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Marcellus Shale and Local Economic Activity: What the 2012 Pennsylvania State Tax Data Say

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Marcellus Shale and Local Economic Activity: What the 2012 Pennsylvania State Tax Data Say

Development of Marcellus shale has brought many changes to parts of the Commonwealth. Drilling and related activity began in earnest in 2007 in several Pennsylvania counties, and has continued and expanded into many more counties since then. It is clear from experience and past research that the shale gas development activity impacts local economies through several means, including the lease and royalty income paid to mineral right owners, increased local employment and earnings, and greater activity at locally owned businesses.

It is relatively common in these communities to hear some residents express concern that many of the jobs are going to outsiders, whether they be Texans or Oklahomans, or Pennsylvanians from other counties. The implication behind such statements is that much of the benefit of shale gas development is not staying within the counties where drilling is occurring.

The Pennsylvania Department of Revenue has several data series which focus on county residents, and thus allow examining the economic impact of Marcellus shale development on residents themselves in the counties where drilling activity is occurring. The Department releases aggregate Personal Income Tax data at the county level, which is compiled directly from personal income tax returns filed by taxpayers who self-identify as being a resident of that specific county. Non-resident workers, including Pennsylvanians from elsewhere in the Commonwealth, and out-of-state workers, are not included in the county totals. The data thus allows focusing solely on how much of the income resulting from Marcellus shale development stays within the county where drilling activity is occurring. In addition, the Department of Revenue releases data on state sales tax and realty transfer tax collections within each county. The information provides additional insights on how Marcellus shale development is affecting local economies.

This Fact Sheet provides basic analysis of state tax information between the years of 2004-2012 as reported in the Department of Revenue's 'Pennsylvania Tax Compendium.' The Fact Sheet updates similar analysis conducted in 2011 using 2009 data (Costanzo and Kelsey, 2011) and in 2012 using 2010 data (Costanzo and Kelsey, 2012), and provides a more current perspective on Marcellus shale activity and state taxes. The data continue to show distinct differences between counties with Marcellus Shale gas drilling and those without.

I. Method of Analysis

Counties were categorized by the number of Marcellus shale wells drilled during the study years, using Pennsylvania Department of Environmental Protection data. Changes in income reported on tax returns and state tax collections within each county were calculated using the Department of Revenue data, adjusting for inflation using 2007 dollars, and then the average change within each category of counties was calculated. Data presented here reflects the averages for each of the category groups based on the number of Marcellus wells drilled to date; the individual data for each county may differ from the average shown in this Fact Sheet (the latter individual county data appears in the Appendices). Due to differences in data availability, the tax analysis had to be conducted for different comparison years for some taxes. The most recent currently available Personal Income Tax data is from calendar year 2010, while the most recent currently available state Sales and Realty Transfer Tax data is from the 2011/2012 fiscal year (June 1 through July 30).

For analysis of the Personal Income Tax analysis, we grouped counties by those with more than 90 Marcellus wells between 2007 and 2010; 10 to 89 Marcellus wells; 1 to 9 Marcellus wells; and no Marcellus (see Appendix A for a complete listing of the counties). For the Sales Tax and Realty Transfer Tax analysis, we grouped counties by those with 150 or more Marcellus wells, 10 to 149 Marcellus wells, 1 to 9 Marcellus wells, and no Marcellus wells drilled between July 1, 2004, and June 30, 2012. These categories were selected based upon how the counties clustered by well counts. The number of counties in each of the four groupings by wells changed from year to year and this is noted in our data tables and analysis.

To see how tax collections are changing over time, we compared these results to previous years' analysis. We chose to take a closer look at the percent change in state Sales Tax and Realty Transfer Tax from the years 2004 to 2012 to observe long term trends in Marcellus shale development. Additionally we calculated the changes in Personal Income Tax data from 2004 to 2010 on a per tax return basis as well as percent change over time.

