# MACHINERY USED IN MANUFACTURING EXEMPTION

EVALUATION SUMMARY | JANUARY 2021 | 2021-TE6

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| TAX TYPE | Sales and Use Tax | REVENUE (TAX YEAR 2017) | $45 million maximum |
| YEAR ENACTED | 1979 | NUMBER OF TAXPAYERS | Could not determine |
| REPEAL/EXPIRATION DATE | None | | |

**KEY CONCLUSION:** The exemption is effective at preventing the taxation of machinery purchased for direct use in manufacturing goods.

## WHAT DOES THE TAX EXPENDITURE DO?

The Machinery Used in Manufacturing Sales and Use Tax Exemption allows purchases greater than $500 of machinery used predominantly and directly in manufacturing to be exempt from taxation.

## WHAT IS THE PURPOSE OF THE TAX EXPENDITURE?

Statute and the enacting legislation do not state the exemption's purpose; therefore, we could not definitively determine the General Assembly's original intent. Based on our review of legislative history and the current operation of the expenditure, our evaluation considered a potential purpose: to prevent the taxation of machinery purchased for direct use in manufacturing goods, since consumers must typically pay sales taxes on the finished goods.

## WHAT POLICY CONSIDERATIONS DID THE EVALUATION IDENTIFY?

The General Assembly may want to consider establishing a statutory purpose and performance measures for the exemption.

# MACHINERY USED IN MANUFACTURING EXEMPTION

## EVALUATION RESULTS

### WHAT IS THE TAX EXPENDITURE?

The Machinery Used in Manufacturing Exemption (Machinery Exemption) [Section 39-26-709(1)(II) and (2), C.R.S.] exempts purchases of machinery, machine tools, and parts, directly and predominately used for manufacturing tangible personal property, from sales and use tax. Additionally, the purchase must be in excess of $500 and the items must be depreciable and have a useful life of at least one year. Purchases of used equipment are limited to $150,000 per year.

The expenditure was created by House Bill 79-1611 in 1979 and, through several amendments, was expanded to increase the benefit it provides manufacturers and the types of purchases that are eligible:

- House Bill 87-1331 eliminated a $500,000 per year, per-taxpayer cap on the exemption that was included in the original provision.

- House Bill 88-1201 changed the minimum eligible purchase amount from $1,000 in a calendar year to the current $500 per purchase.

- House Bill 96-1333 expanded the exemption, which had originally required the items to be used "exclusively in manufacturing," to allow items used "predominately in manufacturing."

- Senate Bill 16-124 added solid waste processing and diversion facilities that process recovered materials for remanufacturing, recycling, or reuse as eligible beneficiaries.

- House Bill 18-1350 added scrap metal processors as eligible beneficiaries.

To claim the exemption, eligible beneficiaries must first file a declaration of entitlement (Form DR 1191 or DR 1192) with the Department of Revenue. Vendors then typically apply the exemption at the time of the sale. Vendors are generally required to report the amount they exempted using the Colorado Retail Sales Tax Return (Form DR 0100), which includes a line to enter exempt sales of machinery. If a manufacturer pays sales tax to a vendor for an eligible sale, the manufacturer can receive a refund for the sales tax paid by filing a Claim for Refund (Form DR 0137B) with the Department. If a manufacturer makes an exempt purchase in another state and brings the equipment into Colorado, they are not required to report the amount exempt from use tax under the Machinery Exemption.

## WHO ARE THE INTENDED BENEFICIARIES OF THE TAX EXPENDITURE?

Statute does not directly state the intended beneficiaries of the Machinery Exemption. Based on its operation, we considered the intended beneficiaries to be manufacturers of tangible personal property, including those that process recovered materials for remanufacturing, recycling, or reuse. The manufacturing industry is significant within the State's economy, including aerospace, medical supplies, electronics, and food and beverage manufacturing. As of June 2019, Colorado's manufacturers employed about 148,600 individuals, which is nearly 6 percent of all jobs in the state, and accounted for about $27 billion, or 7 percent, of the State's gross domestic product (GDP) in Calendar Year 2019.

Vendors of eligible machinery and consumers of manufactured goods may also be indirect beneficiaries of the exemption to the extent that it allows manufacturers to make additional purchases of machinery from vendors and offer their products to consumers at lower prices.

