



MACHINERY & EQUIPMENT EXEMPTION KEY TO KEEPING JOBS, INVESTMENTS IN WASHINGTON

BRIEFLY

Manufacturing continues to be a strength of Washington's economy. The M&E exemption contributes to that strength by encouraging the capital investments that anchor the industry here.

In 1995, the legislature enacted retail sales and use tax exemptions for machinery and equipment (M&E) used in manufacturing. Gov. Mike Lowry championed the M&E exemption, which was the signature industrial development initiative of his administration. The exemption has had the desired effect.

Since 1995, manufacturing has done better in Washington than in many other states. From 1995 to 2010 (the last year for which data is available from the Bureau of Economic Analysis), wages and salaries in

emption would have on the state's economy. The simulation indicates that elimination of the exemption would cost the state 18,700 jobs and \$1.6 billion in annual personal income after five years.

History

For a manufacturer deciding whether to make a capital investment in a state, the M&E exemption provides an immediate and certain benefit, making it a critical factor in site selection decisions. Other features of the state tax code affecting the long-run profitability of the investment (e.g. property tax and Business & Occupation tax rates) may change in the future. Across the country, the exemption has become standard tax policy. According to *Site Selection* magazine, nearly every state has some sort of manufacturing M&E exemption (Site Selection 2011).

Washington's exemption underwent some changes in the early years. When the 1995 legislature enacted the exemption for M&E used directly in manufacturing operations, it also exempted labor and services related to the M&E's installation. The 1996 legislature extended the exemption to M&E used in research and development operations by manufacturers, to the purchase of repair parts, and to labor and services related to the repairing, cleaning, altering or improving existing machinery and equipment. The 1999 legislature further extended the exemption to M&E used by third parties who provide testing services to manufacturers.

The sales tax exemption is codified at RCW 82.08.02565; the complementary use tax exemption, at RCW 82.12.02565.

Because Washington's sales tax rates are among the nation's highest, the exemption is relatively more important in this state. By

Key Findings:

- Elimination of this exemption would immediately cost Washington 7,400 jobs.
- After five years without this exemption, Washington state would lose:
 - More than 22,300 jobs
 - \$365 million worth of annual investments in equipment and software
 - \$2.3 billion in annual manufacturing output
 - \$1.6 billion in annual personal income
- Washington state can ill afford to lose this exemption, which currently bolsters one of our state's strongest industries and job creators.

Washington's manufacturing sector increased by 43.7 percent, the ninth highest percentage increase among the 50 states. Washington's absolute increase in manufacturing wages and salaries was \$5.1 billion, third highest among the states.

In this, brief we report the results of a simulation of the impact elimination of the ex-

the Tax Foundation’s calculations, Washington’s average combined state and local sales tax rate (8.79 percent) ranks fourth highest in the nation, behind Texas, Arizona and Louisiana (Drenkard 2011).

The sales tax on machinery and equipment purchases exerts an extraordinary drag on manufacturing investments because it is not immediately deductible from businesses’ federal income taxes. Rather, the business must include the sales tax in the depreciable basis of its capital assets and deduct it over time as the assets are depreciated. Recognizing the time value of money (a dollar today is worth more than a dollar tomorrow), this delayed deduction is less valuable than the immediate deductions allowed on other business taxes.

A 1994 study by the Department of Revenue preceded the 1995 legislation. This study compared the state and local tax burdens on 20 hypothetical manufacturing firms if they located in Washington to their tax burdens if they located in 11 other states with which Washington competes for business investment. Across the 20 firms, DOR found Washington to be “usually among the top three states for tax liability... For industries with a high tax ranking, the sales tax has a high tax rank and is the dominant tax” (DOR 1994, p. B-1).

In a book written for the Upjohn Institute, Peter Fisher and Alan Peters used the hypothetical firm methodology to study state industrial incentive programs. Echoing DOR, Fisher and Peters found “that the sales tax exemption for manufacturing machinery is one of the most valuable incentives. . . . [It is] of more value to the firm than double

weighting sales . . . and of much more importance than allowing [accelerated] depreciation under the state corporate income tax” (Fisher and Peters 1998, p. 127).

From his examination of the variation of user costs of capital across states, economist Charles Ian Mead reached an even stronger conclusion: “an exemption of purchases of machinery and equipment is generally a more valuable industrial incentive than eliminating a corporate income tax.” (Mead 2001, pp. 32-33)

Simulations

We use the WRC REMI model to estimate the impact of eliminating the M&E exemption. The WRC-REMI model is a dynamic simulation model of the Washington economy that incorporates a number of significant behavioral responses to changes in prices and costs. The model divides the state of Washington into two subregions: the Seattle Metropolitan Statistical Area (King, Pierce and Snohomish Counties) and the balance of the state. There are 53 industrial sectors within each subregion. Twenty-two of these 53 sectors are manufacturing.

