

# Economic and Fiscal Impact Assessment of the Transformational Brownfield Plan Submitted by Bedrock Management Services, LLC



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University of Michigan Research Seminar in Quantitative Economics &  
W.E. Upjohn Institute for Employment Research

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# Summary of the Transformational Brownfield Program



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# What is a Brownfield?

- Traditionally, a property with either real or potential environmental contamination that restricts the property's future uses
- Under the TBP program, also includes blighted, functionally obsolete, historic, and transit-oriented properties

# Tax Incentives for Developers

- A developer with an approved TBP may capture a share of *incremental* tax revenue generated at the project site associated with:
  - Construction period personal income tax revenues
  - Sales and use taxes paid on construction materials
  - Personal income tax revenues paid by residents of the developed property
  - Personal income tax withholding from individuals employed within the developed property
  - State and local property tax revenue from the developed property

# The two key thresholds for TBP approval

1. The TBP must be expected to result in an overall positive fiscal impact to the state net of tax capture, taking into account:
  - Potential displacement of tax revenue from other areas of the state
  - Effects on local economic development
2. There must be a demonstrated gap in financing, i.e. the TBP would not be economically viable without the tax capture.

# The Bedrock TBP



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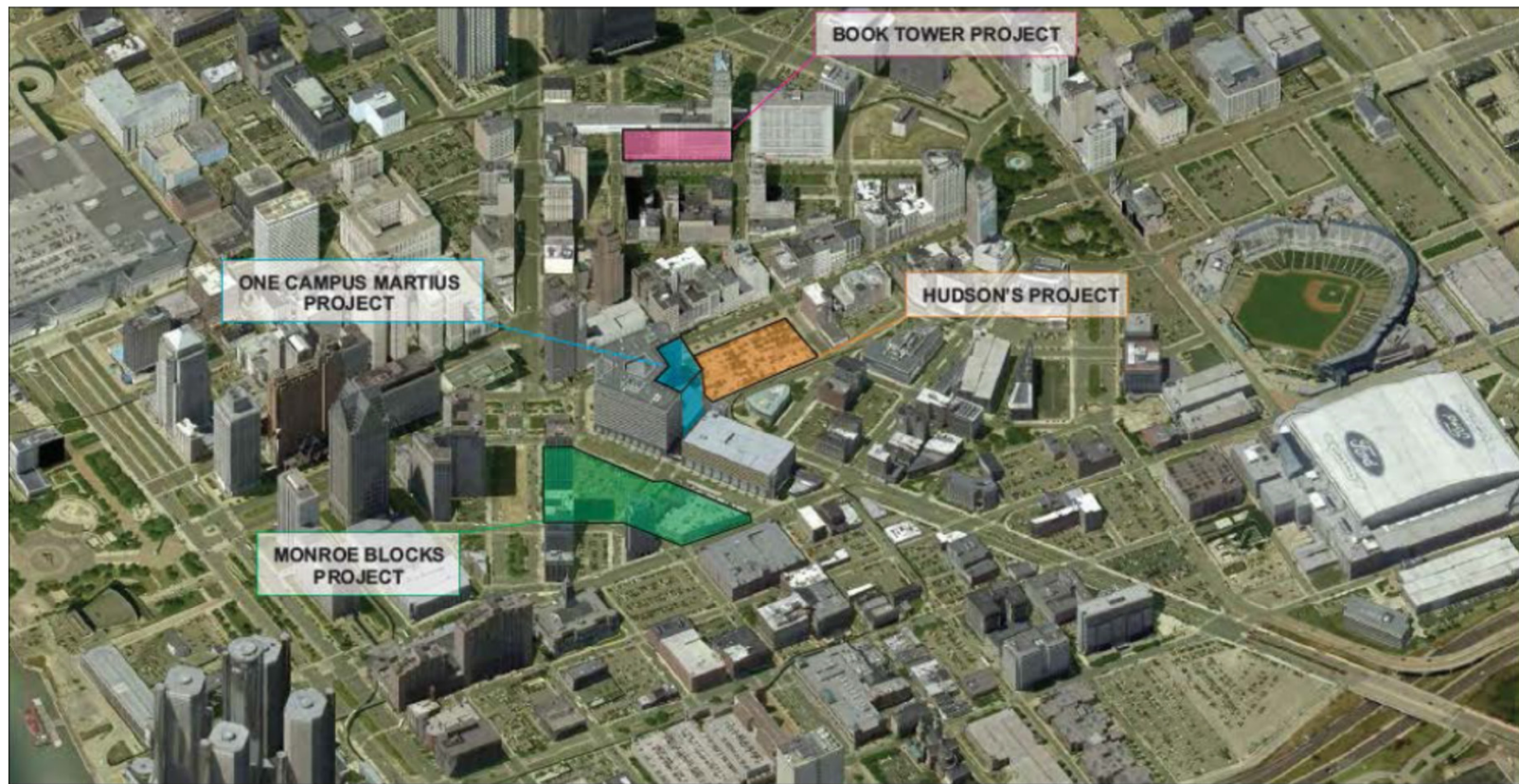
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# The four-site Bedrock TBP

- Official TBP:
  - “Transformational Brownfield Plan for the Hudson’s Block, Monroe Blocks, One Campus Martius Expansion, and Book Building and Book Tower Redevelopment Projects”
  - Bedrock Management Services, LLC
- Collectively, the sites will include office, retail, hotel, residential, event/exhibition, and public space uses
- Location: Downtown Detroit
- Total investment costs: \$2.15 billion
- Total proposed tax capture: \$618 million

