MARCELLUS EDUCATION FACT SHEET

State Tax Implications of Marcellus Shale: What the Pennsylvania Data Say in 2010

Development of Marcellus shale natural gas in Pennsylvania has brought with it many changes to parts of the Commonwealth. Because of the rather recent nature of the drilling activity, the extent of its effects on local economies and state tax collections has not been clearly understood. Marcellus-related activity can affect these through several means. Leasing and royalty income paid to mineral right owners increases household income, and since it is taxable under the state's personal income tax, it will affect state income tax collections. Increases in local employment or earnings due to Marcellus-related work can likewise affect state income tax collections. If mineral right owners and those employed due to Marcellus development spend more money locally, state sales tax collections can increase. If development of Marcellus shale affects local real estate markets, it may similarly affect realty transfer tax collections.

It still is very early in the development of Marcellus shale, so much cannot be known about its full long-term economic implications. However, recent state tax collection information gathered by the Pennsylvania Department of Revenue can provide some insight into the short-term economic and state tax implications of gas development in the Commonwealth. This fact sheet provides basic analysis of state tax information as reported in the Department of Revenue's "Pennsylvania Tax Compendium," and "Personal Income Statistics." The data show distinct differences between counties with Marcellus shale gas drilling and those without.

Method of Analysis

Counties were categorized by the number of Marcellus wells drilled during the study years using Pennsylvania Department of Environmental Protection data. Changes in tax collections within each county were calculated using the Department of Revenue data, and then the average change was calculated within each category. The base years used for analysis vary between the state income tax (2007–2008) and the other state taxes (2007–2010) because the 2009 state income tax data had not been released at the time of this writing.

Eight counties had ten or more Marcellus wells as of 2008, including Bradford, Butler, Fayette, Greene, Lycoming, Susquehanna, Washington, and Westmoreland. As of December 8, 2010, five Pennsylvania counties had had more than 150 Marcellus wells drilled since 2007, including Bradford, Greene, Susquehanna, Tioga, and Washington.

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State Sales Tax Collections

Sales tax collections are a marker of the level of retail activity occurring within a county. Higher local retail sales mean more state sales tax collections, while declining local retail sales mean lower collections (though changes in sales tax collections do not perfectly track retail sales because food and clothing are excluded from the tax). The data indicate that counties with 150 or more Marcellus wells experienced an 11.36 percent increase in state sales tax collections between 2007 and 2010 (Table 1). Counties with fewer Marcellus wells reported declining state sales tax collections, but they still did better than counties with no Marcellus wells, which reported steeper declines. These data suggest that counties with Marcellus shale development fared better in retail sales during the years 2007–2010 than those counties without.

Table 1. Average change in state sales tax by county (July 1, 2007–June 30, 2010).

Marcellus Activity in County	*Change*
150 or more Marcellus wells drilled	11.36%
At least one but fewer than 150 Marcellus wells drilled	-3.11%
No Marcellus wells drilled	-6.55%
State average	-3.77%

Realty Transfer Tax Collections

Pennsylvania's realty transfer tax is a 1 percent tax on the sale of real estate (many local governments and school districts also levy a local realty transfer tax). Changes in realty transfer tax collections result from changes in the average value of sold properties, changes in the number of sales, or a combination of both.

Across the state, realty transfer tax collections were down between July 2007 and June 2010, reflecting overall weaknesses in the real estate market. However, counties with Marcellus shale development typically declined less than those without such development (Table 2).

Table 2. Average change in state realty transfer tax collections by county (July 1, 2007–June 30, 2010).

Marcellus Activity in County	*Change*
150 or more Marcellus wells drilled	-14.54%
At least one but less than 150 Marcellus wells drilled	-16.38%
No Marcellus wells drilled	-27.93%
State average	-22.10%

State Personal Income Tax Collections

The state personal income tax is a levy on personal income, including wages and salaries, investment income, and leasing and royalty income. Counties with Marcellus activity showed greater increases in tax income than non-Marcellus counties even though there was little difference in the number of returns filed. Counties with ten or more wells reported an average 6.96 percent increase in taxable income, and counties with between one and nine wells reported a 3.08 percent increase (Table 3). Those areas with no wells witnessed a 0.89 percent increase in taxable income.

