

## Economic Impacts from the Proposed Legacy Funds

### Bottom Line

This infusion of \$700 million into the ND economy looks to deliver the following returns on an annual basis

- 7% cash on cash return
- Additional 1% cash return from sales and use tax, and individual income tax revenues
- 8% aggregate cash realization return to the state
- An increase in the state economy's size of \$322 million in economic output and \$180 million in the State GDP.
- An increase of 3,859 jobs in total employment, with 83 percent occurring across all private non-farm industries. This estimate consists of full-time and part-time workers.
- An increase of \$101 million in personal income and \$79 million in wages and salaries. These increases are driven almost entirely by the growth in labor income derived from the jobs created across all industries.

These calculations have been made using a blend of sophisticated data models in conjunction with successes from other similar programs such as Connecticut Innovations which has \$204 million under management. Since inception in 2011, CT Innovations has achieved:

- 52 exits
  - 38 acquisitions,
  - 14 IPOs
- 7.5% average annual cash return on investment

Invest between \$12 - \$15 million per quarter in 30 – 50 companies using both debt and equity. Their portfolio of investments supports over 40,000 jobs in the state.

The proposed \$700 million development fund is associated with financing the new and expanding primary sector businesses in North Dakota in the 2021-2022 biennium year<sup>1</sup>. The North Dakota Department of Commerce utilized the Regional Economic Model Policy Insight (REMI PI<sup>+</sup>)<sup>2</sup> to project the potential economic impacts of the proposed funds at the state level. The projected economic impacts include increases in the state economy size (as measured by the state gross domestic product (GDP) and output); payroll creation (as measured by personal income, earnings by the place of work, wages, and salaries); and new jobs created (as measured by employment). The study also estimates tax revenues from the sales and use tax and individual income tax. The economic impacts are projected for five years from 2021-2025 and ten years from 2021-2030. The estimated impacts are substantial, and the findings of this analysis are outlined below.

The analysis projected that from 2021-2025, the average annual economic impacts from the increase in investment funding for North Dakota in a given year would be:

- An increase in the state economy's size of \$322 million in economic output and \$180 million in the State GDP.
- An increase of 3,859 jobs in total employment, with 83 percent occurring across all private non-farm industries. This estimate consists of full-time and part-time workers.
- An increase of \$101 million in personal income and \$79 million in wages and salaries. These increases are driven almost entirely by the growth in labor income derived from the jobs created across all industries.
- An increase of \$2.4 million in tax revenues from the sales and use tax and \$1.05 million in tax revenues from individual income tax.

In the ten year projection period (2021-2030), the analysis projected the average annual economic impacts from the increase in investment funding for North Dakota in a given year would be:

- An increase in the state economy's size of \$387 million in economic output and \$220 million in the State GDP.
- An increase of 4,224 jobs across all industries, with 86 percent occurring across all private non-farm industries. This estimate consists of full-time and part-time workers.
- An increase of \$132 million in personal income and \$96 million in wages and salaries, driven almost entirely by the growth in labor income derived from the jobs created across all industries.
- An increase of \$3.09 million in tax revenues from the sales and use tax and \$1.45 million in tax revenues from individual income tax.

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<sup>1</sup>That is from July 1, 2021 to June 30, 2022

<sup>2</sup>Regional Economic Models, Inc. (REMI) is an independent company with offices in Amherst, MA and Washington, D.C. that provides non-partisan economic analysis and modeling software to its clients, who include federal, state, and local government agencies, non-profit organizations, universities, and private companies.

## Methodology

The North Dakota Department of Commerce utilized version 2.4 of the REMI PI+ model. Briefly, the REMI PI+ model is a sophisticated regional economic model that dynamically simulates the year-by-year economic effects of public policy initiatives and is widely used by state agencies and legislatures, universities, and other organizations and experts. The REMI model is also tailored to North Dakota using data from the Bureau of Census, the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Energy Information Administration, and other reliable data sources<sup>3</sup>.