The sites are in close proximity to each other in downtown Detroit

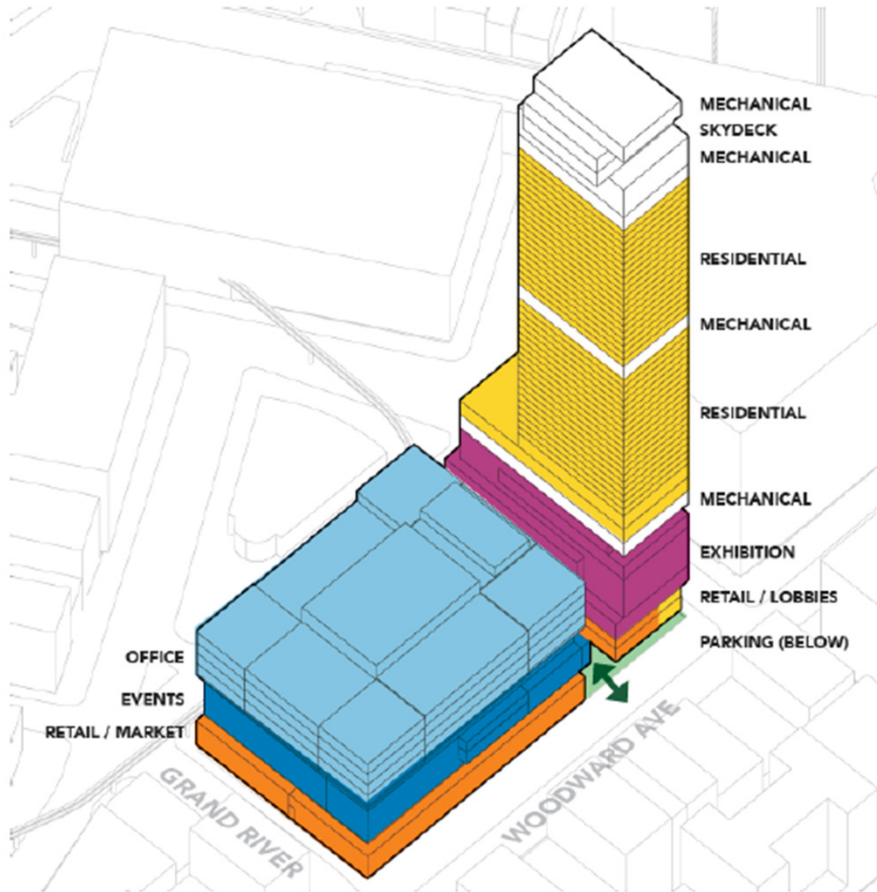


Attachment A-1, Bedrock TBP (p.46)



# HUDSON'S SITE DEVELOPMENT

## PROGRAM SUMMARY (GROSS AREAS)



RETAIL	
Total Retail Area:	102,805 gsf
EVENTS	
Total Events Area:	167,968 gsf
OFFICE	
Total Office:	262,662 gsf
EXHIBITION	
Total Exhibition:	93,464 gsf
RESIDENTIAL	
Total Area:	439,217 gsf
Total Residential:	330 units
PARKING	
Total Parking:	700+ spaces
<b>TOTAL AREA*:</b>	<b>1,000,000+ gsf</b>
*Excludes Parking	

