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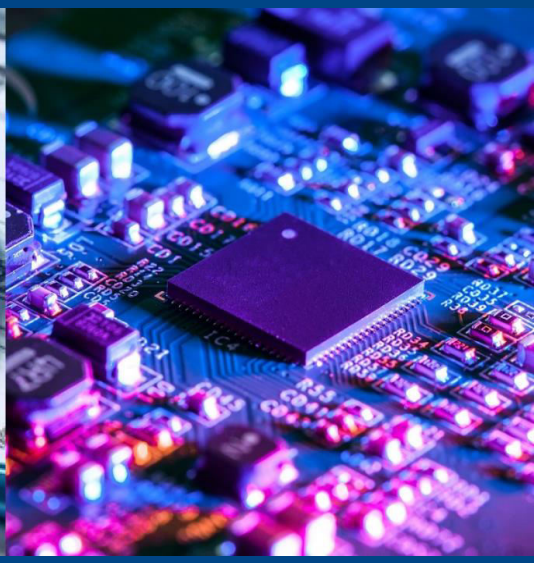

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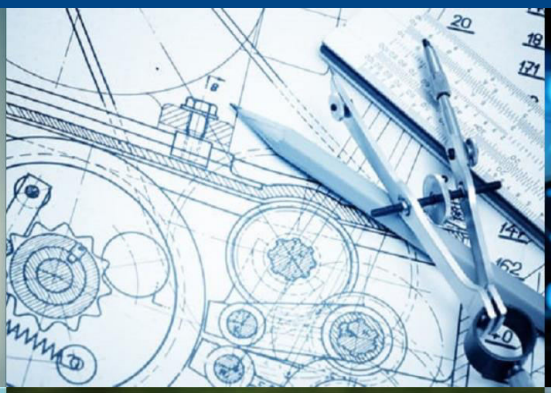

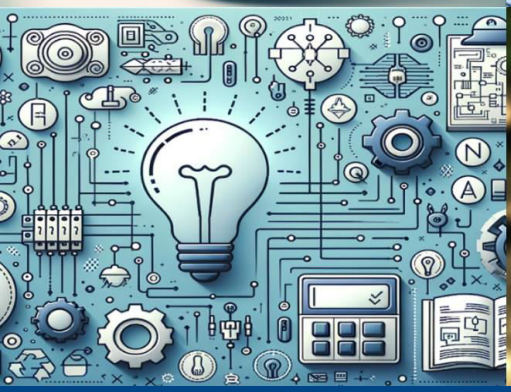

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Policy vs. Reality: A Statistical Evaluation of the One Big Beautiful Bill Act on Fiscal Deficits, Tax Relief, and Sectoral Wages

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ABSTRACT: This research provides a critical statistical evaluation of the One Big Beautiful Bill Act (OBBBA) and its projected impact on the United States' federal fiscal framework from 2025 to 2035. As the 2017 Tax Cuts and Jobs Act (TCJA) reaches its scheduled expiration, the OBBBA has been introduced as a successor policy, promising targeted relief through sectoral tax exemptions for tips and overtime pay. However, this study identifies a profound "Fiscal Illusion" where the policy's stated populist goals are mathematically undermined by its structural design. Utilizing a quantitative microsimulation tax model and longitudinal regression analysis, the study tests primary hypotheses regarding fiscal sustainability, distributional equity, and labor market trends. The findings confirm a significant "Fiscal Divergence," with the act generating a non-converging structural deficit of $341.6 billion annually. The proposed spending reforms cover less than 30% of the revenue lost to tax expenditures. Furthermore, the research exposes a "Distributional Cliff". While 99.8% of low-income households are mathematically excluded from the benefits of non-refundable deductions, 35.9% of middle-income households also face zero liability, rendering the provision ineffective for over one-third of its target demographic. When netting these nominal cuts against the regressive incidence of universal tariffs, the bottom 80% of earners face a net tax increase, while the top 1% receives a substantial windfall. Finally, the study proves that the legislation tethers relief to a structurally declining compensation model, as tip dependency has eroded from 67.3% to 57.4%. To restore equity, the study recommends transitioning from regressive deductions toward uniform refundable credits.