It is important to note that the data reflect tax collections by the state government within each county; county governments cannot levy these taxes. In addition, the Earned Income tax available to municipalities and school districts is much narrower than the state Personal Income Tax analyzed in this study, only including wage and salary, and net profit income. The analysis thus should not be viewed as reflecting what is occurring with tax collections by local governments and school districts.

II. Taxable Personal Income of County Residents

The Commonwealth's Personal Income Tax is a levy on personal income, including wages and salaries, interest, investment income, and leasing and royalty income. Social Security and pension income are exempt from the tax, so such income is not reported by the Department of Revenue. Data on the tax is released by the Department of Revenue separately from sales, realty, and other state tax information, with the release typically lagging a year behind information on these other taxes. The most up-to-date Personal Income Tax data at the time of this writing is for the 2010 tax year, which is two years older than data on the other taxes. Because the Department of Revenue reports this data by the residence of the taxpayer, tax returns reflect the earnings of county residents (not of workers who commute into the county, or whose legal residence is outside of Pennsylvania).

In addition to total personal income, it is important to consider how specific types of income have changed relative to Marcellus shale activity, because this helps clarify the distribution of benefits from the natural gas development activity. We thus further analyzed changes in the three types of income subject to the personal income tax which are most likely to be affected by Marcellus drilling activity: Gross Compensation (e.g. wages and salaries); Rents, Royalties, Patents and Copyrights income; and Net Profits income.

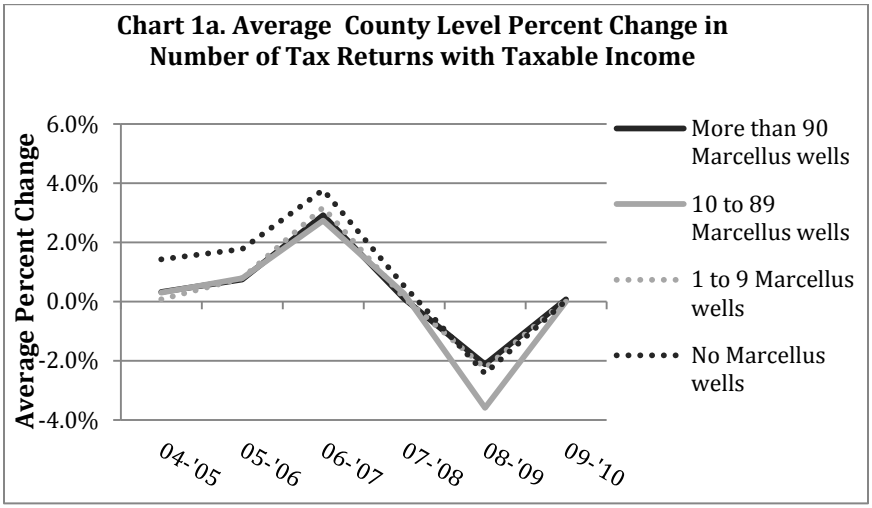
A. Total Personal Income

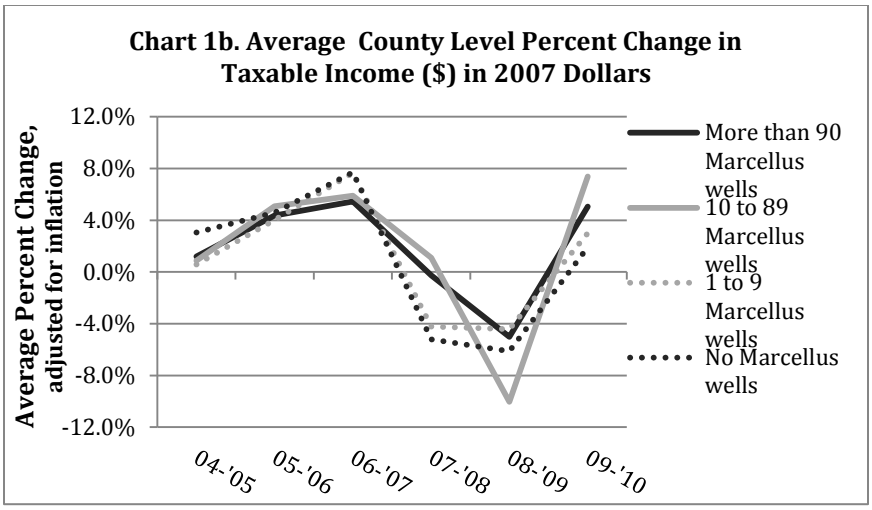
The number of Personal Income Tax returns filed by residents statewide declined an average of 2.7 percent at the county level between 2007 and 2010, but in counties with the most Marcellus shale activity, the average decrease was less (see Table 1). Counties with 90 or more wells on average experienced a 1.2 percent decrease in the number of state tax returns filed. Other counties with less Marcellus shale activity on average had larger decreases in the number of tax returns than the state and counties without Marcellus activity.