To make sound projections for the tax revenues, the effective tax rates for sales and use tax and individual income tax were computed first. The computation used the 2001-2018 tax revenues data from the North Dakota Office of State Tax Commissioner and the 2001-2018 output and personal income data from REMI and the U.S. Bureau of Economic Analysis. The sales tax revenues were calculated by multiplying the average effective sales and use tax rate by the projected output from the REMI model. Similarly, the income tax revenues were calculated by multiplying the average effective individual income tax rate by the REMI model's projected personal income. Finally, all estimates are first converted to real dollars using the 2020 consumer price index of 258.81 before reporting.

## Assumptions

**Assumption 1:** The \$700 million development fund contributed \$350 million in 2021 and \$350 million in 2022 to the investment capital spending and as a result:

- Investment spending increased due to increased development funding. This increase was split proportionally between three investment spending categories: (i) the non-residential structures, (ii) non-residential equipment, and (iii) non-residential intellectual property products.

**Assumption 2:** The \$700 million principal will have a 7% ROI for ten years beginning in 2022, and as a result:

- Investment capital spending will increase by 7% beginning in 2022. The ROI will be injected back into the economy through loans and equity investments in the primary sector businesses. The investment expenditure amount was split proportionally between three investment spending categories: (i) the non-residential structures, (ii) non-residential equipment, and (iii) non-residential intellectual property products.

**Assumption 3:** The \$700 million development fund contributed \$350 million in 2021 and \$725 million<sup>4</sup> in 2022 to the investment capital spending and injected the ROI back into the economy through funding loan and equity investments in the primary sector businesses and as a result:

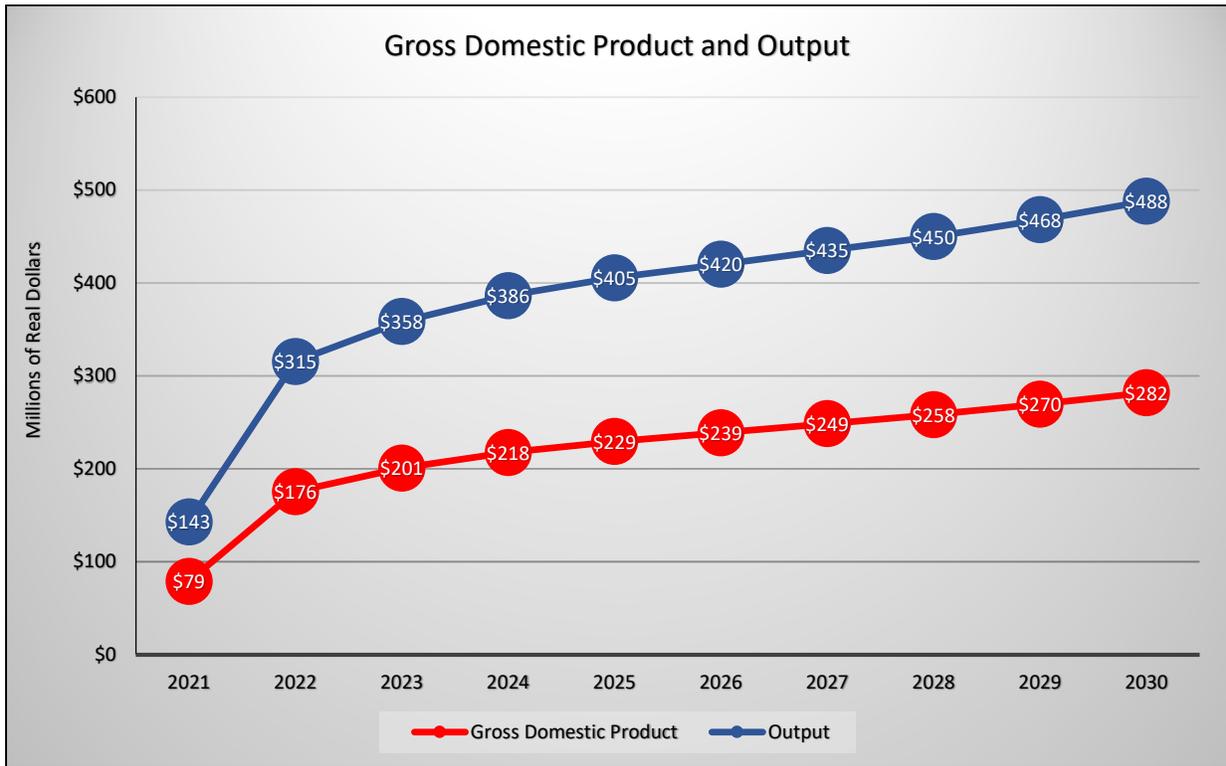
- The production cost decreases by \$70 million per year and is spread by value-added across all private industries.