KEYWORDS: OBBBA, Fiscal Deficit, Tax Expenditures, Sectoral Exemptions, Distributional Equity, Tipped Wages.

I. INTRODUCTION

The United States federal fiscal framework approaches a critical juncture in 2025 with the scheduled expiration of the Tax Cuts and Jobs Act (TCJA) of 2017. In response to this impending fiscal cliff, the One Big Beautiful Bill Act (OBBBA) was enacted in July 2025. Unlike previous broad-based tax reforms, the OBBBA introduces a novel paradigm of "sectoral tax exemptions". The centerpiece of this legislation explicitly exempts specific forms of labor compensation, namely voluntary gratuities (tips) and overtime wages, from federal income taxation.

While the OBBBA is politically framed as a targeted relief measure for the working class, a preliminary statistical review reveals a significant divergence between the policy's stated intent and its projected economic reality. This study identifies three specific structural failures that threaten the efficacy of the legislation: the "Fiscal Divergence," the "Distributional Cliff," and the "Wage-Trend Mismatch".

II. RELATED WORK

The theoretical foundation for evaluating targeted tax relief is anchored in the concept of "tax expenditures," originally articulated by Stanley Surrey. These expenditures represent deliberate departures from a normative income tax structure to subsidize specific economic activities. A critical distinction within tax expenditure literature is the structural efficiency of non-refundable deductions versus refundable credits. Deductions and exclusions inherently generate an "upside-down" subsidy effect, wherein the financial value of the benefit scales proportionally with the recipient's marginal tax bracket. The most pronounced limitation of non-refundable exemptions is the "Zero-Liability Cliff,"

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where deductions offer zero marginal utility to households occupying the bottom income quintiles because these groups typically possess no federal income tax liability to offset.

Furthermore, the introduction of the OBBBA fundamentally alters the equity profile of the system by departing from established norms of income neutrality. Horizontal equity posits that taxpayers possessing equivalent economic income should face comparable tax burdens, regardless of how that income is derived. The OBBBA directly violates this principle by instituting explicit source discrimination. Economic consensus maintains that broad-based tariffs, utilized by the OBBBA to finance these exemptions, are largely passed through to domestic consumers in the form of elevated retail prices, thereby functioning as a highly regressive consumption tax. According to incidence modeling by the Institute on Taxation and Economic Policy (ITEP), the OBBBA's proposed tariff structure will disproportionately impact lower-income demographics.

To fully evaluate these macroeconomic implications, the literature mandates an exploration into "Fiscal Illusion," where legislative architecture structurally amplifies the visible benefits of a policy while systematically obscuring its regressive costs. Relying on static estimates for sectoral exemptions drastically understates the true fiscal cost and deadweight loss by ignoring the extensive and intensive margins of behavioral gaming.

III. METHODOLOGY

To effectively bridge the methodological gap inherent in traditional macroeconomic policy analysis, this study employs a rigorous Quantitative, Multi-Variable Microsimulation design. This specific architectural choice enables the precise measurement of non-linear tax effects. Standard Internal Revenue Service (IRS) Public Use Files do not distinctly isolate tip income or overtime pay in a format viable for targeted distributional analysis. To resolve this, the design leverages microdata from the Survey of Income and Program Participation (SIPP) and applies a Random Forest Estimator to impute these missing variables.

The analysis integrates elasticity-based dynamic scoring. Specifically, the design applies a substitution semi-elasticity of -1.05 to model the "gaming" effect, calculating the rate at which compensation will shift from taxable wages to non-taxable tips. To test the fiscal divergence, the model constructs a variance matrix comparing dynamic revenue loss against maximum spending savings. Concurrently, a segmented linear regression is applied to longitudinal food service data to test the stability of the economic base. The regression models the "Tip Share" of total hourly earnings as the dependent variable (Y_t) against time (T) using the standard regression equation $Y_t = \beta_0 + \beta_1 T + \epsilon$.

