Fiscal Challenge Proposal
Team 130
Agenda

Goal

Economic Outlook

Spending Trajectory

Infrastructure Spending

Medicare Reform

Discretionary Spending

Tax Reform
Goal

Reduce the Debt-to-GDP ratio to 108% by 2050
Current Economic Outlook

Federal Debt as a Percentage of GDP

Source: Peter G Peterson Foundation
Spending Trajectory

Assumptions

- Ceteris Paribus
- Interest rates near-zero through 2023
- TCJA expire as scheduled
- Entitlement Programs: 15.5% of GDP by 2050

Source: CBO
History of the Debt

Debt Held by The Public (% of GDP)

- 195% in 2050
- Great Recession
- Tax Cuts and Jobs Act
- Coronavirus Pandemic

Source: Peter G Peterson Foundation
Principles

- Decreasing Inequality
- Sustainable Economic Growth
- Increase Productivity
Infrastructure Spending
Public Infrastructure

Combine investments into construction of national smart grid and infrastructure projects

- Insufficient infrastructure costs American households over $3,300 annually
- Deferred servicing costs translate to $3.9T in losses to US GDP by 2025

Δ Debt
+370 B

Δ GDP
+410B

Debt/GDP
-1%

Funding Breakdown

Traditional Infrastructure
- Utility Efficiency: $76 billion
- Electric Power: $99 billion
- Semiconductor Tech.: $20 billion

Clean Energy
- Smart Grid: $40 billion
- Energy Efficiency: $52 billion

Source: Economic Policy Institute, American Society of Civil Engineers, Brookings Institute
Target funding for the construction of optimal broadband networks

- $20 Billion to Department of Commerce
- $50 Billion to FCC Rural Digital Auction
- Increase FCC broadband requirement to 100mbps

$Δ Debt \quad + 90\, B$

$Δ GDP \quad + 2\, T$

$\text{Debt/GDP} \quad - 6\%$

Source: Brookings Institute, Purdue Research Center for Regional Development, FCC, ARRA
Environmental Infrastructure

Combine a National Cap and Trade System with the Privatization of Dams

- Nationalize the Regional Greenhouse Gas Initiative
- Cap-and-trade systems out-performed a carbon tax at lowering CO2 emissions by 47% within the first ten years
- Hydropower dams would serve 15% of the U.S.'s electricity needs

\[
\begin{align*}
\Delta \text{Debt} &\quad -6.5 \, \text{T} \\
\Delta \text{GDP} &\quad +2.5 \, \text{T} \\
\text{Debt/GDP} &\quad -15\% 
\end{align*}
\]

Source: CBO, CRS, Brookings Institution, RGGI, Grantham Research Institute, U.S Army Corps of Engineers
Infrastructure Effect on Debt-GDP Ratio

\[ \Delta \text{Debt} = -6 \, T \]

\[ \Delta \text{GDP} = +4.9 \, T \]

\[ \text{Debt/GDP} = -22\% \]

- 2020: Baseline Debt/GDP = 100%
- 2026: Baseline Debt/GDP = 105%
- 2032: Baseline Debt/GDP = 110%
- 2038: Baseline Debt/GDP = 115%
- 2044: Baseline Debt/GDP = 120%
- 2050: Baseline Debt/GDP = 125%

- 2020: Infrastructure Debt/GDP = 105%
- 2026: Infrastructure Debt/GDP = 110%
- 2032: Infrastructure Debt/GDP = 115%
- 2038: Infrastructure Debt/GDP = 120%
- 2044: Infrastructure Debt/GDP = 125%
- 2050: Infrastructure Debt/GDP = 130%

Funding Timeline:
- Broadband: 5 years
- Public Infrastructure: 10 years
- Environmental Infrastructure: 30 years
Tax Reform
Marijuana Tax

Legalize the use and sale of Marijuana with a subsequent 15% sales tax

- Phase out illicit markets worth $60B annually
- Decreases Medicare Part D spending by $470 million annually
- Ensure sustainable market growth with uniform regulation and tax rate

Δ Debt - 3.4 T
Δ GDP +400B
Debt/GDP - 6%

Average Monthly Cannabis Consumption

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Average Monthly Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4 2019</td>
<td>$100.00</td>
</tr>
<tr>
<td>Q1 2020</td>
<td>$200.00</td>
</tr>
<tr>
<td>Q2 2020</td>
<td>$250.00</td>
</tr>
<tr>
<td>Q3 2020</td>
<td>$250.00</td>
</tr>
</tbody>
</table>

Source: New Frontier Data, Pew Research Center, FBI, Harvard Health, ACLU
Financial Transactions Tax