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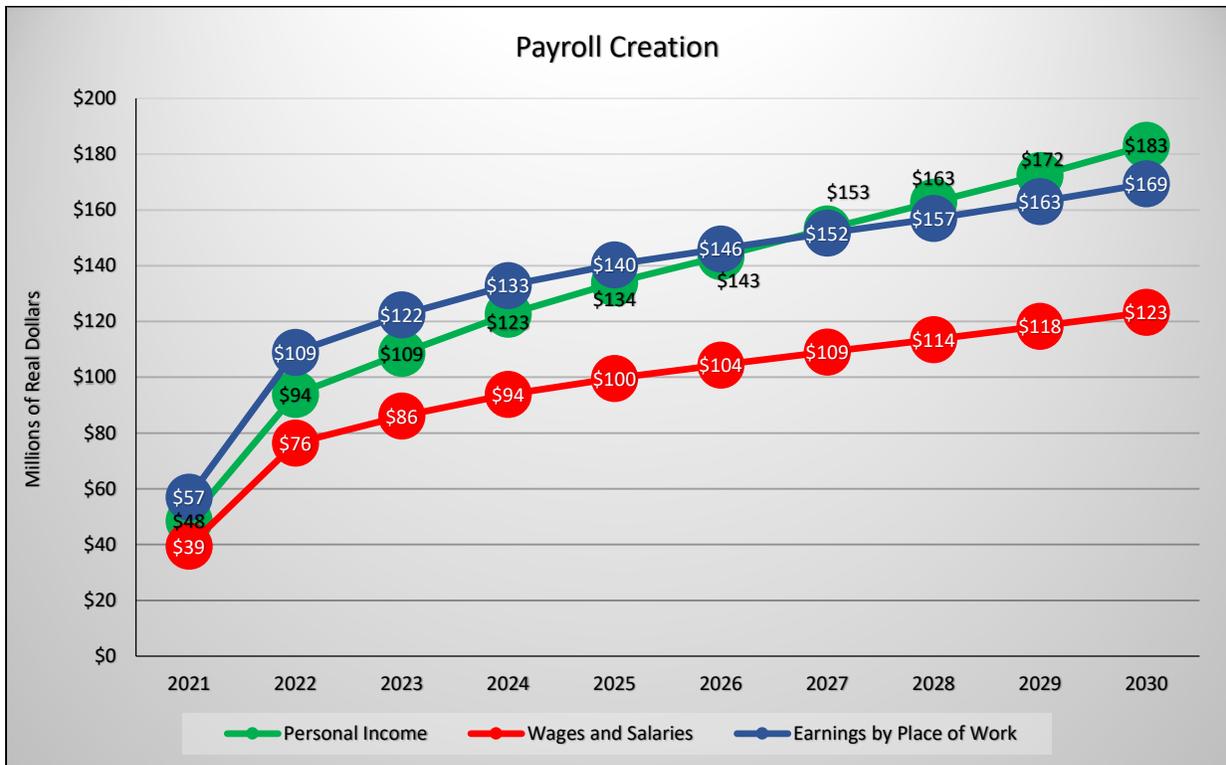
<sup>3</sup>Source: REMI PI+ Model Equations 2020

<sup>4</sup>The \$725 million in 2022 include a return on investment of \$25 million collected from the \$350 million spent in 2021.