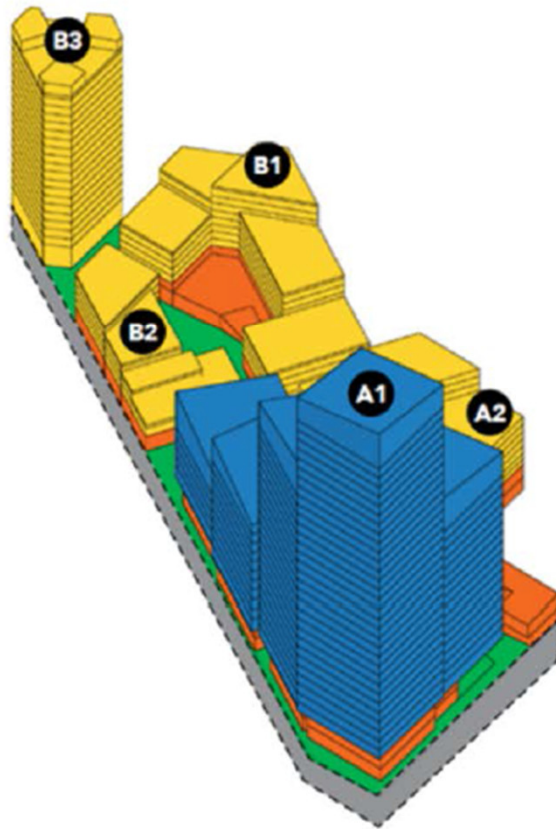
Investment costs:  
\$909 million

Proposed tax capture:  
\$193 million

Attachment C-1, Eedrock TSP (p.59) **Please Do Not Distribute**

# MONROE BLOCKS

## PROGRAMMING SUMMARY



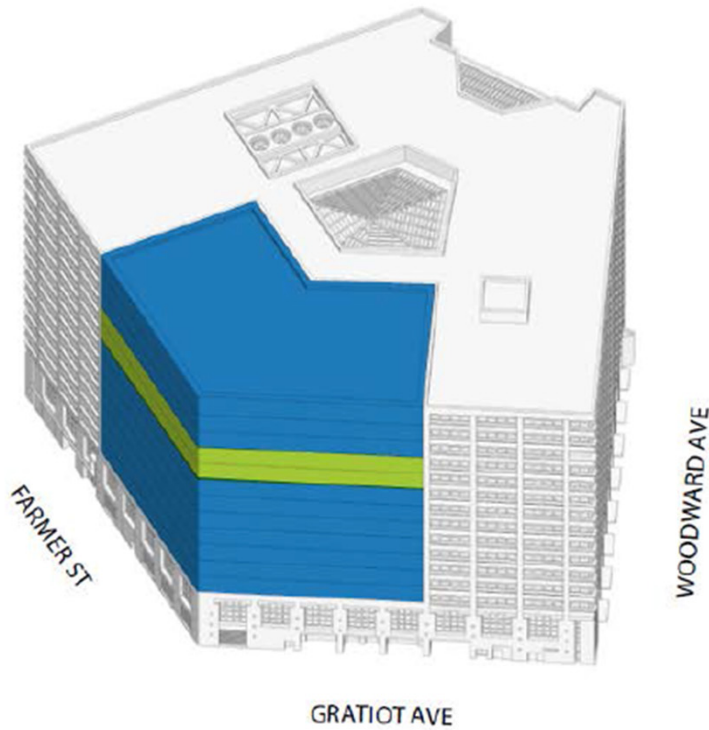
RETAIL	
Building A1:	63,700 gsf
Building A2:	53,500 gsf
Building B1:	38,000 gsf
Building B2:	13,800 gsf
<b>Total Retail:</b>	<b>169,000 gsf</b>
OFFICE	
Building A1:	814,000 gsf
<b>Total Office:</b>	<b>814,000 gsf</b>
RESIDENTIAL	
Building A2:	136 units
Building B1:	153 units
Building B2:	62 units
Building B3:	131 units
<b>Total Residential:</b>	<b>482 units</b>
<b>Total Area:</b>	<b>433,000 gsf</b>
PUBLIC SPACE	
<b>Total Public Space Area:</b>	<b>1.5 acres</b>
PARKING	
<b>Total Spaces:</b>	<b>1,261 spaces</b>
<b>TOTAL FLOOR AREA*:</b>	<b>1,420,000 gsf</b>

\*Excludes Public Space and Parking

Investment costs:  
\$830 million

Proposed tax capture:  
\$295 million

# OCM ADDITION PROGRAMMING SUMMARY



OFFICE	
Total Office Area:	269,160 sf

AUDITORIUM SPACE	
Total Auditorium Area:	41,040 sf
Total Auditorium Capacity:	600 people

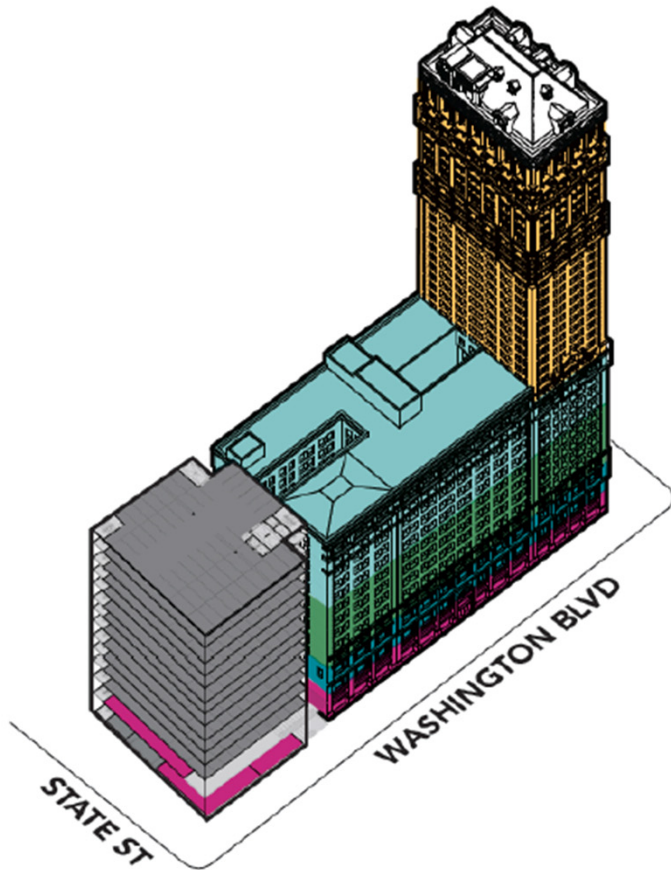
TOTAL PROJECT AREA:	310,200 sf
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Investment costs:  
\$95 million

Proposed tax capture:  
\$67 million

# BOOK TOWER DEVELOPMENT

PROGRAM SUMMARY (GROSS AREAS)



RESIDENTIAL	
FLOORS 14-36	143,083 gsf
TOTAL UNITS	95 units
OFFICE	
FLOORS 4-8	106,400 gsf
EVENTS	
FLOORS 2-3	49,780 gsf
HOTEL	
FLOORS 9-13:	106,400 gsf
TOTAL ROOMS:	200
RETAIL	
MAIN FLOOR:	28,890 gsf
PARKING	
FLOORS 1-14:	157,490 gsf
TOTALS	
TOTAL GSF	592,043 gsf
RESIDENTIAL UNITS	95 units
HOTEL ROOMS	200 rooms

Investment costs:  
\$311 million

Proposed tax capture:  
\$63 million

Attachment C-4, Eedrock TSP (p. 73) **Please Do Not Distribute**

# Methodology—Economic Impact Analysis



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# Construction Inputs

- Soft Costs
  - REMI automatically allocates portion of hard cost construction inputs into soft costs
  - We had separate soft cost info: allocate a portion of those to hard cost policy variables
- Hard Costs
  - Detailed industry sales variables for multifamily residential construction
  - Highways and streets construction (parking garages)
  - Commercial structure construction
  - Other nonresidential structure construction
  - Initial tenant improvements

# Construction Inputs

- Tenant Improvements
  - Non-residential maintenance and repair construction
    - Initial value provided by developer
    - Refresh 20% of initial spend per year starting year 6 of operations
  - Residential maintenance: 5% of residential rent payments annually
- Producer Durables
  - Computer, communications, and furniture investment
  - Values provided by developer seemed conservative based on consultation with private sector developers
- Capital Stock
  - Added total value of nonresidential and residential construction activity to capital stocks
  - REMI model endogenously reduces construction activity in future years
  - Not all of the new construction will be treated as “net new”

