An Economic Analysis of HB17-1195

House Bill 17-1195 will eliminate state sales tax on diapers for both children and adults. The bill expressly states that due to the financial burden diapers place on low income families, eliminating such a tax will decrease their financial vulnerability. This tax exemption applies only to disposable diapers. In addition to the state-wide tax exemption, the bill allows local jurisdictions to adopt the same exemption by express inclusion in their sales and use taxes.

When it comes to keeping young children healthy, diapers may seem insignificant. But they are important to a child's health. Proper usage of a diaper not only keeps the child healthy, but it has also been shown to keep the parents healthy. Extended use of a spoiled diaper can cause rashes and urinary tract infections in children (White, 2013). Left untreated these infections can lead to kidney damage, poor growth, and high blood pressure (White, 2013).

For families with young children, diapers are a critical purchase. Depending on the age of the child, parents may need to change a diaper every 2 to 5 hours ("Changing a Diaper," 2012). That means they go through anywhere from 4 to 8 diapers in one day. And given that most children wear a diaper until around age 3, diapers represent a significant expense for any family with young children.

For families making less than two times the federal poverty threshold, the cost of diapers presents an even greater challenge. For these families, diapers make up a greater percentage of the overall family budget. Given that low income families have little or no disposable income, this can put strain on the family. Seeing as there are 42,000 children in low income households in Colorado, this is a significant concern ("US Census Bureau Colorado," 2015).

One cheaper alternative to disposable diapers is cloth diapers. While using cloth diapers reduces the total number of diapers purchased, cloth diapers are inconvenient for their own reasons. Even subsidized child care facilities, which low income families frequently use, require that families provide disposable diapers for their children (White, 2013). Further, many low-income families live in rental housing which may not have a washer and dryer. As a result, they must use a laundromat. But, many laundromats do not allow patrons to wash diapers at their facilities (White, 2013). Assuming a family washes their cloth diapers at home, the total cost of using cloth diapers is close to $230 annually which is about a quarter of the cost of disposable diapers (Adams, 2008). While this represents significant cost savings, the additional work load placed on parents might be difficult to manage for low income families. Without a washer or dryer at home, hand washing is much more time intensive.

Diaper banks provide diapers to low income families, but providing enough diapers to serve all low income families is all but impossible. In order to serve all low income children in Colorado, diaper banks would need to provide 336,000 diapers every day. As a result, these organizations often ration diapers to families (White, 2013). Donated diapers can help low income families get by when money is particularly tight, but do little to relieve the overall burden of purchasing diapers.

This bill seeks to reduce the financial burden of purchasing diapers on families by eliminating the state sales tax on diapers. This action is a form of redistribution. Its effects should be considered comprehensively before being implemented.

While eliminating the state sales tax will help low income families, there are numerous drawbacks. The amount of money this measure will save low income families is woefully inadequate. Further, by eliminating sales tax for all consumers of diapers, this bill is highly untargeted and will assist mostly higher income families as opposed to lower income families.

The bill estimates that Colorado families spend between $80 and $100 on diapers for each child, every month. This estimate however is on the high side. Most sources estimate the monthly cost of diapers is closer to $50-$80 per month (Adams, 2008). At this lower estimate and the Colorado state sales tax rate of 3%, this bill would save families $1.50-$2.40 per child every month (“Denver, Colorado Sales Tax Rate,” n.d.). Assuming local jurisdictions adapted the same policy, savings would increase to $3.50-$5.60, assuming a 4% local sales tax. While every dollar counts, such savings are relatively minimal when compared to the amount of money families spend on diapers every month. At the proposed rate, this bill would save families a total of $18-$29 annually.

Demand for diapers is price inelastic. Because diapers are an essential healthcare item for families with young children, they are likely to buy approximately the same number despite changes in the price of diapers. Economists have shown that when it comes to taxation, consumers who have inelastic behaviors end up bearing the brunt of the tax. Due to the inelastic demand for diapers, consumers bear the brunt of the tax on diapers, as opposed to producers. By eliminating such a tax, consumers stand to benefit the most.

While it is true that eliminating the state sales tax on diapers will reduce the price consumers face in the short run, the limited competition in the market could result in manufactures raising prices in the long run. The diaper market faces moderate consolidation with the top two producers owning 80% of the market share with a 50/30 split between the two (Neff, 2015). Producers know the consumer is willing to pay a higher price for diapers.

When the price of diapers is reduced due to the elimination of state sales tax, they could just as easily raise the price they charge consumers to the same level it was before the tax was removed.

In its current form, the effectiveness of this bill is questionable. That said, modifications to the incidence of the bill's measures could improve its efficacy. While it may make sense to support low income families in their purchase of diapers, it does not make sense to remove the sales tax for all consumers, and in doing so, support higher income families.

According to the fiscal note that accompanies this bill, the removal of a state sales tax on diapers will reduce income for the state by $3.4 million (Sobetski, 2017). Of this $3.4 million, about $2.6 million will be on diaper purchases made by families with incomes more than two times the federal poverty threshold. While ensuring adequate access to diapers for all families is a good policy, only $800,000 of the $3.4 million committed to the program will make a difference in the lives of low income families ("US Census Bureau Colorado," 2015). This is an inefficient use of resources.

It would be much more effective to develop a program that directly assists only those families who struggle the most with purchasing diapers. This will insure that the state's financial resources are being used effectively and efficiently.

For example, the money that would be lost due to the lack of sales tax could be diverted into a program that assists only low income families in their purchase of diapers. Such a program could be in the form of a tax credit or a version of the food stamp program, but for diapers.

If the financial resources this bill concerns were diverted exclusively to low income families, then the per family impact would be far greater. Given an annual cost of $3.4 million combined with the bill's provided estimate of 42,000 children ages 0 to 3 living below the poverty line, then this bill could reduce the cost of diapers by $6.74 per month for low income families. This is almost triple the effect the bill would have as it is currently written.

In addition, because the sales tax would not be eliminated for everybody, diaper producers would no longer be incentivized to raise their own prices. This would overcome the challenges related to price inelasticity of diapers discussed earlier.

Law makers should amend or adjust this bill to specifically target only low income families. Creating a general elimination of sales tax is ineffective both because of the minimal effect it will have and the fact that producers can simply raise prices on this price inelastic good.

Ensuring this bill more adequately targets its intended audience will mean that the state's funds are not spent unnecessarily. Further it will increase support for families that need it most. While the premise behind this bill is a good one, its ultimate effect is unlikely to be significant. Changes to the methods employed by this bill will make it a winner for all.

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