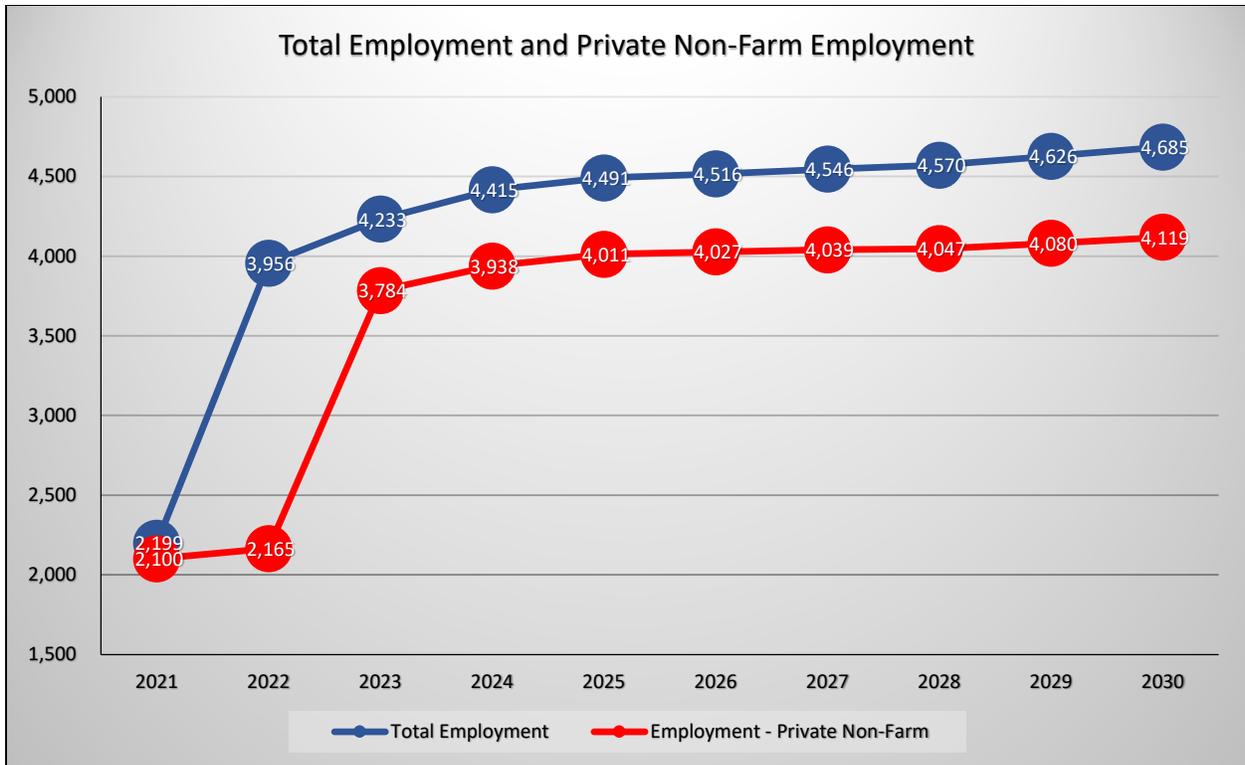
Results: Figures