# Employment Impacts

- Five Major Industries
  - Retail trade
  - Hotels
  - Restaurants
  - Events and conferences
  - Office sector/“white collar”
- First four line up with standard REMI industries
- Had to allocate white collar employment across industries ourselves



# Employment Impacts: Non-Office

- Developer provided data on employment, square footage, and average wages for each sector
  - Benchmarked employment/sq. ft. using data from Avention/Dun and Bradstreet
  - Benchmarked wages using QCEW data
- Entered all employment using firm policy variables
- Developer projected 2% annual wage increases
  - Conservative relative to REMI baseline

# Employment Impacts: Office

- Distributed “Office” activity across 13 REMI industries using Dun and Bradstreet employment data for Detroit CBD

Sector	Share of Employment
Publishing industries, except Internet	14.1%
Motion picture and sound recording industries	1.0%
Internet publishing, broadcasting; ISPs, search portals; data processing; Other information	0.5%
Broadcasting, except Internet	0.9%
Telecommunications	9.6%
Monetary authorities; Credit intermediation and related activities; Funds, trusts	9.1%
Securities, commodity contracts, investments	1.4%
Insurance carriers and related activities	10.5%
Professional, scientific, and technical services	38.2%
Management of companies and enterprises	0.2%
Administrative and support services	10.4%
Real estate and related	4.1%
Rental and leasing services; Lessors of nonfinancial intangible assets	0.0%

# Employment Impacts: Office

- Modified distribution slightly based on developer's plans
- Bedrock is part of the Quicken Loans Family of Companies
  - Require 400,000 s.f. of space by 2023
  - Bedrock provided us with industry distribution of that space
- 13% of that space will fall under Management of Companies
  - Treated as "exogenous"
- Entered all other Office employment using firm policy variables
  - Conservative: REMI defaults for mortgage industry reflect more substitution than is likely for Quicken Loans
- Validated employment assumptions using data on employment/sq. ft. in downtown Detroit using Avention and other data

## Tourism Impacts

- Estimate avg. of 1.7 million annual visitors
- We estimate only 60,000 are net new visitors to MI drawn primarily by Hudson's site
- Estimate they will spend \$64 each in Detroit
- Entered using exogenous production policy variables
  - Retail trade
  - Transit and ground passenger transportation
  - Performing arts and spectator sports
  - Food services and drinking places

## Amenity Benefits

- Brownfield redevelopment replaces a negative externality with a positive externality
- Literature review of residential redevelopment
  - Aggregate increase in local property values 0.1–5 times initial investment
  - Closest study (from Cleveland) implies 0.9 times increase
- Reduce “real estate price” policy variable
  - Better amenities reduce the effective cost of obtaining same utility from housing
  - No unwanted spillovers to other parts of model
- No amenity impact of non-residential investment

## Migration Impact

- REMI assumes new migrants to Michigan will have state average incomes
- Bedrock TBP will feature high-end residences
  - Should draw higher-income migrants
- Estimate 28% of development residents will come from out of state/those who would otherwise have left
- Adjust average incomes of net new migrants to state using difference between projected and state average incomes

## Accounting for Tax Incentives

- REMI does not enforce budget balance
- Endogenously generates increase in government employment from private sector expansion
- Must account separately for cost of tax incentives
- Costs to local government negligible in this TBP
- Allocate costs to state government across all counties
  - Use distribution of state government employment

# Methodology—Fiscal Impact Analysis





## Economic to Fiscal Impacts

- REMI PI+ model does not generate revenue impacts
- Cannot simply apply statutory tax rates
- Previously developed “tax calculator”
  - Updated for this project
  - Post-process REMI economic impacts
- Apply average effective rates to statewide increase in taxable incomes
  - Use BEA personal income data for tax bases
  - Average rates from FY 2013–2016
  - Six tax categories

# Translating Economic Impacts to Fiscal Impacts

- Business taxes
  - Base: private sector earnings (private wages and salaries, private employer-paid benefits, and proprietors' income)
  - Tax revenue calculation (numerator) adds back revenue reduction from prior tax incentives/credits
  - Effective rate: 0.56%
- Personal income taxes
  - Base: wage and salary income, proprietors' income, and (estimated) capital income subject to MI personal income tax
    - Capital income subject to tax is measured as a proportion of BEA-reported dividend and interest income
    - In Michigan, IRS-reported taxable dividend, interest, and capital gains income averages 86.5% of BEA-reported dividend and interest income
  - Effective rate: 3.04%

# Translating Economic Impacts to Fiscal Impacts

- Sales and use tax revenue
  - Base: wage and salary income, proprietors' income, taxable capital income, and the cash income portion of personal transfer payment income, minus employee contributions for social insurance and personal tax payments
  - Effective rate: 3.26%
- Gambling tax revenue
  - Base: same as for sales and use tax
  - Effective rate: 0.34%

## Translating Economic Impacts to Fiscal Impacts

- State property tax revenue
  - Base: sales and use tax base plus imputed rental income of owner-occupied property
  - Effective rate: 0.66%
- All other tax revenue
  - Base: same as for sales and use tax
  - Effective rate: 0.55%

# Defining Net Fiscal Benefit

- Consider increased taxes less cost of incentives
  - Do not consider increased costs from new residents
  - Do not consider increased taxes for local governments
- Net Present Value concept
  - 35 year benefit-cost window considered from start of construction (2017–2052)
- Discount rate: 6%
  - Compared to yields on recent TIF bonds
  - Taxable or taxable equivalent yields
  - Not for public facilities
  - No general obligation protection or other backstop

