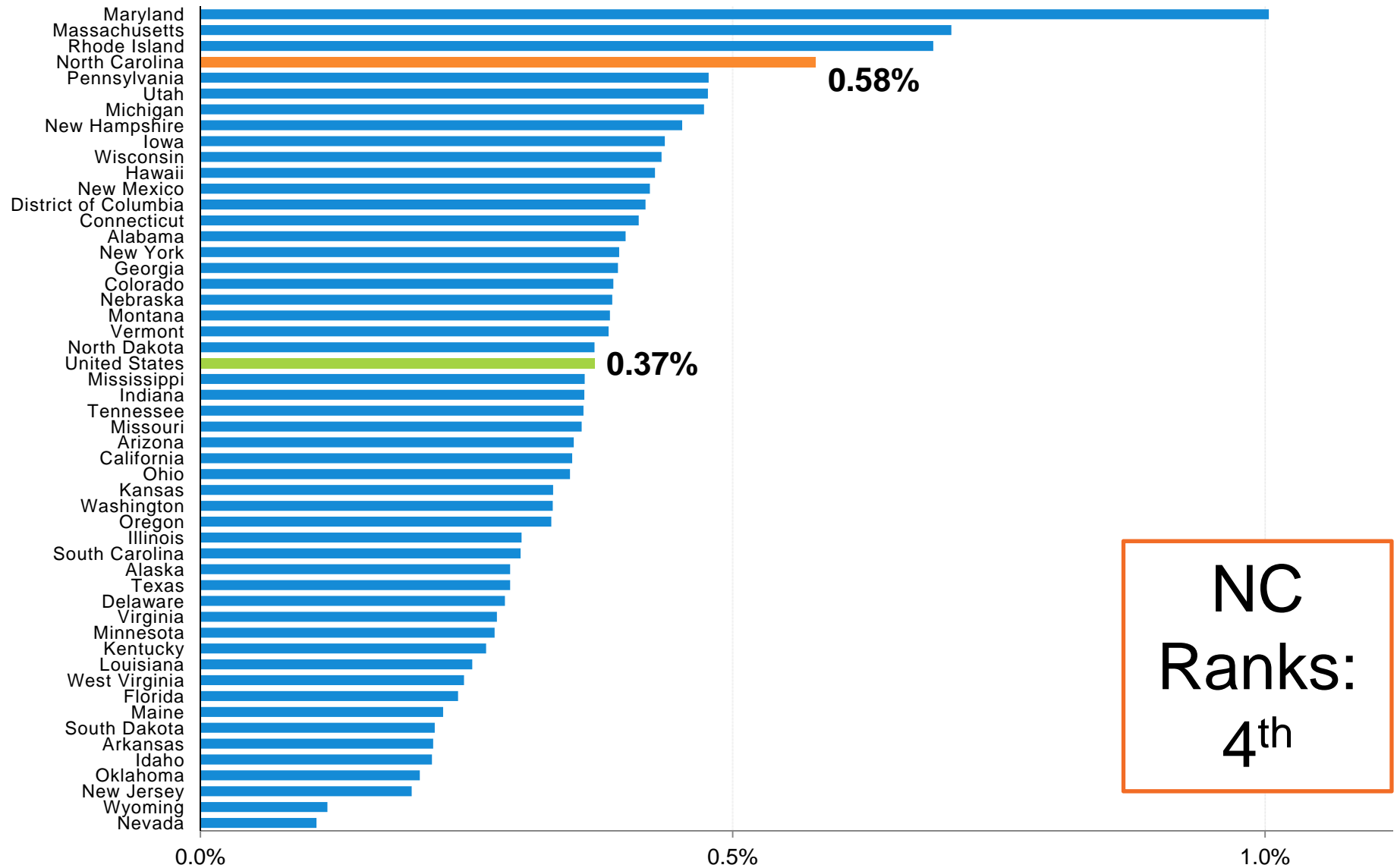


Percentage of Women Working in the Tech Industry