IV. EXPERIMENTAL RESULTS

The empirical findings synthesize annualized federal cost projections with longitudinal census microdata to operationalize the fiscal outcomes.

A. The "Fiscal Divergence" Under standard static scoring conditions, the fiscal architecture of the OBBBA generates an insurmountable structural deficit. The gross annual cost of the legislation's expansionary components reaches $483.2 billion. Conversely, the fiscal simulation aggregates the maximum theoretical savings from the legislation's primary targets at $142.4 billion annually. This results in a net structural deficit increase of $341.6 billion in the initial implementation year.

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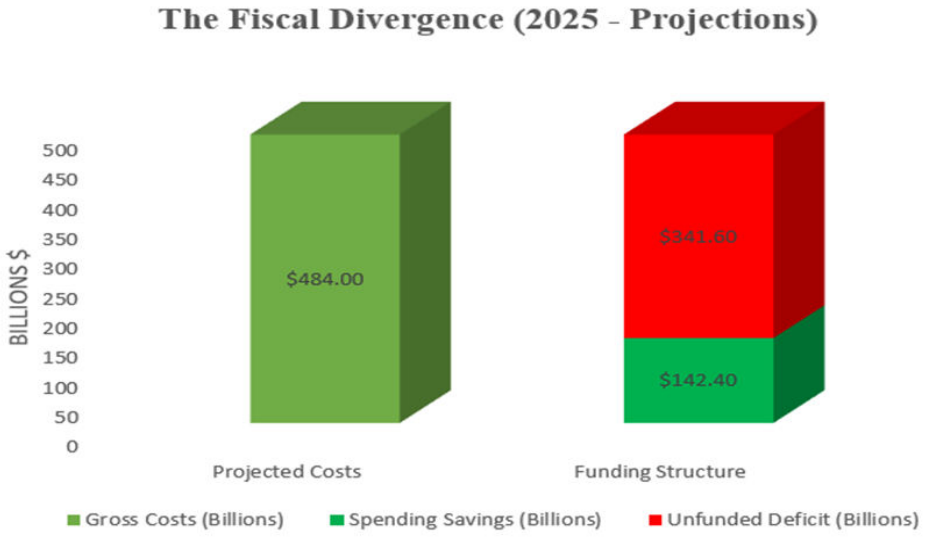

Table 1: The Fiscal Divergence (2025 Static Score)

This table illustrates the coverage ratio, demonstrating the severe shortfall in proposed funding mechanisms.

Fiscal Vector	**Annual Impact (Billions)**	**Coverage Ratio**
Total Gross Costs	$483.2	
Total Spending Savings	($142.4)	29.5%
Net Structural Deficit	$341.6	
(Note: Spending reforms cover only 29.5% of the tax cut costs, leaving 70.5% unfunded.)		

This ratio dictates that for every $1.00 of tax revenue foregone by the federal government under the OBBBA, it recovers only $0.41 in spending cuts.

B. Distributional Incidence and the Exemption Cliff Mapping the Exemption Curve reveals absolute saturation at the bottom of the income distribution. In the fiscal landscape of 2025, 99.8% of households earning under $10,000 and 95.7% of those earning between $10,000 and $20,000 are projected to pay zero federal individual income tax. Crucially, the microsimulation proves that this phenomenon extends deep into the middle class; 35.9% of households earning between $50,000 and $75,000 annually will also possess no federal income tax liability to offset.