# Results



# Summary

- Total PV Increased Revenues: \$861 million
- Total PV Tax Incentives: \$265 million
- NPV Fiscal Benefit to State: \$596 million
- Ratio of Benefit to Cost: 3.2
  - Adverse Scenario: ratio of 2.4
- Statewide increase in employment ~8,000
  - About 56% in “office” jobs
  - Total jobs multiplier roughly 1
- State population increases ~16,000 by 2052

Figure 1: Projected Employment at the TBP Sites

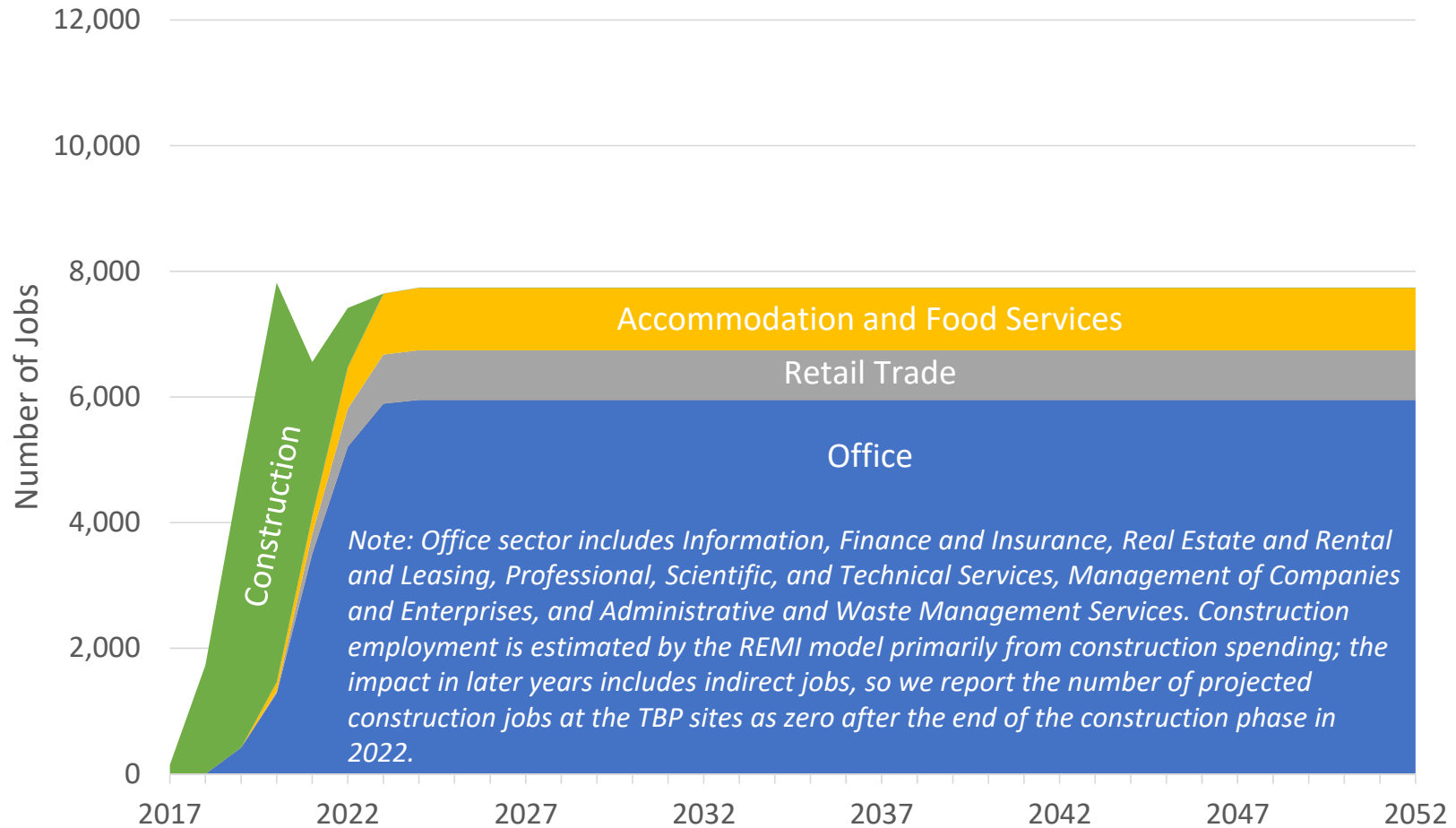
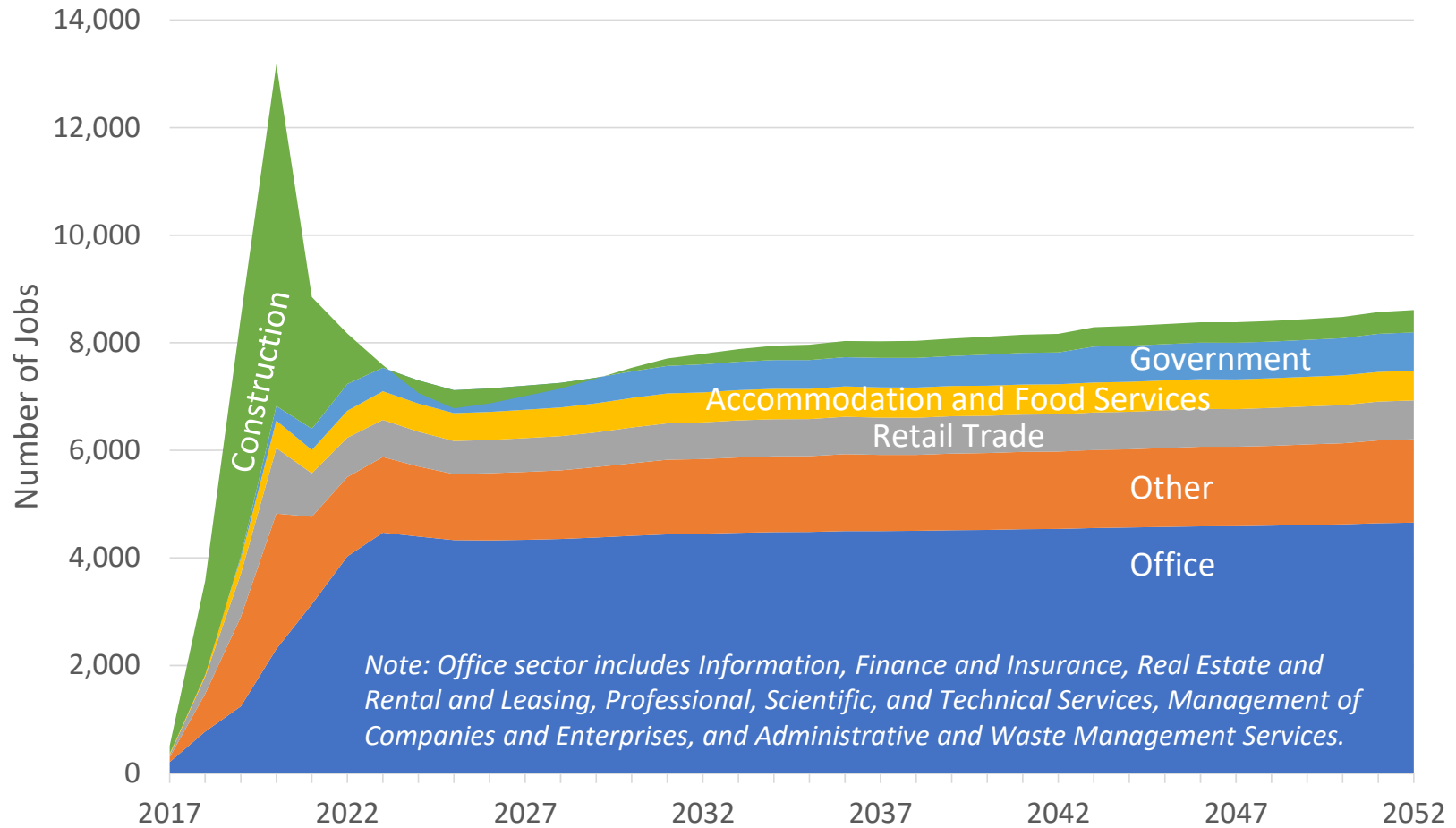