0.1% tax across all securities purchases and derivative contracts

- Reduction of algorithmic and predatory trading practices through a progressive tax
- Household costs would average $13-$35 per year

\[
\begin{align*}
\Delta \text{Debt} & = -3.8 \text{ T} \\
\Delta \text{GDP} & = 0 \\
\text{Debt/GDP} & = -5\%
\end{align*}
\]
Payroll Tax

Impose a 12.4% payroll tax on $250k+ earnings, increase retirement age to 70

- All earnings will be subjected to the payroll tax once earnings reach $250k in 2037
- 47% of millionaires support cap adjustments
- FRA to 70 reduces the program's actuarial imbalance from −2% to −1.39%

\[
\begin{align*}
\Delta \text{Debt} & \quad -6 \text{T} \\
\Delta \text{GDP} & \quad 0 \\
\text{Debt/GDP} & \quad -11\%
\end{align*}
\]
Itemized Deductions

Repeal the Mortgage Interest Deduction & Reform Itemized Deductions

- Repeal MID which only provides 7% of benefits to the middle 20% of households
- Exclude itemized deduction less than 3-5% of Adjusted Gross Income

<table>
<thead>
<tr>
<th>Income</th>
<th>Itemized Deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 250,000</td>
<td>3% of AGI</td>
</tr>
<tr>
<td>250,000 - 1 million</td>
<td>4% of AGI</td>
</tr>
<tr>
<td>&gt; 1 million</td>
<td>5% of AGI</td>
</tr>
</tbody>
</table>

Source: Institute on Taxation and Economic Policy, St. Louis Federal Reserve
Tax Effect on Debt-GDP ratio

\[ \Delta \text{Debt} \quad -14.3 \text{T} \]
\[ \Delta \text{GDP} \quad +400B \]
\[ \text{Debt/GDP} \quad -24\% \]
Discretionary Spending
Perkins V Funding

Increase funding by $10 billion annually for high-quality CTE programs

• Gives students the chance to explore career pathways and earn credentials
• Received bipartisan support in 2018
• Reentry programs and opportunities to develop skills later in life

Longer-Term Net Impacts of Postsecondary and Secondary CTE in Washington

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Secondary CTE</th>
<th>Postsecondary CTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment (in percentage points)</td>
<td>2.0</td>
<td>6.7</td>
</tr>
<tr>
<td>Average hourly wage</td>
<td>$0.29</td>
<td>$2.06</td>
</tr>
<tr>
<td>Average quarterly hours</td>
<td>24.5</td>
<td>39.7</td>
</tr>
<tr>
<td>Average quarterly earnings</td>
<td>$264</td>
<td>$1,008</td>
</tr>
<tr>
<td>Receiving unemployment insurance benefits</td>
<td>0.6</td>
<td>-2.7</td>
</tr>
<tr>
<td>(in percentage points)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving TANF benefits (in percentage points)</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Receiving Food Stamp benefits (in percentage points)</td>
<td>0.5</td>
<td>-0.4</td>
</tr>
<tr>
<td>Enrolled in Medicaid (in percentage points)</td>
<td>-1.0</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

NOTE: Specific estimation techniques are described in later chapters. Dollar figures adjusted for inflation to 2005: Q1. All entries statistically significant at the .01 level (two-tailed test) unless otherwise denoted. Defined as 9-12 quarters after exit. Table entry not statistically significant.

Source: W.E. Upjohn Institute for Employment Research, U.S. DOE, FRBSF, WTE Coordination Board
Universal Pre-K

Implement a voluntary, high-quality Universal Pre-K Program

- Long term personal and social benefits
- Gives parents opportunity to participate in labor force
- Higher educational attainment in Pre-K participants

**Budgetary, Compensation, Health, and Crime Benefits of U.S. Public Investments in Prekindergarten**

It would take just 8 years for the total annual benefits of a publicly-funded universal prekindergarten program to exceed the costs for such a program. In 2050, the benefits are even more impactful:

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government budget benefits</td>
<td>$81.6 billion</td>
</tr>
<tr>
<td>Increased compensation</td>
<td>$108.4 billion</td>
</tr>
<tr>
<td>Private savings from improved health and reduced crime and child maltreatment</td>
<td>$114.7 billion</td>
</tr>
<tr>
<td>Total budget, compensation, and private benefits</td>
<td>$304.7 billion</td>
</tr>
<tr>
<td>Ratio of total annual benefits to program costs</td>
<td>8.9 to 1</td>
</tr>
</tbody>
</table>

Note: All monetary values are in 2014 dollars. Source: Authors’ analysis.
Performance Based Logistics