## WHAT IS THE PURPOSE OF THE TAX EXPENDITURE?

Statute and the enacting legislation for the Manufacturing Exemption do not state its purpose; therefore, we could not definitively determine the General Assembly's original intent. Based on our analysis of the expenditure's legislative history and the current operation of the expenditure, we considered a potential purpose: to prevent the taxation of items purchased for direct use in manufacturing goods, since consumers typically must pay sales tax on the finished goods. This is consistent with other sales tax exemptions in the state, which exempt manufacturers' purchases of raw materials that they incorporate into a final product. Similar structural provisions are common in states with a sales tax to prevent the tax from being applied at multiple stages of a good's manufacturing and distribution process, which is referred to as "tax pyramiding." Tax pyramiding can increase the effective tax on a consumer good to the extent that taxes on manufacturers' inputs are passed on to the final consumers of their products.

## IS THE TAX EXPENDITURE MEETING ITS PURPOSE AND WHAT PERFORMANCE MEASURES WERE USED TO MAKE THIS DETERMINATION?

We could not definitively determine whether the Machinery Exemption is meeting its purpose because no purpose is provided in statute or its enacting legislation. However, we found that it is likely meeting the potential purpose we considered in order to conduct this evaluation because purchases of eligible machinery are commonly exempt from sales and use tax.

Statute does not provide quantifiable performance measures for the exemption. Therefore, we created and applied the following performance measure to determine the extent to which the exemption is meeting its potential purpose:

PERFORMANCE MEASURE: *To what extent are manufacturers using the Machinery Exemption to avoid paying sales and use tax on eligible purchases?*

RESULTS: We found that the exemption is widely applied to sales of manufacturing equipment in the state. Department of Revenue sales tax data show that 350 vendors applied the exemption to a total of $124 million in sales of eligible equipment in Calendar Year 2017. Because manufacturers may also claim a refund if a vendor collects sales tax on an eligible purchase and are not required to report the amount they claim as a consumer use tax exemption, the Department's sales tax data do not include all eligible purchases. However, we spoke to nine stakeholders who represent manufacturers, manufacturing trade organizations, or vendors of machinery in the state and they indicated that most manufacturers are aware of and use the Machinery Exemption and vendors routinely apply it at the point of sale.

## WHAT ARE THE ECONOMIC COSTS AND BENEFITS OF THE TAX EXPENDITURE

We estimate that the Machinery Exemption had a maximum revenue impact to the State of about $45 million in Calendar Year 2017 and provided a corresponding benefit to manufacturers.

The Department of Revenue lacked the data necessary for us to determine the exemption's full revenue impact; therefore, we used economic data from the U.S. Census Bureau to estimate the potential impact. Specifically, the Census Bureau estimates that in Calendar Year 2017, Colorado manufacturers spent a total of $1.56 billion on capital expenditures for machinery used in manufacturing in the state. We multiplied this amount by the State's 2.9 percent sales tax rate to arrive at a potential impact of $45 million. However, this amount likely overstates the true impact of the exemption to some degree because some of the capital expenditures included in the Census Bureau data are ineligible for the exemption. For example, sales under $500 are included in the Census Bureau data, but do not qualify for the exemption, and manufacturers' capital expenditures could include items, such as office equipment, that are not directly used in manufacturing and are thus, ineligible for the exemption. Further, the Census Bureau groups businesses in its data based on North American Industry Classification System (NAICS) codes, which businesses self-select when they report to the Census Bureau and might be misreported. Additionally, the NAICS code for manufacturing is more comprehensive than the State's statutory definition of manufacturing, meaning that some businesses that would not qualify for the exemption may be included in the capital cost data we used.