Total taxable income reported in the counties with the most Marcellus activity similarly outperformed the state average when adjusted for inflation, increasing an average of 6 percent compared to a 5 percent average decrease in taxable income statewide at the county level. Of the top eight Marcellus counties however, just half showed positive changes in taxable income, although in three of those counties the increases were very large. Bradford, Tioga, and Susquehanna counties far surpassed the group average during this time period with increases of 19.1 percent, 21.6 percent, and 16 percent in total taxable income, respectively. In Fayette, Lycoming, Washington and Westmoreland counties, total taxable income declined from 2007 to 2010 (see Appendix B), though the declines in the latter three were less than the statewide average decline.

Table 1. Average Change in Taxable Income Subject to the Personal Income Tax, by Drilling Activity, 2007 to 2010		
Level of Marcellus Activity in County	**Percent Change** (number of counties at level of Marcellus activity)	
	Average Change in Taxable Income Adjusted for Inflation	**Average Change in Number of Returns from County Residents**
More than 90 Marcellus wells	6% (8)	-1.2% (8)
10 to 89 Marcellus wells	-0.5% (14)	-3.4% (14)
1 to 9 Marcellus wells	-9% (13)	-4.5% (13)
No Marcellus wells	-8.1% (32)	-2% (32)
State Average at the County Level	-5% (67)	-2.7% (67)
Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics		

Long term trends are difficult to discern due to the national economic downturn in 2008 and 2009 (see Charts 1a and 1b). The state tax data does however reflect the counties' ability to survive the recession and bounce back after. Counties with 90 or more Marcellus wells suffered the smallest average decrease in both number of returns and taxable income during the recession, and counties with 10 or more wells had higher percent changes in both number of returns and taxable income amount after the recession. This suggests that the taxpayers in these counties with Marcellus activity on average experienced smaller economic losses due to the recession than did taxpayers elsewhere in the Commonwealth.





Source for Charts 1a and 1b: PA Dept. of Revenue, Personal Income Tax Statistics

B. Gross Compensation (wages and salaries)

Pennsylvania state tax on gross compensation is a tax on all reported wages and salaries. Between the years of 2007 and 2010, total gross compensation to residents in counties with 90 or more Marcellus wells on average increased more when adjusting for inflation than in those counties with fewer or without wells (see Table 2). For example, gross compensation increased an average of 1.5 percent between 2007 and 2010 in counties with more than 90 Marcellus wells, compared to an average 3.2 percent decrease in counties with no Marcellus wells. Such an increase in gross compensation could occur due to rising wage rates, by people working many more hours at the same wages they had previously, or a combination of both.

The number of tax returns reporting such income (e.g. wages and salaries) declined slightly in the counties with the most drilling (down 0.3 percent), while counties without Marcellus shale wells averaged a decline of 1.7 percent. This means high drilling counties on average experienced smaller losses in total employment of county residents than did those counties without Marcellus activity.