Expand the use of Performance Based Logistics across military's Operations & Maintenance Accounts

- PBL used as mechanism to manage and sustain military assets
- Break the weapon acquisition “death spiral”
- Savings can fund procurement of new weapons

\[
\begin{align*}
\Delta \text{Debt} & \quad -1.5 \ T \\
\Delta \text{GDP} & \quad 0 \\
\text{Debt/GDP} & \quad -2.5\%
\end{align*}
\]
Discretionary Spending Effect on Debt-GDP ratio

\[
\frac{\Delta \text{ Debt}}{-4T} \quad \frac{\Delta \text{ GDP}}{+9.3T} \quad \frac{\text{Debt/GDP}}{-25.5\%}
\]
Medicare Reform
Dual Eligibility Healthcare

Implement a national Medicare-Medicaid Plan & Intelligent Assignment Algorithm for Medicare Part D’s Prescription Plans

- Massachusetts MMP: 82% of enrollees were satisfied; - 7.5% hospital admissions; 6.4% fewer ER visits
- Dual eligible cost 3x more than the average Medicare or Medicaid beneficiary
- Algorithm yield: savings of $716 per beneficiary

\[
\begin{align*}
\text{Δ Debt} & \quad -3.6 \text{T} \\
\text{Δ GDP} & \quad 0 \\
\text{Debt/GDP} & \quad -5\% 
\end{align*}
\]

Source: MedPac, Department of Health and Human Services, Cicero Institute, PGPF, Congressional Research Services, Health Affairs
Medicare Fraud

Implement machine learning algorithm to detect Medicare Fraud

- $100B a year paid to fraudulent Medicare claims
- Current fraud investigations use $300+ million to recover 3% of fraud
- 70% detection accuracy

Δ Debt: -6.3T
Δ GDP: 0
Debt/GDP: -11%

Entitlement Fraud (Billions)

Medicare Reform Effect on Debt-GDP ratio

\[ \Delta \text{Debt} = -9.9 \text{ T} \]

\[ \Delta \text{GDP} = 0 \]

\[ \text{Debt/GDP} = -16\% \]
Before and After

![Graph showing the comparison between Baseline and Our Proposals from 2020 to 2050. The graph indicates a significant increase in the percentage from 2020 (100%) to 2050 (220%), with a marked improvement under Our Proposals compared to Baseline.](image-url)

- Baseline:
  - 2020: 107.5%
  - 2050: 195%

- Our Proposals:
  - 2020: 107.5%
  - 2050: 195%
Interaction Effects

Taxes
- Financial Transaction Tax
- Itemized Deductions

Medicare Reform
- Medicare Fraud
- Dual Eligibles

Productivity
- Perkins V
- Pre-K
- Marijuana

- All Infrastructure Plans
- Performance Based Logistics
## Summary

<table>
<thead>
<tr>
<th>Component</th>
<th>Proposal</th>
<th>Debt : GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure</td>
<td>Public Infrastructure</td>
<td>-1%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Broadband Infrastructure</td>
<td>-6%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Environmental Infrastructure</td>
<td>-15%</td>
</tr>
<tr>
<td>Tax</td>
<td>Marijuana Tax</td>
<td>-6%</td>
</tr>
<tr>
<td>Tax</td>
<td>Financial Transactions Tax</td>
<td>-5%</td>
</tr>
<tr>
<td>Tax</td>
<td>Payroll Tax</td>
<td>-11%</td>
</tr>
<tr>
<td>Tax</td>
<td>Itemized Deductions</td>
<td>-2%</td>
</tr>
<tr>
<td>Discretionary</td>
<td>Perkins V Funding</td>
<td>-8%</td>
</tr>
<tr>
<td>Discretionary</td>
<td>Universal Pre-K</td>
<td>-15%</td>
</tr>
<tr>
<td>Discretionary</td>
<td>Performance Based Logistics</td>
<td>-2.50%</td>
</tr>
<tr>
<td>Medicare Reform</td>
<td>Dual Eligibility Healthcare</td>
<td>-5%</td>
</tr>
<tr>
<td>Medicare Reform</td>
<td>Medicare Fraud</td>
<td>-11%</td>
</tr>
<tr>
<td>Total Reduction</td>
<td>—</td>
<td>- 87.5%</td>
</tr>
</tbody>
</table>
Thank You!
Appendix