We have run two simulations extending through the year 2027. The *baseline simulation* assumes that the M&E exemption remains in place for the whole period. The *policy simulation* assumes that the M&E exemption ends January 1, 2013. We measure the impact of eliminating the M&E exemption on various economic indicators by the differences in values between these two simulations. Financial impacts are adjusted for inflation to constant 2010 dollars.

Based on the distribution of manufacturing employment across Washington counties, we estimate that the weighted average sales tax rate on M&E would be 9 percent if the exemption were to be eliminated. Based on M&E’s share of manufacturing investment, we then calculate elimination of the exemption would increase the cost of capital for manufacturing firms by 7.6 percent on average.

The extra taxes paid by manufacturers due to the elimination of the exemption are recycled through state and local government spending.

Results

Chart 1 shows the impact on employment of eliminating the M&E exemption over the years 2013 through 2027. In the first year, 2013, total employment is reduced by 7,400. By the fifth year (2017), the total job loss grows to 18,700; by the fifteenth year (2027), to 22,300. Because of the reduction

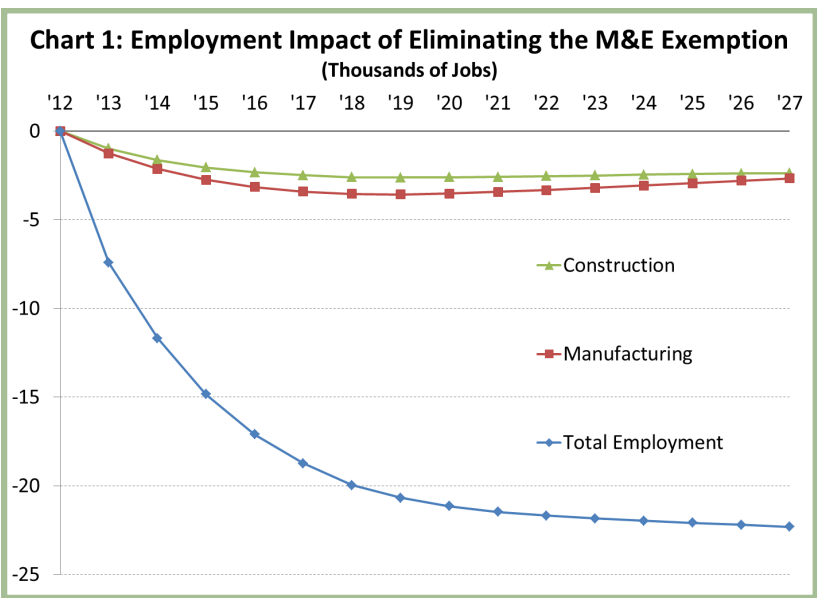


Chart 2: Investment Impact of Eliminating the M&E Exemption
(Billions of 2010 Dollars)

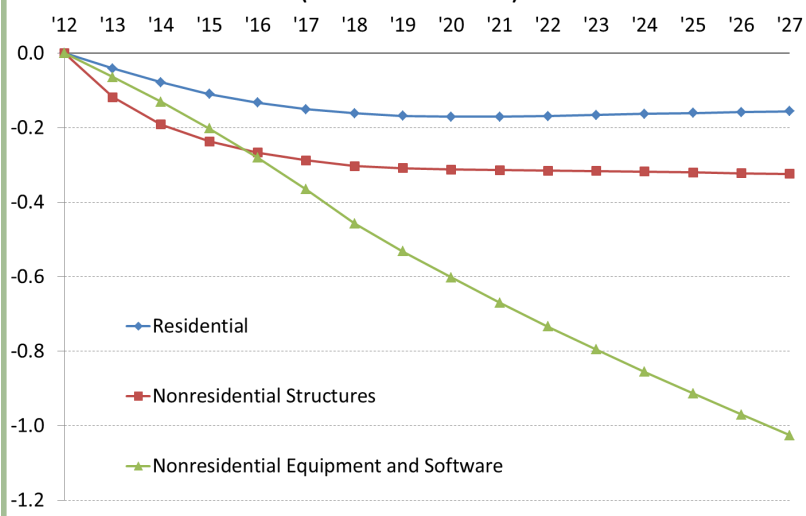


Chart 3: Manufacturing Output Impact of Ending the M&E Exemption
(Billions of 2010 Dollars)