These percentages hide the detail about how specific types of income have changed. Between 2007 and 2008, total taxable compensation (i.e., wages and salaries) in counties with Marcellus wells increased only slightly more than in those without wells (Table 4). The number of tax returns reporting taxable compensation was only up slightly across all the counties and was somewhat higher in counties without Marcellus wells (0.6 percent) compared to those with Marcellus wells (0.4 percent and 0.2 percent), which suggests that Marcellus activity had little effect on the number of local workers between 2007 and 2008. These figures are not surprising since this was early in the development of Marcellus shale and a significant change in drilling activity did not occur between those two years.

The number of tax returns reporting rights, royalties, and patent income was substantially different among the counties. Mineral right owners who receive leasing or royalty income from gas development report such payments as this type of income on their state tax return, so Marcellus activity would be expected to affect this tax source. In counties with ten or more Marcellus wells, returns reporting royalty income increased 44.1 percent and tax income increased 325.3 percent (Table 4). Counties with fewer than ten wells saw smaller increases in both returns and income (13.1 percent and 107.8 percent, respectively). Counties without any Marcellus wells also experienced growth in both returns and income, but less on average than in the other counties (12.9 percent and 86.6 percent, respectively). Some of the royalty income increase in non-Marcellus counties likely is related to Marcellus activity because land being developed for Marcellus includes second-home and recreational land owned by Pennsylvanians living outside the Marcellus counties.

On average, net profits were higher in counties with gas wells during 2007–2008 (Table 4), though the relationship of Marcellus development to the number of returns filed is not very clear. Net profits are what business owners pay on their business earnings. Counties with ten or more wells recorded an 10.8 percent increase in net profits between 2007 and 2008, and counties with fewer than ten wells saw a 7.1 percent increase in such income. Counties with no gas activity had increases of only 1.5 percent.

Table 3. Average change in state income tax by county (2007–2008).

Marcellus Activity in County	*Change in Number of Returns Filed*	*Change in Taxable Income*
Ten or more Marcellus wells drilled	0.29%	6.96%
At least one but fewer than ten Marcellus wells drilled	-0.01%	3.08%
No Marcellus wells drilled	0.31%	0.89%
State average	0.25%	2.04%

Table 4. Average change in sources of income by county (2007–2008).

Marcellus Activity in County	***Change in Taxable Compensation*** *(Change in Number of Returns)*	***Change in Rights, Royalties, and Patent Income*** *(Change in Number of Returns)*	***Change in Net Profits*** *(Change in Number of Returns)*
Ten or more Marcellus wells drilled	4.2% *(0.4%)*	325.3% *(44.1%)*	10.8% *(-1.3%)*
At least one but fewer than ten Marcellus wells drilled	3.3% *(0.2%)*	107.8% *(13.1%)*	7.1% *(-0.1%)*
No Marcellus wells drilled	3.0% *(0.6%)*	86.6% *(12.9%)*	1.5% *(-1.3%)*
State average	3.2% *(0.5%)*	119.2% *(16.7%)*	3.7% *(-1.1%)*

Implications

The Pennsylvania Department of Revenue data show major tax collection patterns associated with Marcellus shale development. State tax collections in counties with significant activity related to Marcellus shale on average had larger increases in sales and personal income tax collections and less precipitous declines in realty transfer tax collections than did other Pennsylvania counties. The data indicate that Marcellus shale development brings some positive economic activity for communities. At the same time, however, this analysis only reflects the early stages of natural gas drilling and does not include the cost impacts of Marcellus development on public services or the environment. It also does not indicate the impact of Marcellus development on local government and school district tax collections since royalty and leasing income is exempt from the local earned income tax and local jurisdictions cannot levy sales taxes.

Sources

Pennsylvania Department of Environmental Protection (2008–2010): **www.dep.state.pa.us/dep/deputate/minres/oilgas/2010%20Wells%20Drilled%20by%20County.htm**

Pennsylvania Department of Revenue, "Personal Income Statistics" (2007 and 2008): **www.portal.state.pa.us/portal/server.pt/community/personal_income_tax_statistics/14832**

Pennsylvania Department of Revenue, "Tax Compendium" (2007–2008 through 2009–2010): **www.portal.state.pa.us/portal/server.pt/community/reports_and_statistics/17303/tax_compendium/602434**

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FACT-BASED INFORMATION
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