Public Infrastructure:
- "A 2009 report from Mckinsey & Company identified massive inefficiencies within physical infrastructure (offices and building spaces), as well as flaws in the capacity, reliability, transfer ability, and safety of current energy grids that are both proponents of excess carbon emissions, as well as extreme costs to the federal government that often result in governments of all levels opting for deferred maintenance." (Economic Policy Institute)
- "The ASCE discovered in its 2016 economic study, Failure to Act: Closing the Infrastructure Investment Gap for America's Economic Future, failing to close this infrastructure investment gap brings serious economic consequences including; 3.9 trillion losses to U.S. GDP by 2025, 7 trillion in lost business sales by 2025, and 2.5 million lost American jobs." (Infrastructure Report Card)
- "Under both projects, the majority of jobs are disproportionately male and Latino, and skew away from younger workers, and jobs created are disproportionately middle- and/or high-wage." (Economic Policy Institute)

Broadband Infrastructure:
- American Recovery and Reinvestment Act: "For every 1 dollar invested in broadband the economy reaps $4, and a $3 dollar decrease in healthcare costs due to telemedicine." (Purdue Center for Regional Development & Council of Economic Advisers)
- "Although 22 billion dollars has been investment in broadband expansion in the last 5 years, between 6%-12% of Americans do not have access to quality broadband network." (Brookings Institution)
- "Broadband Technology Opportunities Program within ARRA: which granted $4 billion in funding for high-speed fiber construction --> 233 projects across the nation." (Brookings Institution)
- "FCC Rural Digital Auction Fund: First FCC auction: 99.7 % of the locations being serviced will receive broadband with speeds at least 100/20 Mbps." (Securities and Exchange Commission)
Appendix

Environmental Infrastructure:
- “The majority of program revenue (58% through 2016) has been invested in energy efficiency programs that reduce consumers’ bills and reduce demand for power. Lower power demand resulting from energy efficiency means fewer emissions from power plants, and less money leaving the region to pay for imported fossil fuels.” (The Arcadia Center)
- Electricity prices in RGGI states have fallen by 5.7%, while prices have increased in the rest of the country by 8.6% (The Arcadia Center)
- “Hydropower dams under private ownership would produce over 20% more electricity per unit of capacity.” (Congressional Budget Office)
- “In 1997, the CBO estimated that the sale of the PMAs and related federal generation assets would raise up to $34 billion for the government and create net budgetary savings of up to $14 billion. Those totals would likely be higher today.” (Congressional Budget Office)

Marijuana Tax:
- “As of December 2020, the MORE act passed by congress works to move marijuana to a schedule 3 drug, giving doctors the ability to prescribe marijuana directly to patients. This move by the federal government significantly expands the potential of medicinal marijuana, as doctors now have access to a substitute for expensive, and addictive opioids and other types of painkillers, as well as access to comprehensive medical research and long-term studies.” (Congress.Gov / Forbes)
- “The legal cannabis market was worth an estimated $13.2 billion in 2019 and is expected to reach $20.1 billion in annual sales for 2020. Fueled by strong consumer demand, annual legal sales are projected to grow at a compound annual growth rate (CAGR) of 21%, to reach more than $41 billion by 2025.” (New Frontier Data)

Financial Transaction Tax:
- “Tax is imposed on transactions occurring within US and on transactions taking place outside of the country involving at least one U.S. Taxpayer (whether a corporation, partnership, citizen or resident).” (Congressional Budget Office)
- “As of 2016, 84% of total stocks were owned by the top 10% of households. Only 1.8% of stocks are owned by the bottom 60% of households.” (Institute on Taxation and Economic Policy)
- “More than 60% of trades for ticket sizes bigger than USD 10 million were executed in March via an algorithm.” (J.P. Morgan)
Appendix

Payroll Tax:
- "Perhaps surprisingly—but in harmony with this acceptance of progressivity roughly half (47 percent) of the wealthy actually favored raising the 'cap' on wages and salaries subject to Social Security payroll taxes, so that high-income people would pay higher payroll taxes than they now do." (Northwestern University, Democracy and the Policy Preferences of Wealthy Americans)
- "Every year, roughly 6 percent of covered workers have earnings above the taxable maximum." (Social Security Administration)
- "From the start of March to now, the group of billionaires’ total wealth has increased by $308 billion." (Jack Kelly, Forbes)
- "The taxable maximum would exceed $250,000 in calendar year 2037; after that, all earnings from jobs covered by Social Security would be subject to the payroll tax." (Congressional Budget Office)
- "When fully phased in, FRA 70 could reduce average Social Security benefit amounts from 18.1 percent to 20.0 percent and eliminate 31 percent of Social Security's actuarial imbalance." (Social Security Administration)

MID/AGI:
- "By driving up housing costs, the mortgage interest deduction reduced homeownership rates by 5% in 2018." (Bill Emmons, American Economic Review)
- "Analyses claiming that taxes on millionaires and billionaires will slow economic growth are fundamentally flawed." (Economics Policy Institute)
Appendix