Figure 2: Statewide Net Job Additions



### Direct Jobs vs Net Increase in Statewide Employment by Sector, 2035

	Direct Jobs	Net Increase in Employment
Office	5,955	4,483
Accommodation and Food Services	993	563
Retail Trade	790	689
Construction	0	285
Government	0	535
Other	0	1,407
Total	7,738	7,963

Figure 3: Increase in State Population

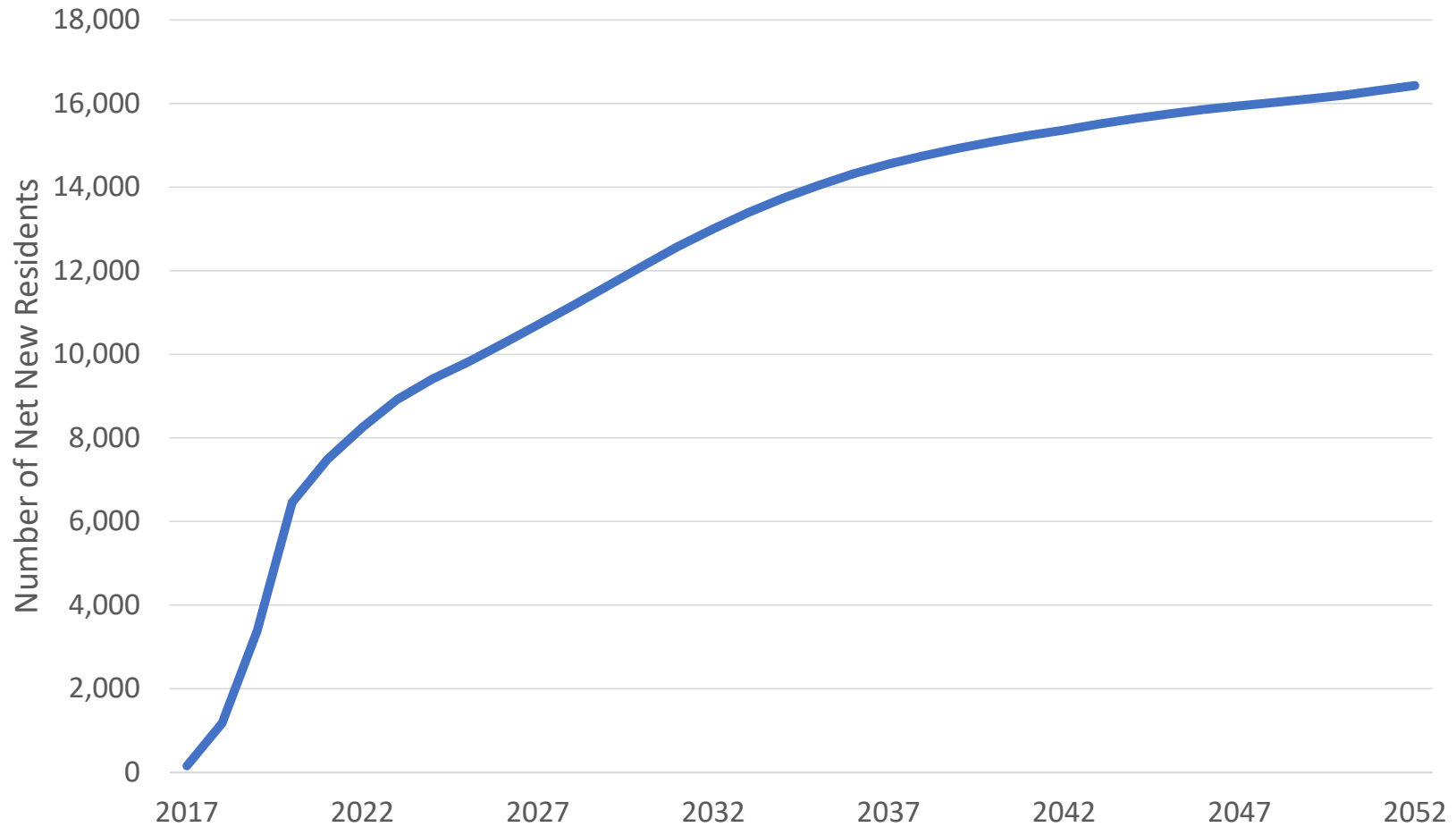


Figure 4: Increase in Michigan Real Personal Income

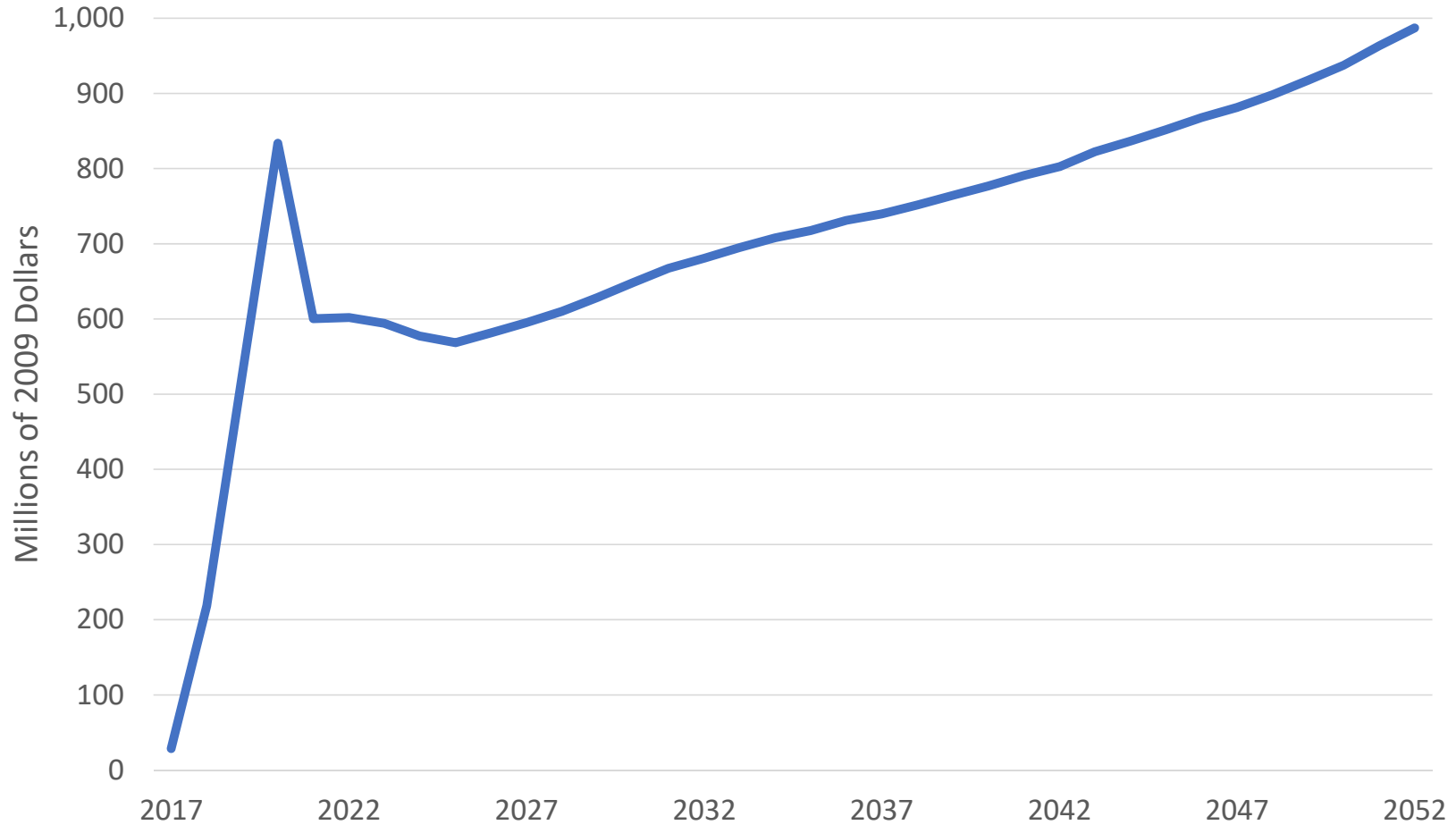