In addition to its impact on state revenue, we also estimate that the Machinery Exemption had a maximum revenue impact of about $7.8 million in counties that had opted to apply it in Calendar Year 2017. Specifically, under Section 29-2-105(1)(d)(I)(A) and (A.5), C.R.S., statutory and home-rule municipalities and counties that have their sales and use taxes collected by the State may choose to provide the Machinery Exemption, though they must explicitly adopt it. According to the Department, 20 state-collected counties and 28 municipalities have adopted the exemption. To estimate the revenue impact to the 20 counties that have adopted the exemption, we first estimated the amount of eligible sales in each by multiplying the $1.56 billion in statewide manufacturing capital expenditures reported by the Census Bureau by the percentage of the state's manufacturing jobs located in each county, based on data from the State Demographer's Office. We then multiplied the estimated eligible sales in each county by each county's sales and use tax rate. Because this estimate also relies on Census Bureau data, as was the case for our estimate for the exemption's state revenue impact, this total likely overstates the revenue impact to local governments to some degree. Further, we lacked data necessary to estimate the impact to the 28 municipalities that have adopted the exemption; however, because these are relatively small municipalities, the additional revenue impact from the exemption in these areas is likely small as well.

Despite the exemption providing a significant tax benefit to manufacturers, we found that most manufacturers must still pay local sales taxes, which could be limiting the exemption's economic impact. As of July 2020, only 20 of 51 state-collected counties and 28 state-collected municipalities had adopted the exemption. Further, based on our review of Calendar Year 2017 data from the Bureau of Labor Statistics, most manufacturing jobs in the state are likely located within home-rule cities that collect their own sales taxes and that do not provide a similar exemption. Therefore, most purchases of manufacturing equipment in the state are subject to local sales taxes, which may reduce the economic impact of the Machinery Exemption and reduce its ability to avoid tax being applied to equipment that is part of the manufacturing process.

## WHAT IMPACT WOULD ELIMINATING THE TAX EXPENDITURE HAVE ON BENEFICIARIES?

Eliminating the Machinery Exemption would result in manufacturers having to pay an additional 2.9 percent on their purchases of machinery that currently qualify for the exemption. In the 20 state-collected counties that have adopted the exemption, on average, manufacturers would also have to pay an additional 1.23 percent in county sales tax.

Because most states with a sales tax have a similar exemption, eliminating the Machinery Exemption could also make Colorado a less attractive location for manufacturing businesses. Overall, most stakeholders we contacted indicated that the removal of the exemption would have some impact on their operations in the state. Although manufacturers could potentially pass some of the additional costs from taxes on to customers in the form of higher prices, stakeholders noted a variety of actions they might take to cover the additional costs that could not be passed on, such as buying used equipment, reassessing future expansion in the state, or expanding automation. Stakeholders reported that automation of the manufacturing sector is inevitable to compete internationally, and the exemption allows manufactures to reinvest their savings on machinery purchases into a smaller skilledlabor force to operate automated machinery, which is eligible under the exemption.

However, stakeholders reported that sales and use taxes are one factor among many when they make investment decisions and eliminating the exemption may have a relatively limited impact. Further, as discussed, most machinery purchases by manufacturers in the state are subject to local sales taxes and we found that manufacturing businesses are concentrated in several home-rule cities, such as Denver, Lakewood, Aurora, and Boulder. These areas have higher than average local tax rates and do not exempt sales of manufacturing equipment, indicating that sales taxes are not the primary driver of manufacturers' location decisions. Manufacturing comprised about $27 billion of the state's GDP in Calendar Year 2019 and so the estimated $45 million tax benefit, which is equivalent to less than 0.2 percent of the industry's share of state GDP, is relatively small in comparison to the size of the industry.

## ARE THERE SIMILAR TAX EXPENDITURES IN OTHER STATES?

Of the 45 states, including Colorado, which levy sales and use tax, 41 provide a tax expenditure for machinery used in manufacturing. Of these, 38 provide a sales and use tax exemption and three provide a reduced sales and use tax rate for purchases of machinery used in manufacturing. Similar to Colorado, we identified 25 other states with provisions that expressly include recycling or scrap metal processing industries as eligible manufacturers. Additionally, we found three states—Missouri, Kentucky, and North Dakota—that require the qualifying machinery to be used to establish new or expanded manufacturing capabilities, which is narrower than Colorado's eligibility requirements.

## ARE THERE OTHER TAX EXPENDITURES OR PROGRAMS WITH A SIMILAR PURPOSE AVAILABLE IN THE STATE?

The Wholesales Exemption [Section 39-26-102(20), C.R.S] exempts inputs, such as ingredients and component parts that are incorporated into consumer goods, and non-retail sales of tangible personal property, from sales and use tax. The Wholesales Exemption applies to a broad range of industries, including manufacturers, and similar to the Manufacturing Exemption, appears to be intended to avoid taxing inputs necessary to the production of consumer goods, which are typically subject to sales tax when sold by retailers.