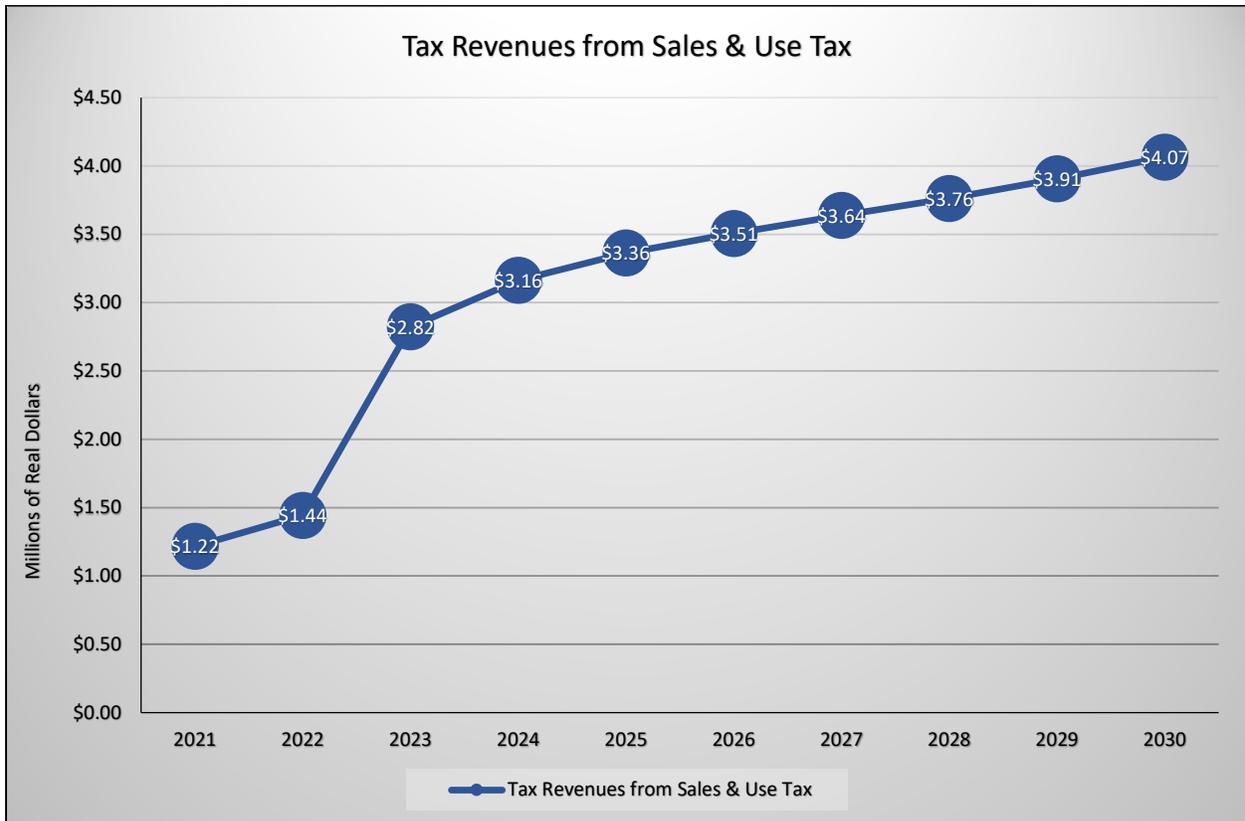
Source: REMI PI+ and author's calculations