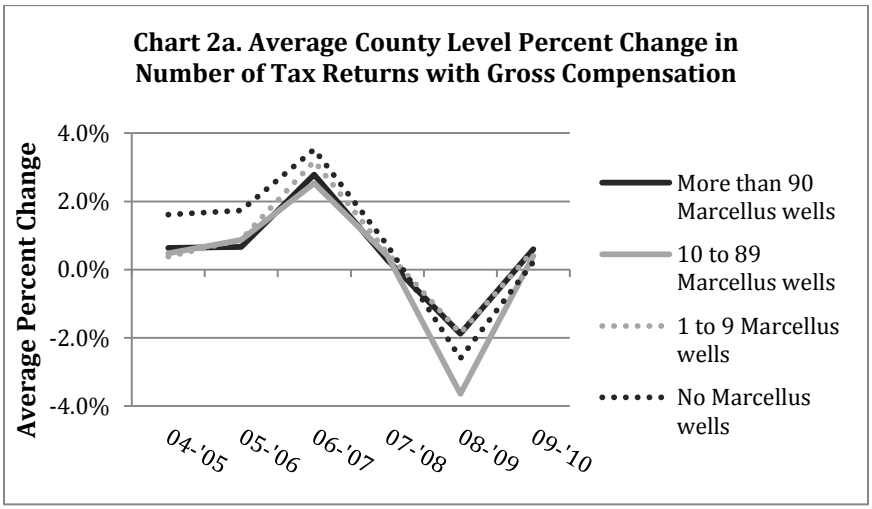
That gross compensation in high drilling counties on average increased while the number of returns reporting such income decreased suggests that Marcellus shale development has a larger effect on the total wages and salaries received by county residents than it does on the number of county residents who are employed. Such a change could occur if the demand for labor exceeds the local supply, driving up local wages or hours worked.

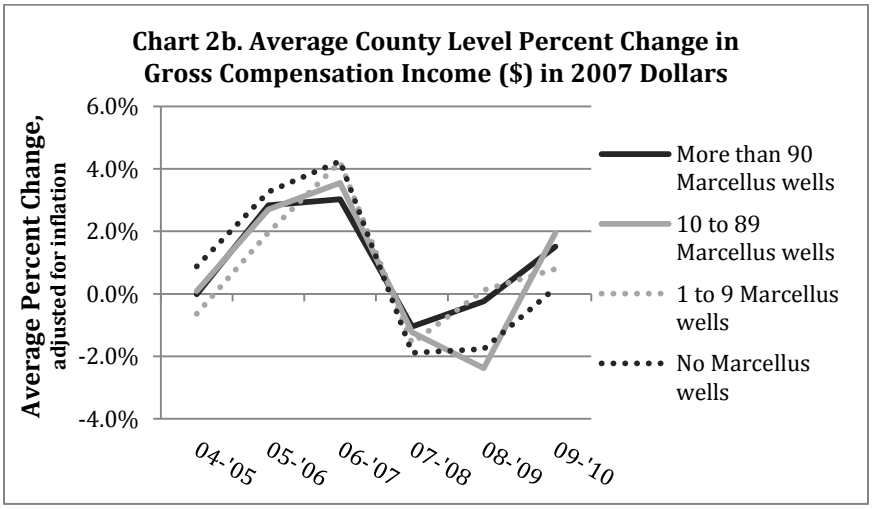
Table 2. Percent Change in Gross Compensation, by Drilling Activity

Level of Marcellus Activity in County	2007 to 2010	
	Average Change in Gross Compensation Adjusted for Inflation (number of counties)	**Average Change in Number of Returns Reporting this Income**
More than 90 Marcellus wells	1.5% (8)	-0.3%
10 to 89 Marcellus wells	-2.5% (14)	-2.7%
1 to 9 Marcellus wells	-4.8% (13)	-3.9%
No Marcellus wells	-3.2% (32)	-1.7%
State Average at the County Level	*-2.8% (67)*	*-2.2%*

Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics

The long term economic effects on gross compensation are seen in Charts 2a and 2b. Prior to Marcellus shale development in 2007, all Pennsylvania counties were on average experiencing moderate increases in gross compensation income and then from 2007 to 2008, moderate decreases, likely a result of the economic recession. In the most recent time interval from 2008 to 2010, however, differences among counties with much Marcellus activity, and little or no Marcellus activity are apparent. Average increases in gross compensation income in counties with the most Marcellus activity were over seven times greater than the average increases seen in counties without Marcellus activity. During this time frame (2009 to 2010), for example, counties with 90 or more Marcellus wells on average experienced a 1.5 percent increase in gross compensation income and counties with 10 to 89 wells experienced a 2 percent increase, but counties without Marcellus wells experienced on average just a 0.2 percent increase. Importantly, these counties with much Marcellus activity on average went from performing less well than those without Marcellus, prior to 2006 to 2007, to doing better in terms of change in gross compensation and number of employed residents.





Source for Charts 2a and 2b: PA Dept. of Revenue, Personal Income Tax Statistics

C. Rents, Royalties, Patents and Copyrights

Lease and royalty payments from gas companies to mineral right owners are categorized on state tax forms as 'rents, royalties, patents, and copyrights' income. In the initial years of gas development, during which time the companies obtain the rights to drill and before much drilling and infrastructure development occurs, it would be

expected that lease dollars will exceed royalties. As the development matures and most mineral rights have been leased, more wells are drilled and start producing, the proportion of royalty dollars would increase and the share of leasing dollars would drop.

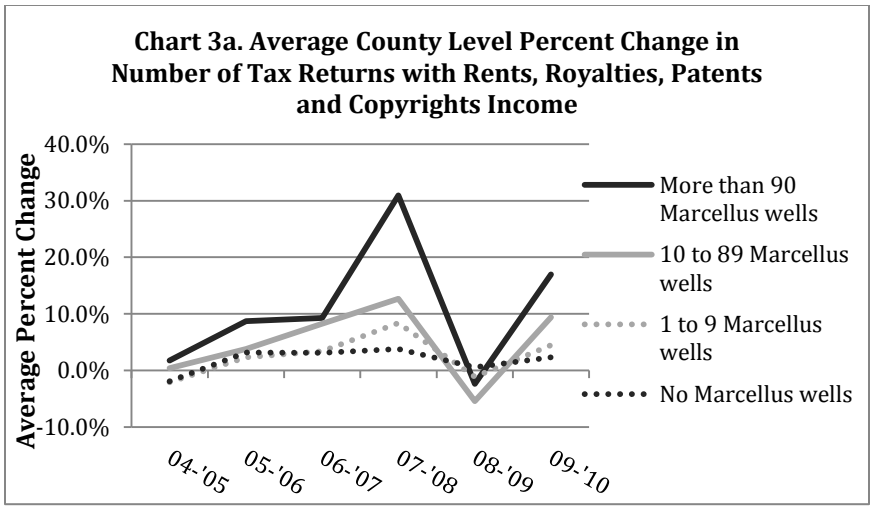
Changes in the number of tax returns reporting rents, royalties, patents, and copyrights income varied substantially between the counties (see Table 3). In counties with 90 or more Marcellus wells, the number of returns reporting royalty income increased 64.8 percent between 2007 and 2010, and taxable income on average increased 460.8 percent. Counties without any Marcellus wells on average also experienced growth in both the number of returns and income, but this growth was less than in the counties with Marcellus wells (7.3 percent increase in returns, and 15 percent increase in total taxable income).