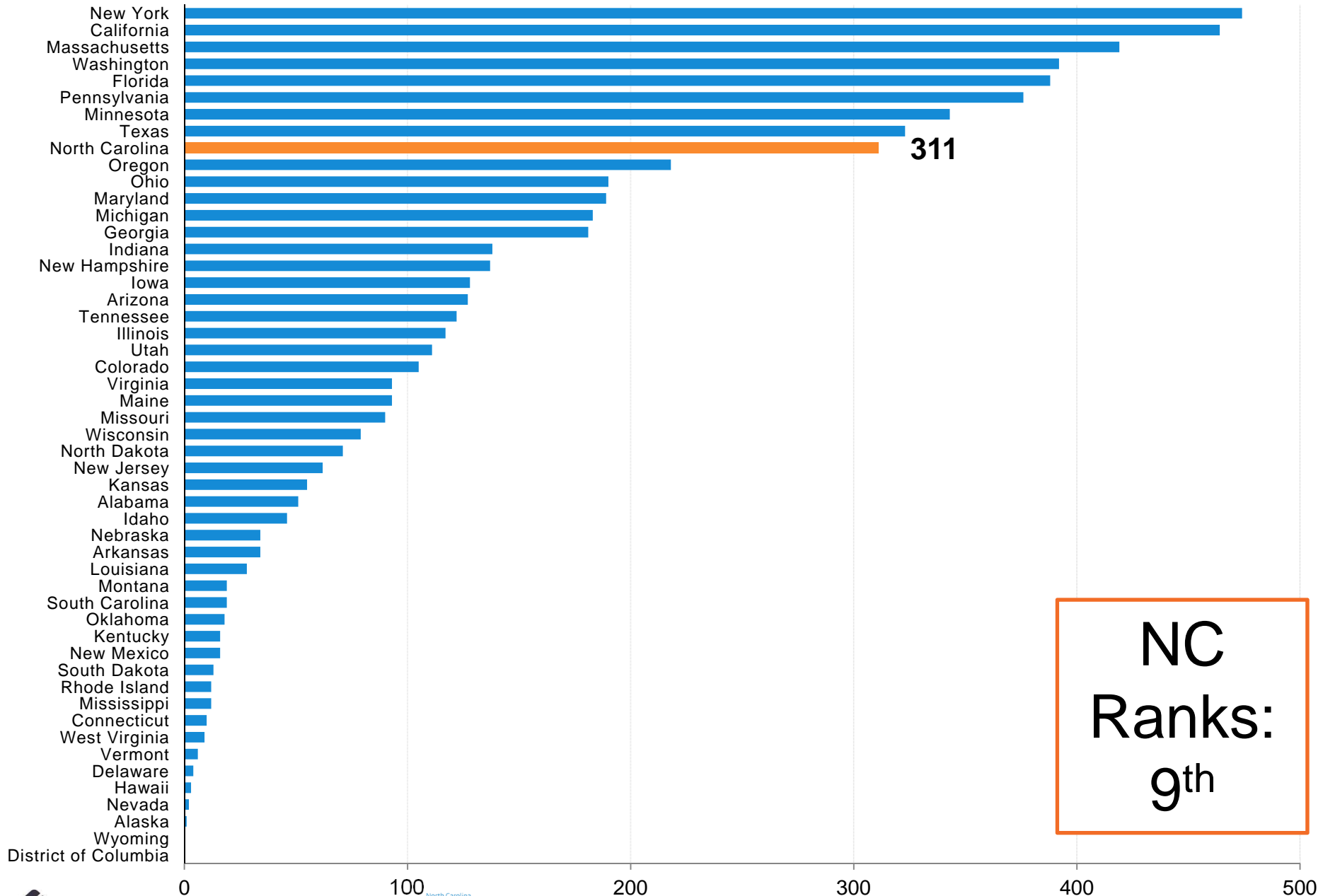


Higher Education R&D in Science & Engineering