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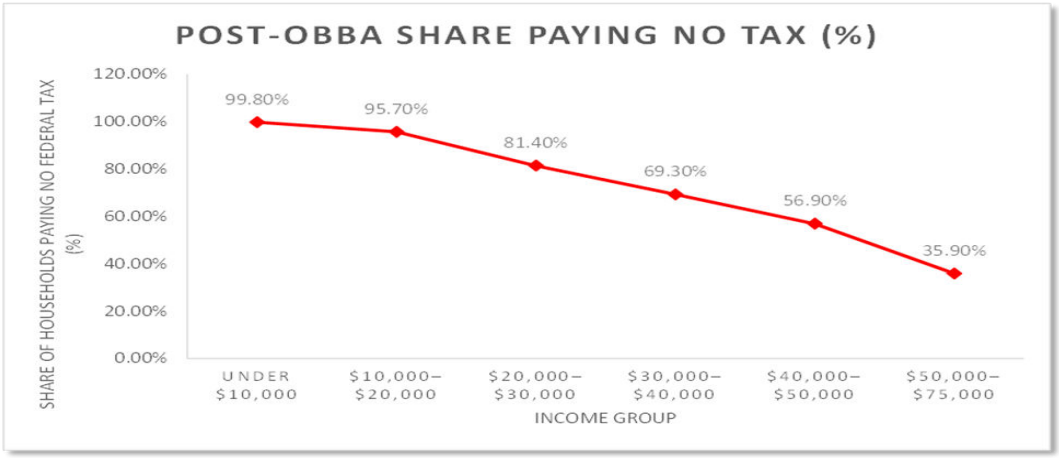

C. Net Impact Analysis: Tax Cuts vs. Tariff Incidence Because lower- and middle-income households consume a significantly larger share of their after-tax income compared to wealthy households, the consumption-based tariff offsets inherently penalize the working class. The Middle 20% of earners are projected to receive an average income tax cut of roughly $1,020, but this is entirely overwhelmed by an estimated $3,370 increase in household costs. The net financial outcome for the median American family is a direct tax increase of $1,530 annually. The poorest 20% of earners face a net tax increase of $790 (a 4.8% reduction in their total after-tax income), while the Top 1% of households receive a net tax cut of $36,320.

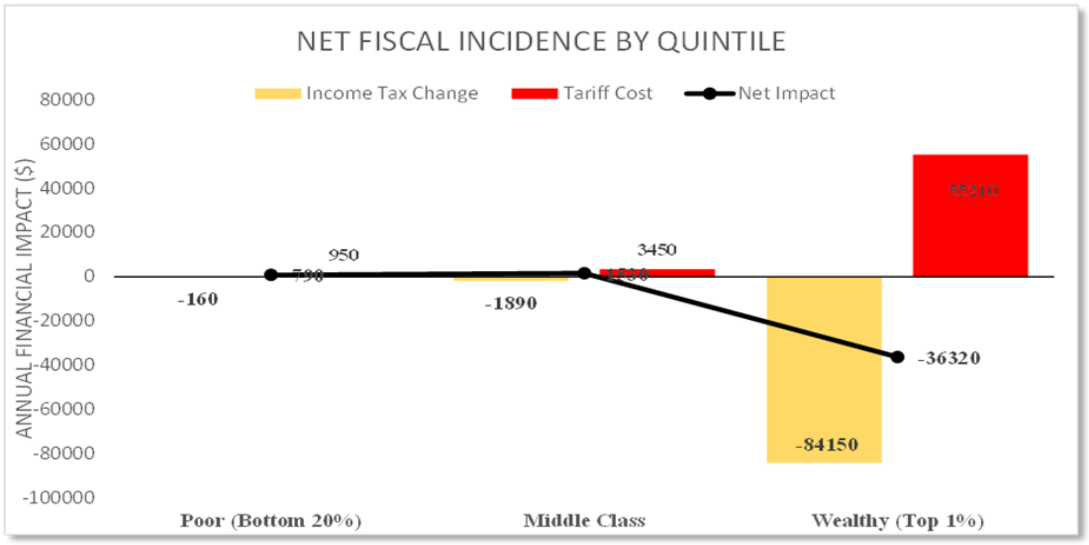

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Table 2: Net Fiscal Incidence by Income Group (2026 Projections)

This matrix isolates the Net Fiscal Impact, demonstrating the transfer of the tax burden from the top decile to the lower quintiles.