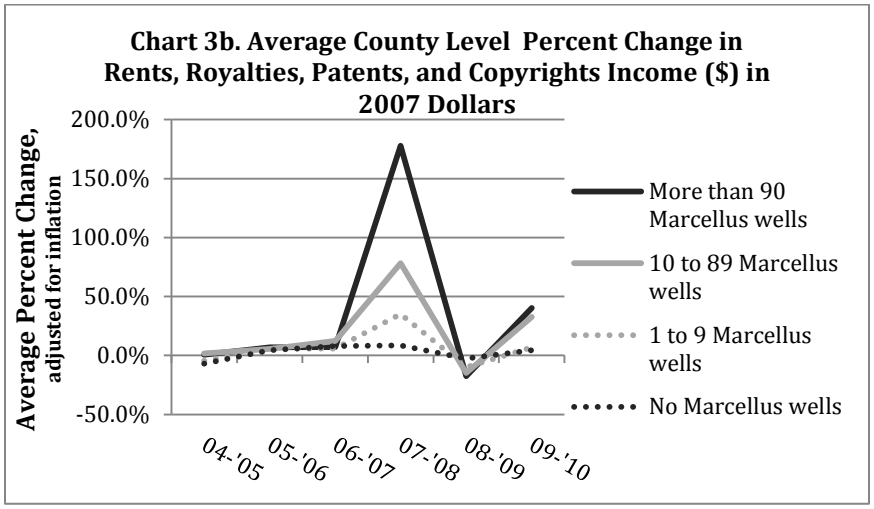
Table 3. Percent Change in Rents, Royalties, Patents and Copyrights, by Drilling Activity

Level of Marcellus Activity In County	**2007 to 2010**	
	Average Change in Rents, Royalties Income Adjusted for Inflation (number of counties)	**Average Change in Number of Returns Reporting this Income**
More than 90 Marcellus wells	460.8% (8)	64.8%
10 to 89 Marcellus wells	274.7% (14)	34.1%
1 to 9 Marcellus wells	38.9% (13)	10.4%
No Marcellus wells	15% (32)	7.3%
State Average at the County Level	127.1% (67)	20.4%

Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics

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 of the Marcellus counties, and land owned by the Commonwealth. In addition, several counties in the southwest region of Pennsylvania have a history of coal mining and shallow natural gas drilling, during which time many of the mineral rights were separated from the surface landowners. These subsequently have been passed down through the generations, with some owners moving out of the county. Most of the Marcellus counties in the north lack much past history of coal and gas development, so mineral rights are more likely to be owned by the surface landowners. The result is wide variation in the lease and royalty income changes between counties with similar levels of drilling activity (see Appendix B).





Source for Charts 3a and 3b: PA Dept. of Revenue, Personal Income Tax Statistics

Counties with more drilling activity on average had larger percentage increases in rents, royalties, patents and copyrights income (see Charts 3a and 3b). Such income in counties with 90 or more wells increased an average of 178 percent between 2007 and 2008, the years when leasing activity was particularly robust. Counties with 10 to 89 wells experienced an average increase of 78.2 percent and counties with 1 to 9 wells experienced an average increase of 35.2 percent during that time frame. The increase in counties with no Marcellus wells, in contrast, on average increased just 8.6 percent.

D. Net Profits

Net profits are the profits from the operation of a business, owned by a resident taxpayer. The state tax data similarly indicates that net profits income on average increased more in high drilling counties from 2007 to 2010 than in counties with no Marcellus drilling activity (see Table 4). Net profits income in counties with 90 or more Marcellus wells increased an average of 14.4 percent between 2007 and 2010 whereas such income in counties with no wells decreased an average of 5.4 percent.

The higher average net profits income in the high drilling counties occurred across fewer local businesses, however; the data indicates that these high drilling counties averaged a loss of 2.2 percent of taxpayers reporting net profit income, compared to only a 0.9 percent decline of such taxpayers in counties with no Marcellus wells.