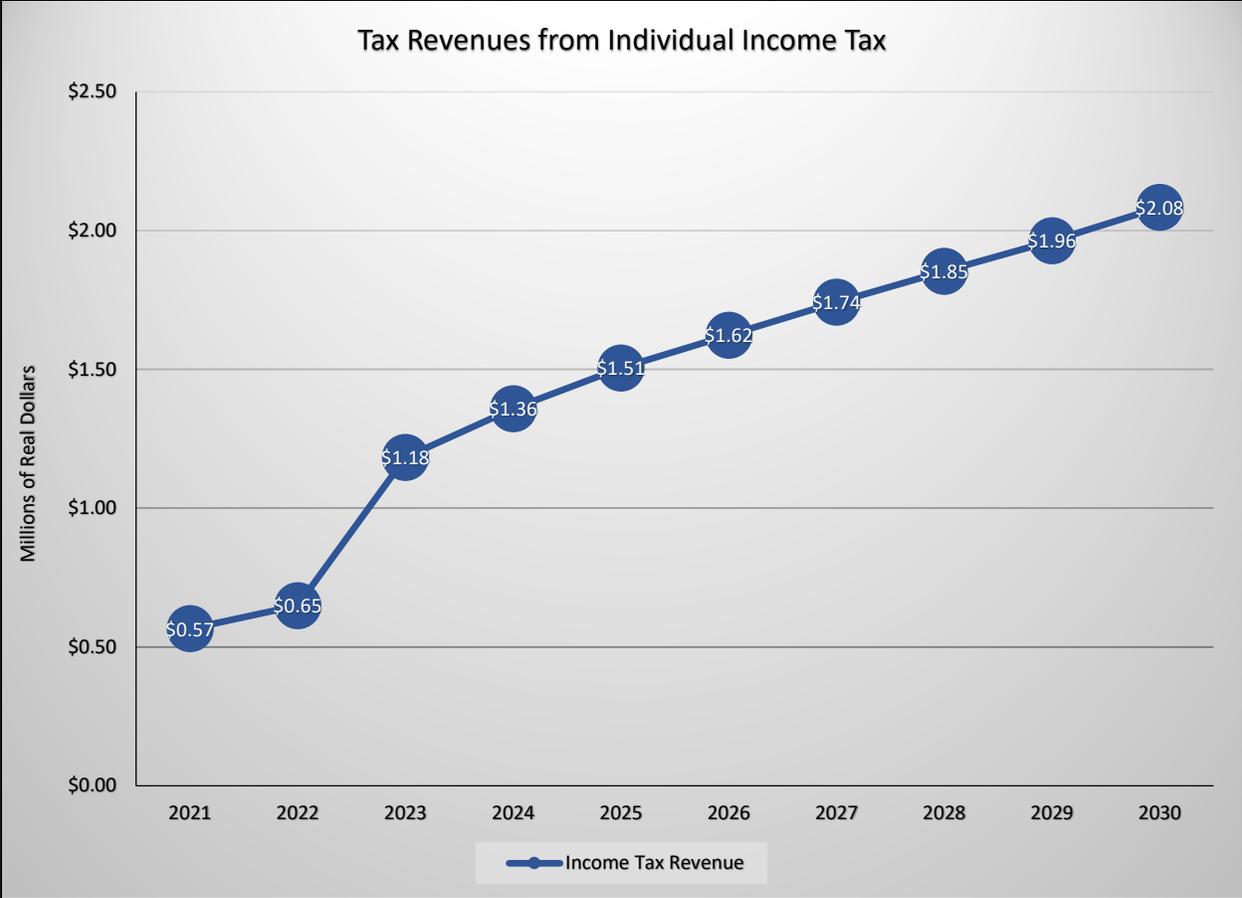
Source: REMI PI+ and author's calculations



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Table 1: Economic Impacts on Employment, Employee Compensation, and the State Income Tax Revenue

<b>Economic Performance Measure</b>	<b>Units</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>Average</b>
Total Employment	Individuals (Jobs)	2,199	3,956	4,233	4,415	4,491	4,516	4,546	4,570	4,626	4,685	4,224
Employment - Private Non-Farm	Individuals (Jobs)	2,100	2,165	3,784	3,938	4,011	4,027	4,039	4,047	4,080	4,119	3,631
Personal Income	Millions of Real Dollars	\$48	\$94	\$109	\$123	\$134	\$143	\$153	\$163	\$172	\$183	\$132
Wages and Salaries	Millions of Real Dollars	\$39	\$76	\$86	\$94	\$100	\$104	\$109	\$114	\$118	\$123	\$96
Earnings by Place of Work	Millions of Real Dollars	\$57	\$109	\$122	\$133	\$140	\$146	\$152	\$157	\$163	\$169	\$135
Income Tax Revenue	Millions of Real Dollars	\$0.57	\$0.65	\$1.18	\$1.36	\$1.51	\$1.62	\$1.74	\$1.85	\$1.96	\$2.08	\$1.45

Source: REMI PI+ and author's calculations

Table 2: Economic Impacts on the State Economy Size and Tax Revenue from the Sales and Use Tax

<b>Economic Performance Measure</b>	<b>Units</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>Average</b>
Gross Domestic Product	Millions of Real Dollars	\$79	\$176	\$201	\$218	\$229	\$239	\$249	\$258	\$270	\$282	\$220
Output	Millions of Real Dollars	\$143	\$315	\$358	\$386	\$405	\$420	\$435	\$450	\$468	\$488	\$387
Tax Revenue from Sales & Use Tax	Millions of Real Dollars	\$1.22	\$1.44	\$2.82	\$3.16	\$3.36	\$3.51	\$3.64	\$3.76	\$3.91	\$4.07	\$3.09

Source: REMI PI+ and author's calculations