Fields Intensity

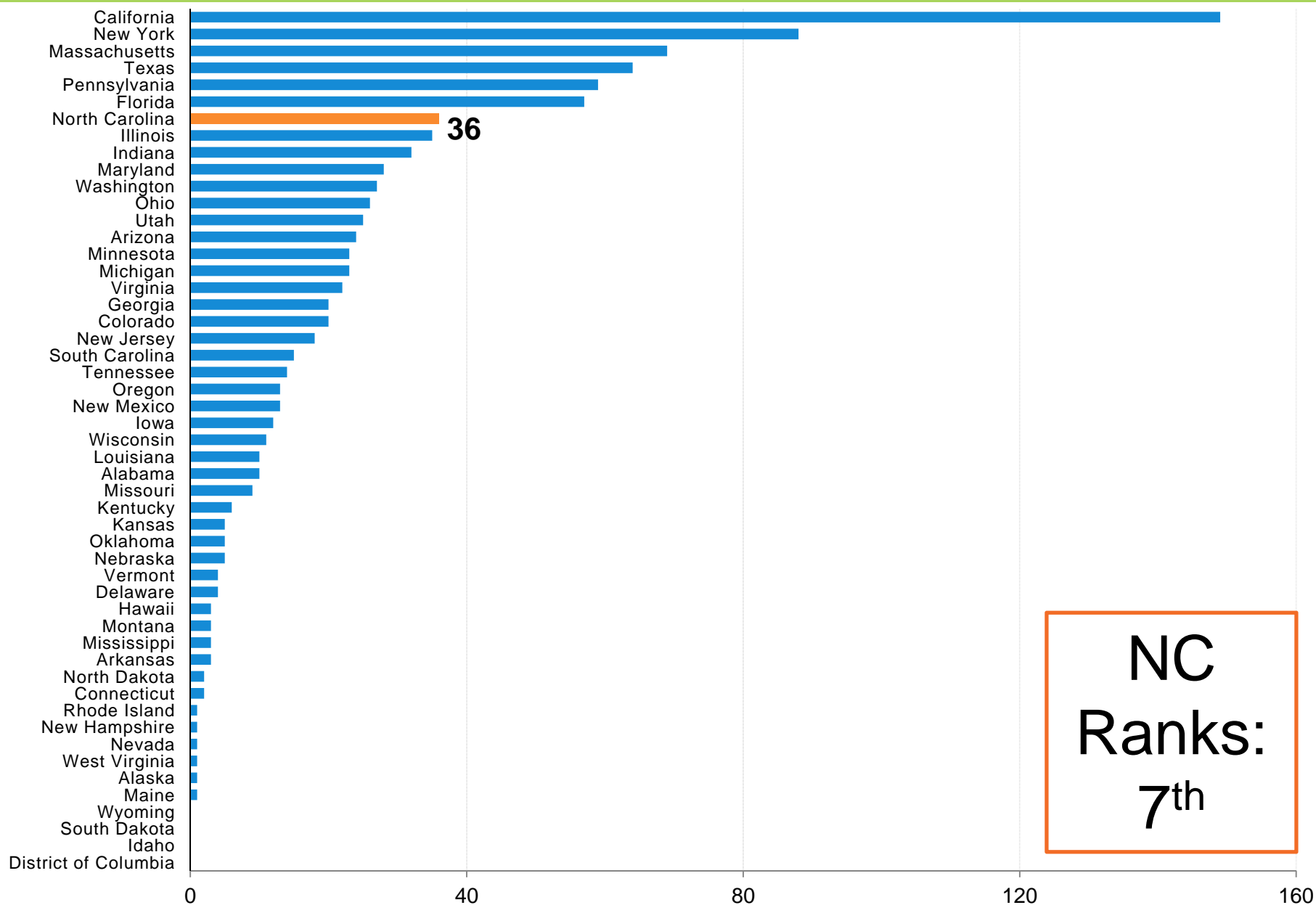
R&D As A Percentage of GDP (2014)