Figure 6: Michigan Tax Incentives and Increased Tax Revenues

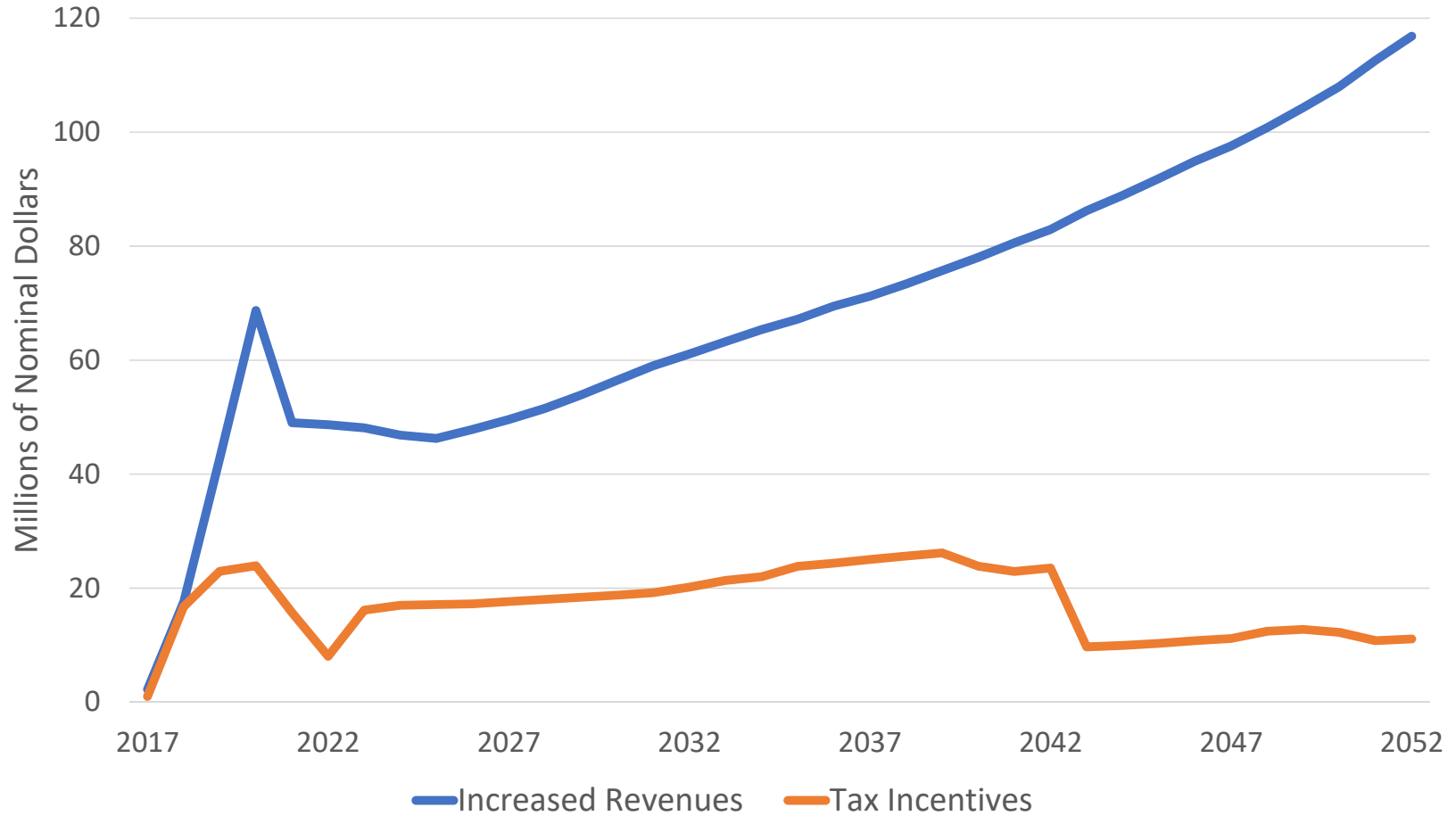
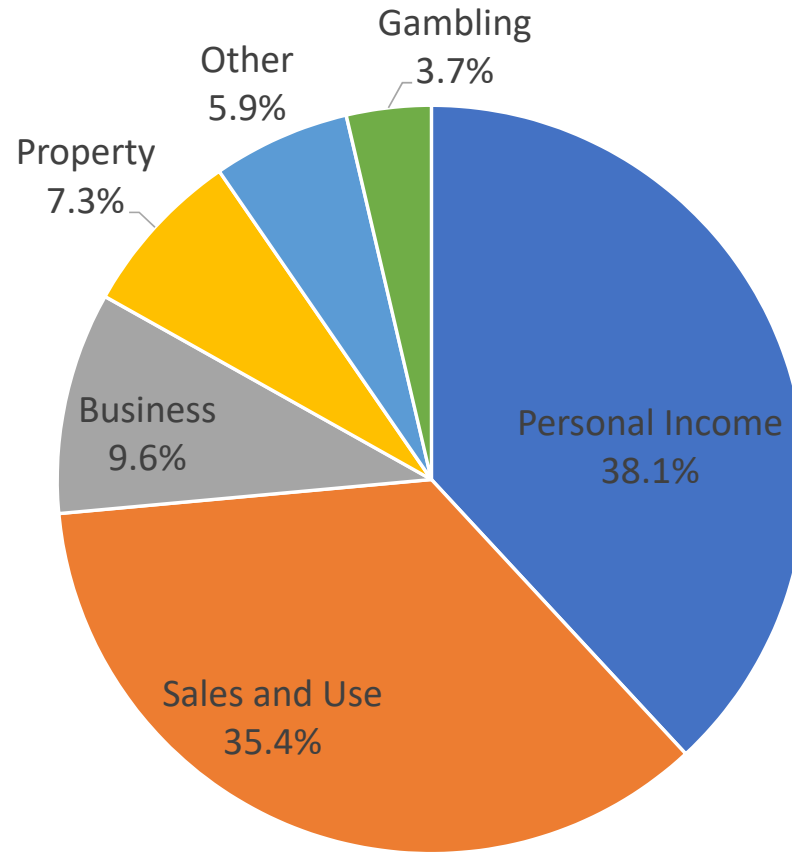


Figure 7: Increased Michigan Tax Revenue by Tax, Present Value





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