Another similar expenditure is the Enterprise Zone Manufacturing Machinery Sales Tax Exemption [Section 39-30-106, C.R.S.], which is linked to the statewide Machinery Exemption, and thus has the same administration criteria, but with its own definition of manufacturing. The enterprise zone exemption has a more comprehensive definition of manufacturing, which includes activities such as processing, than the Machinery Exemption.

## WHAT DATA CONSTRAINTS IMPACTED OUR ABILITY TO EVALUATE THE TAX EXPENDITURE?

The Department of Revenue was not able to provide data on the amount of the exemption claimed as a refund or as a use tax exemption. Specifically, manufacturers that pay sales taxes on eligible purchases may claim the exemption using the Claim for Refund (Form DR 0137B). This form does not include a separate line for reporting the Machinery Exemption, and taxpayers use the same reporting line on the form to claim refunds for multiple exemptions. Therefore, the Department cannot provide data on the amount claimed as a refund under the exemption. Further, manufactures who claim it as a consumer use tax exemption, because for example, they made an exempt purchase in another state before bringing the items purchased back into Colorado, are generally not required to report the amount exempted to the Department. Additionally, although some vendors may report the information on the exemption using the Retailer's Use Tax Return (Form DR 0173), which includes a line to report the Machinery Exemption, GenTax, the Department's tax processing and information system is not programmed to extract this information.

The Department was able to provide data on the use of the exemption for sales that vendors reported on the Colorado Retail Sales Tax Return (Form DR 0100) and reported a revenue impact of about $6.4 million in Calendar Year 2019 for these sales in its *2020 Tax Profile and Expenditures Report*; however, Department staff indicated that this amount likely underrepresents the full revenue impact due to the data limitations discussed above. For this reason, we estimated the statewide and local revenue impact using U.S. Census Bureau data, which could overestimate the true impact since this data likely includes some sales that would not qualify for the exemption.

If the General Assembly wants complete information on the use and revenue impact of the Machinery Exemption, the Department of Revenue would need to program GenTax to extract data on the exemption reported on the Retailer's Use Tax Return (Form DR 0173). In addition, the Department would need to add an additional reporting line for the exemption on its Claim for Refund form (Form DR 0137B) and program GenTax to capture and retrieve this information. However, according to the Department of Revenue, these types of changes would require additional resources to change the necessary programming in GenTax and add a reporting line to the form (see the Tax Expenditures Overview Section of the Office of the State Auditor's *Tax Expenditures Compilation Report* for additional details on the limitations of Department of Revenue data and the potential costs of addressing the limitations).

## WHAT POLICY CONSIDERATIONS DID THE EVALUATION IDENTIFY?

THE GENERAL ASSEMBLY MAY WANT TO CONSIDER AMENDING STATUTE TO ESTABLISH A STATUTORY PURPOSE AND PERFORMANCE MEASURES FOR THE MACHINERY EXEMPTION. As discussed, statute and the enacting legislation for the exemption do not state the exemption's purpose or provide performance measures for evaluating its effectiveness. Therefore, for the purposes of our evaluation, we considered a potential purpose for the exemption: to prevent the taxation of items purchased for direct use in manufacturing goods since consumers typically must pay sales tax on the finished goods. We identified this purpose based on its operation and our review of similar tax expenditures in Colorado and other states. Specifically, the exemption is consistent with other sales tax exemptions in Colorado, which exempt manufacturers' purchases of raw materials that they incorporate into a final product. Similar structural provisions are also common in other states with a sales tax to prevent the tax from being applied at multiple stages of a good's manufacturing and distribution process. We also developed a performance measure to assess the extent to which the exemption is meeting this potential purpose. However, the General Assembly may want to clarify its intent for the exemption by providing a purpose statement and corresponding performance measure(s) in statute. This would eliminate potential uncertainty regarding the exemption's purpose and allow our office to more definitively assess the extent to which the exemption is accomplishing its intended goal(s).