Perkins V:
• "In general, the participants in these programs reap substantial returns. The costs are virtually zero (even negative) for secondary CTE, and yet they get positive earnings, even in the short-term. For postsecondary CTE, there are tuition costs and foregone earnings, but the economic payoffs, even in the short-term, more than offset these costs." (W.E. Upjohn Institute for Employment Research, 2011)
• Taxpayer Return on Investment: $7 to $1; "The ratio of the present values of projected additional lifetime taxes paid by the participant (plus any decrease in unemployment insurance benefits), in comparison to the public costs of the program. Additional taxes are those additional taxes projected to be paid in comparison to the taxes projected to be paid by the non-participant control group." (Washington Workforce Training & Education Coordinating Board, 2019)
• Participant Return on Investment: $26 to $1; "The ratio of the present values of additional lifetime participant earnings and employee benefits to public costs of the program. Additional lifetime participant earnings and benefits are additional earnings and employee benefits received (minus participant program costs, taxes on added income, and any loss in unemployment insurance benefits), when compared to the non-participant control group." (Washington Workforce Training & Education Coordinating Board, 2019)

Universal Pre-K
• "Studies show that children from low-income families are less likely to have access to high-quality early education, and less likely to enter school prepared for success. By third grade, children from low-income families who are not reading at grade level are six times less likely to graduate from high school than students who are proficient." (The Learning Policy Institute, 2019)
• "Because families of all backgrounds stand to benefit, universal programs have in the past drawn broad, bipartisan political approval and attracted the support of middle-class and affluent families with political and social capital." (The Century Foundation, 2017)
• Savings from Universal Pre-K: "Savings related to juvenile justice, welfare, and education would exceed the annual cost of funding state Pre-K by the year 2030." (The Urban Child Policy Institute)
• Return on Investment: $8.90 for every $1 spent: "Increases the compensation of workers by $108.4 billion and reduce the costs to individuals from crime, child abuse, depression, and tobacco consumption by $114.7 billion." (The Washington Center for Equitable Growth, 2015)
Appendix

Performance Based Logistics:
• “The central purpose of adopting the PBL reforms within the Department of Defense should be to transform the death spiral of defense acquisition into a recover spiral. The recovery spiral will use the savings from the adoption of performance-based logistics to fund new purchases of weapons and equipment that will in turn relieve long-term cost growth pressures within the logistical system.” (The Heritage Foundation)
• “Performance Based Logistics already successfully implemented amongst following areas of Aerospace Industries Association: Life Cycle Product Support, Management of Commodities, Mobility Assets and Infrastructure, Theater Services, Logistics Information Systems.” (The Heritage Foundation)
• “Savings could amount to as much as $32 billion a year.” (Aerospace Industries Association)

MMP, Part D:
• “Massachusetts MMP: 82% of enrollees were satisfied with program. 7.5% less hospital admissions. 6.4% fewer emergency department visits.” (Commonwealth Care Alliance)
• “Dual eligible collectively costs: $350-400 billion (Department of Health and Human Services) 12 million x $34,000”
• “39% of dual eligible hospitalizations are preventable.” (Journal of the American Geriatric Society) • “(MMP)Three-way contracts were preferred by every stakeholder.” (MedPac study conducted in 2018) • “2020 Savings= 50 Billion * .75(Federal Government= Total Federal Government Savings” (Cicero Institute)
• “Centers for Medicare and Medicaid Services project that such spending will continue climbing to $1,635 per capita by 2027, an increase of 60 percent... U.S. spent about $330 billion on prescription drugs in 2017—a 40 percent increase from 2007.” (Peter G. Peterson Foundation, 2019)
• “Random assignment has caused several problems: (1) disruptions in plan coverage for 5.9 million between 2007 and 2010; (2) high beneficiary spending for those assigned to ill-fitting plans that didn’t cover drugs enrollees took; potential out-of-pocket costs could be over $6000; (3) high government spending for those assigned to plans requiring high copayments.” (Health Affairs, 2013)

Medicare Fraud:
• “The AI groups randomly select data and place them into 50:50, 65:35, 75:25 and 80:20 majority-to-minority distributions. Each distribution of class was tested 5-fold cross-validation, 10 times each with randomly-selected under-sampled data, followed by accuracy-testing statistical software that showed a 95% confidence level.” (University of Central Florida)
• “The amount saved will grow as the Medicare budget and enrollment increases. CMS projections show a 7.6% percent increase in enrollment yearly in the next decade, increasing Medicare spending further.” (Centers for Medicare and Medicaid Services)