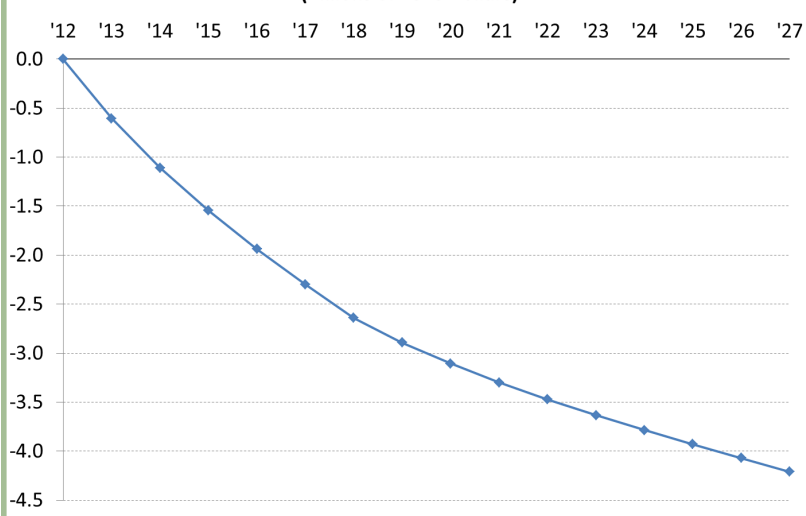
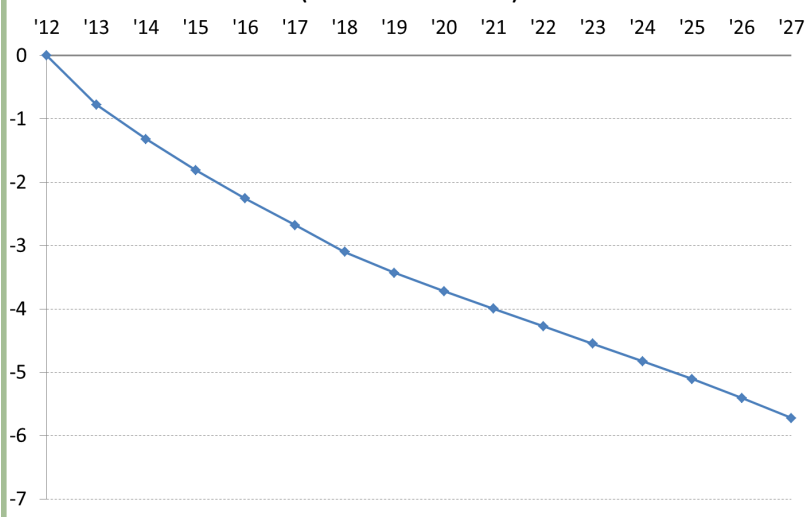


Chart 4: State GDP Impact of Ending the M&E Exemption
(Billions of 2010 Dollars)



in employment, state population in 2027 is 34,000 less than the baseline. Manufacturing is the sector that experiences the greatest job loss, losing 1,200 in the first year. The manufacturing job loss peaks in the sixth year at 3,600. After that point the job losses recede, because repeal of the exemption reduces capital investments that increase labor productivity, and lower productivity requires greater employment for any given level of manufacturing output. Construction experiences the second greatest job loss: 1,000 jobs in the first year. The construction job loss peaks at 2,600 in 2019 and is 2,400 in 2027.