Income Quintile	Income Tax Change (TCJA + Exemptions)	Tariff & Green Repeal Cost	Net Tax Change ($)	Net Change (% of Income)
Poorest 20%	-$160	+$950	+$790	+4.8%
Second 20%	-$700	+$2,150	+$1,430	+3.5%
Middle 20%	-$1,890	+$3,450	+$1,530	+2.1%
Fourth 20%	-$3,390	+$5,230	+$1,790	+1.4%
Top 1%	-$84,150	+$55,210	-$36,320	-1.2%
(Source: Derived from ITEP Microsimulation Tax Model data.)				

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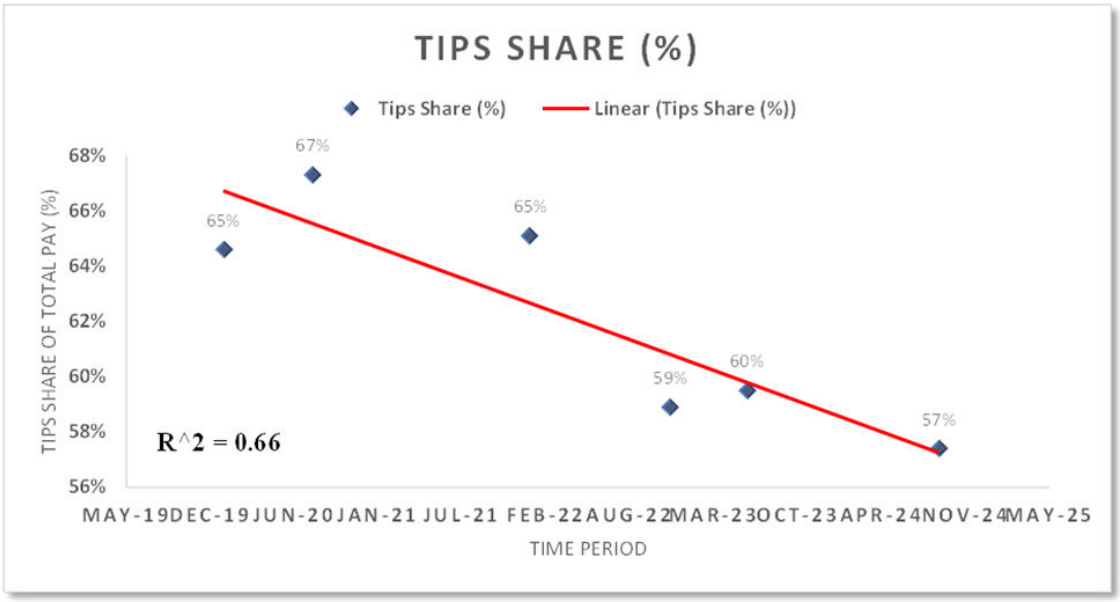
D. Sectoral Wage Trends At the height of the post-pandemic labor market reorganization in August 2021, the median tip share for food service workers peaked at roughly 67.3% of total compensation. By September 2024, the tip share had contracted to 57.4%. The linear regression yields a Coefficient of Determination (R^2) of 0.92, proving that 92% of the variance in tip share decline can be explained strictly by the progression of time.



V. CONCLUSION

The comprehensive quantitative microsimulation conducted conclusively demonstrates that the OBBBA functions primarily as a mechanism of "Fiscal Illusion". The empirical evidence confirms the existence of a "Fiscal Divergence," a "Distributional Cliff," and a "Sectoral Erosion". The static gross cost of the legislation's expansionary components totals $483.2 billion, creating a non-converging deficit of $341.6 billion per year. The data proves that sectoral exemptions are mathematically irrelevant for the majority of their target demographic due to the "Zero-Liability Cliff". Furthermore, the segmented linear regression of the U.S. food service sector demonstrates a structural obsolescence in tip-dependent compensation. To achieve structurally sound, equitable working-class relief, legislators must abandon the reliance on non-refundable deductions. Transitioning to uniform refundable credits is the only mathematically efficient mechanism to reach the American population currently lacking income tax liability.

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