Technology Licenses & Options Executed From Universities 2015

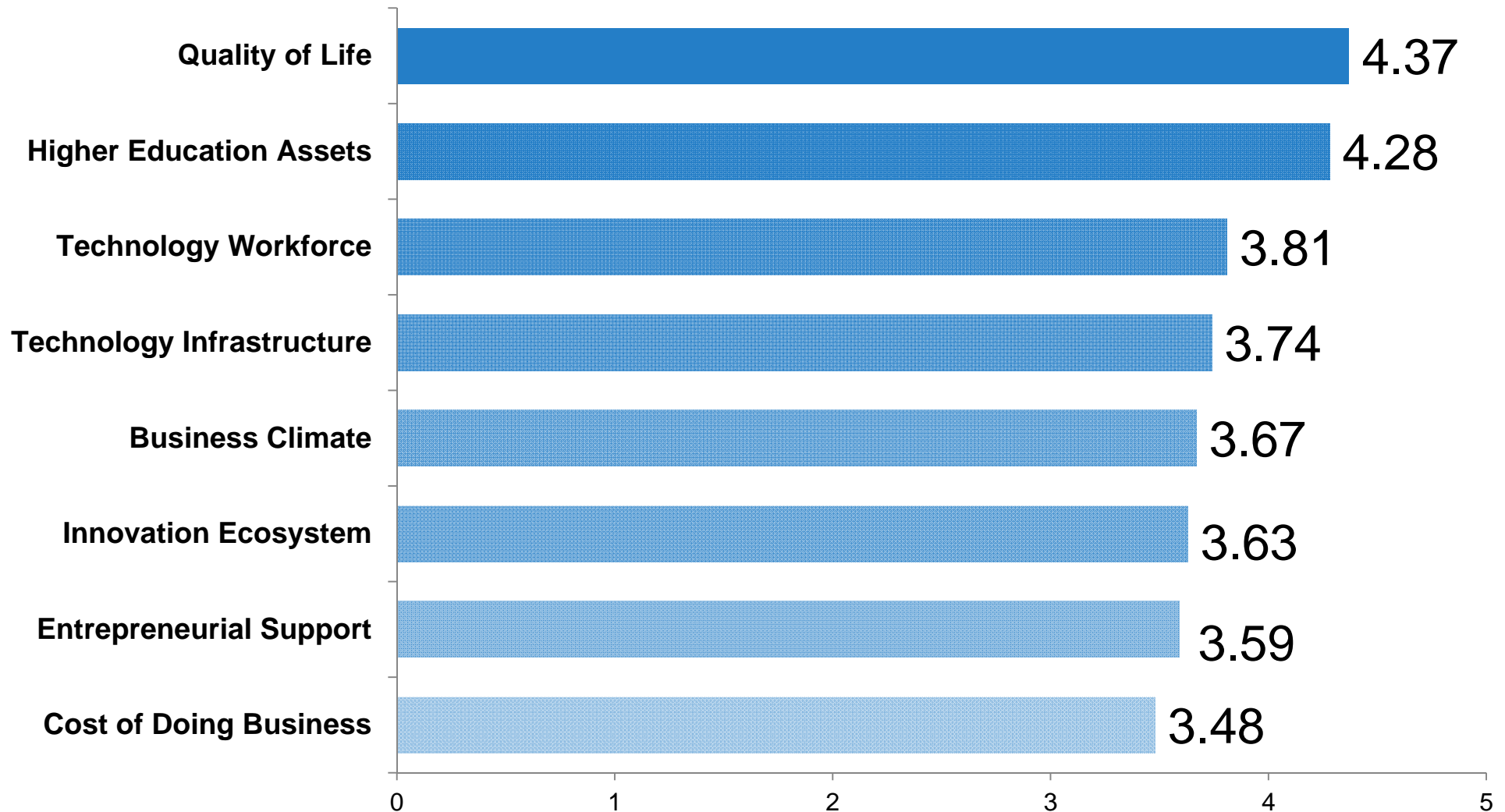


Start-Ups From Universities 2015



Flash Survey Results

Factors Impacting the Competitive Position of North Carolina



Overall North Carolina Tech Sector Rankings

Metric	Value	Rank
Technology Sector as a Percentage of Total Employment (2015)	5.6%	26
Technology Sector Employment Growth (2010-2015)	20.6%	3
Expected Tech Sector Employment Growth (2016-2020)	7.2%	17
Average Annual Wage For Technology Sector Employees with Purchasing Power (2015)	\$120,326	10
Percentage of Women in the Technology Workforce	36.3%	2
Tech Industry Diversity Index	0.72	33

Indicates a state ranking of 15th or higher

Indicates a state ranking between 16th and 35th

Indicates a state ranking greater than 36th

Overall North Carolina IT Sector Rankings

Metric	Value	Rank
IT Sector as a Percentage of Total Employment (2015)	3.1%	18
IT Sector Employment Growth (2010-2015)	28.4%	1
Expected IT Sector Employment Growth (2016-2020)	7.0%	13
Average Annual Wage For IT Sector Employees with Purchasing Power (2015)	\$117,539	10

Indicates a state ranking of 15th or higher

Indicates a state ranking between 16th and 35th

Indicates a state ranking greater than 36th

Overall North Carolina Tech Occupations Rankings

Metric	Value	Rank
Tech Occupations as a Percentage of Total Occupations (2015)	6.6%	20
Tech Occupations Growth (2010-2015)	16.8%	6
Expected Tech Occupations Growth (2016-2020)	7.4%	12
Median Hourly Earnings Adjusted for Purchasing Power (2015)	\$41.01	7

Indicates a state ranking of 15th or higher

Indicates a state ranking between 16th and 35th

Indicates a state ranking greater than 36th

SWOT Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> • Strong employment growth for 1-year and 5-year periods • Competitive wages with high purchasing power • High levels of academic R&D funding for science and engineering • High percentage of women in industry workforce • Less expensive operational costs than traditional tech markets 	<ul style="list-style-type: none"> • R&D funding for industry in the state is ranked below average • Private innovation not matching university innovation • Average performance in entrepreneurship • Venture capital funding lags behind comparable technology states
Opportunities	Threats
<ul style="list-style-type: none"> • Gap between annual STEM education completions and annual job openings offer opportunity to train more local workers • New focus on cybersecurity gives new market opportunity to exist companies 	<ul style="list-style-type: none"> • Higher educational requirements to meet job demand may result in labor shortage • SMEs may struggle to keep up with fast paced growth



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