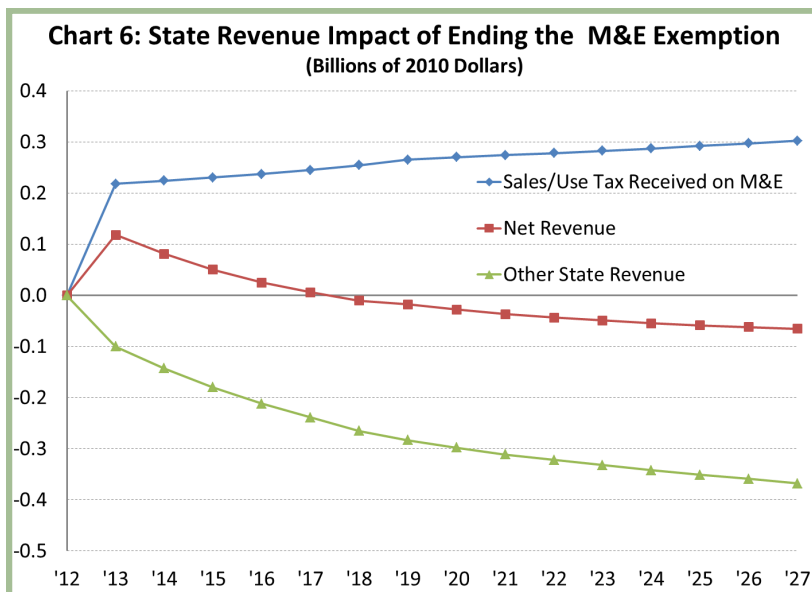
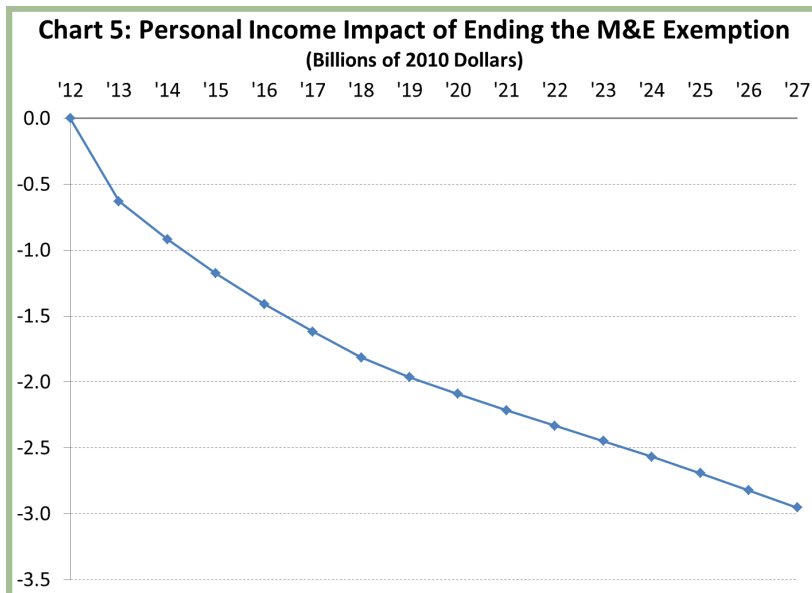
Chart 2 shows the impact of eliminating the M&E exemption on investment in the state. Note that this includes both the direct effects in the manufacturing sector and the indirect effects in other sectors, which are the result of the overall reduction in the level of economic activity and slower population growth. For the first three years, the biggest impact is on investments in the nonresidential structures category, while for the fourth year and beyond, the biggest impact is in the nonresidential equipment and software category. By 2027, annual investment in equipment and software is reduced by more than \$1 billion (2010 \$), while that in nonresidential buildings is reduced by \$320 million.

Chart 3 shows the impact of eliminating the M&E exemption on manufacturing output. In 2017, elimination of the exemption reduces manufacturing output by \$2.3 billion; in 2027 the reduction is \$4.2 billion. The percentage reduction in 2027 manufacturing output is 2.6 percent, which is considerably greater than the 0.9 percent reduction in manufacturing employment for that year. The 1.7 percent difference between these two percentages represents the reduction of average labor productivity caused by the reduction in investment in manufacturing.

Chart 4 shows the impact of eliminating the exemption on the state's gross domestic product (GDP). Annual GDP for 2017 is \$2.7 billion less than the baseline. By 2027 the reduction is \$5.7 billion, which is a 0.3 percent reduction on a per capita basis.

Chart 5 shows the impact on personal income (PI). For 2013, PI is \$630 million less than baseline; for 2017, \$1.6 billion less; for 2027, \$2.9 billion less. For 2017, per capita PI is 0.2 percent less than the baseline value. Because of slower population growth, 2027 per capita PI is essentially equal to the baseline value.

Chart 6 shows the impact on state government revenues. The uppermost curve shows the additional revenue received from the



sales and use tax applied to previously exempt machinery and equipment. The bottom curve shows reduction in all other state revenues due to the reduction in economic activity due to the removal of the exemption. The middle curve is the net of these two effects. In the first year, 2013, we estimate that government will gain \$218 million (2010 \$) in sales and use taxes on machinery and equipment. The gain grows over time, reaching \$302 million by 2027. We estimate governments will lose \$100 million of other revenue in 2013, with the loss growing to \$368 million by 2027. Initially, the net effect is positive, with governments gaining \$118 million in 2013. But the net gain declines year by year, becoming a loss in 2018 and thereafter. By 2024, the cumulative revenue impact is negative.

Comment

Manufacturing continues to be a strength of Washington’s economy. The M&E exemption contributes to that strength by encouraging the capital investments that anchor the industry here. Our simulation shows that the state would lose 22,300 jobs and \$2.9 billion of personal income in the fifteenth year following elimination of the exemption. Over time the exemption returns positive revenues to state and local government: the additional revenue to the state from the economic activity stimulated by the exemption is greater than the foregone taxes on machinery and equipment.

References

Drenkard, Scott. 2011. Ranking State and Local Sales Taxes. Tax Foundation Fiscal Fact No. 284. September .

Fisher, Peter and Alan Peters. 1998. Industrial Incentives: Competition Among American States and Cities. W.E. Upjohn Institute for Employment Research: Kalamazoo, MI.

Mead, Charles Ian. 2001. State User Costs of Capital. Federal Reserve Bank of Boston Working Paper 01-3.

Site Selection. 2011. State Incentive Programs: 2011 Incentive Charts. November.

Washington State Department of Revenue. 1994. Manufacturing Tax Study. Research Division. September.