For each additional post-secondary graduate, the annual GDP of Minnesota will increase by approximately $146,206.

- **Annual State GDP**

- **Lifetime State GDP Impact per Graduate**
  - The average increase in the Minnesota state GDP over the lifetime of the graduate will exceed $1.6 million in present value dollars.
  - For each additional post-secondary graduate, an additional 6.5 support jobs will be generated throughout the Minnesota economy.
  - In addition, household incomes and expenditures will change as more individuals graduate from post-secondary schools. Home values of the graduate are expected to be $146,420 higher, on average, than for those with a high school diploma.

- **Broader Tax Base**
  - Each post-secondary graduate will expand the tax base by an average of $4,578 annually, paying back the state portion of post-secondary expenses within 5.5 working years, thus reducing the pressure on tax rate increases.

- **Improved Incomes and Lifestyles**
  - Post-secondary graduates are more likely to invest in capital assets, which will increase the long-run growth rate of the state economy.

  - The average increase in the Minnesota state GDP over the lifetime of the graduate will exceed $1 million in present value dollars.

  - For each additional post-secondary graduate, an additional 6.5 support jobs will be generated throughout the Minnesota economy.

  - In addition, household incomes and expenditures will change as more individuals graduate from post-secondary schools. Home values of the graduate are expected to be $146,420 higher, on average, than for those with a high school diploma.

  - Each post-secondary graduate will expand the tax base by an average of $4,578 annually, paying back the state portion of post-secondary expenses within 5.5 working years, thus reducing the pressure on tax rate increases.

  - Post-secondary graduates are more likely to invest in capital assets, which will increase the long-run growth rate of the state economy.

  - College graduates will increase automotive and transportation spending by $3,398 annually per graduate relative to a comparable individual without a post-secondary degree.

  - Increased automotive and transportation spending per year
UNDERSTANDING THE RESEARCH

METHODOLOGY
Traditionally GDP is not reported on an educational basis, the way earnings or unemployment metrics are. However, it is important to understand how education contributes to economic activity and the link between education and GDP is known to exist, though not regularly reported. We want to show the direct economic consequence of post-secondary graduates to each state’s economy. To do this we match the GDP-industry data, the industry-to-occupation data, and the occupation-to-education data for each state. After those mappings are compiled, we adjust the GDP, earnings, and tax data to account for known biases (e.g., ability biases) in the data. The result is the direct annual contributions to GDP resulting from the education of post-secondary graduates. It is best to interpret the results as average differences in economic activity between the state’s graduates and non-graduates. Those differences are forecasted and then discounted to present value terms to estimate the additional lifetime contributions to GDP from each graduate.

It is also important to understand that graduates often rely on the support of other graduates and non-graduates. CEOs and Accountants need staff, and we all need and depend on retail clerks, garbage handlers, etc. Because support occupations play an important role, we report the average number of support jobs necessary for per graduate. Lastly, as a metric of improved lifestyle we show the increased annual spending of graduates on housing and transportation. These spending categories represent proxies for additional disposable income to graduates.

With the exception of the support jobs, the results of the fact sheet should be viewed as marginal gains to both the average post-secondary graduate and society as a whole.

DATA SOURCES
Data utilized for this study were as follows and sources for the lifetime earnings trajectory and bias corrections came from various journal articles.


Educational Attainment by Occupation: American Community Survey Public Use Microdata, U.S. Department of Commerce, U.S. Census Bureau


Gross State Product and Taxes by Industry and State: Bureau of Economic Analysis, Lightcast, Department of Commerce, and Census of Governments, and IMPLAN


ADDITIONAL RESOURCES
For those seeking a more detailed explanation of the methodology and intermediate steps for generating the results of the fact sheet please contact NCAN.