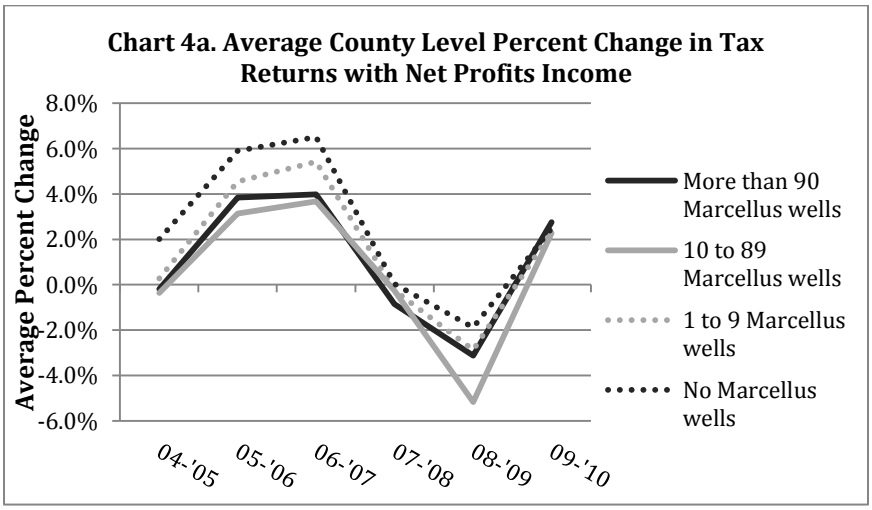
This suggests that the survival rate of locally owned businesses in Marcellus counties may be slightly poorer than of locally owned businesses outside the Marcellus region. Some anecdotes from drilling counties suggest this could be due to increased competition from non-local firms moving into the Marcellus counties, from businesses moving between counties, from local businesses being purchased by outside companies, from owners closing their businesses to work for a natural gas company, or from local businesses buying up and consolidating with competitors, but the data does not allow confirming this.

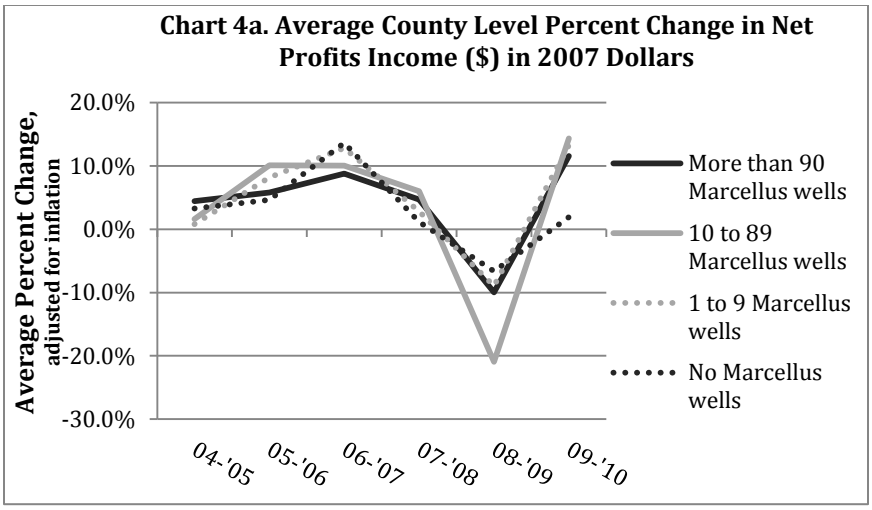
Table 4. Percent Change in Net Profits, by Drilling Activity

Level of Marcellus Activity In County	2007 to 2010	
	Average Change in Net Profits Income Adjusted for Inflation (number of counties)	**Average Change in Number of Returns Reporting this Income**
More than 90 Marcellus wells	14.4% (8)	-2.2%
10 to 89 Marcellus wells	0.8% (14)	-3.1%
1 to 9 Marcellus wells	-5.4% (13)	-4.5%
No Marcellus wells	-5.4% (32)	-0.9%
State Average at the County Level	-1.7% (67)	-2.2%

Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics

Long term trends seen from 2004 to 2010 show that counties with Marcellus activity were affected most by the economic recession in 2008 and 2009 (See Charts 4a and 4b). Counties with wells experienced the largest decrease in both number of tax returns reporting net profits and in such income during this time. Since then, these same counties on average have experienced much higher increases in net profits income than counties with no Marcellus wells, although the number of returns filed has been relatively similar from 2009 to 2010.





Source for Charts 5a and 5b: PA Dept. of Revenue, Personal Income Tax Statistics

E. Composition of Total Income

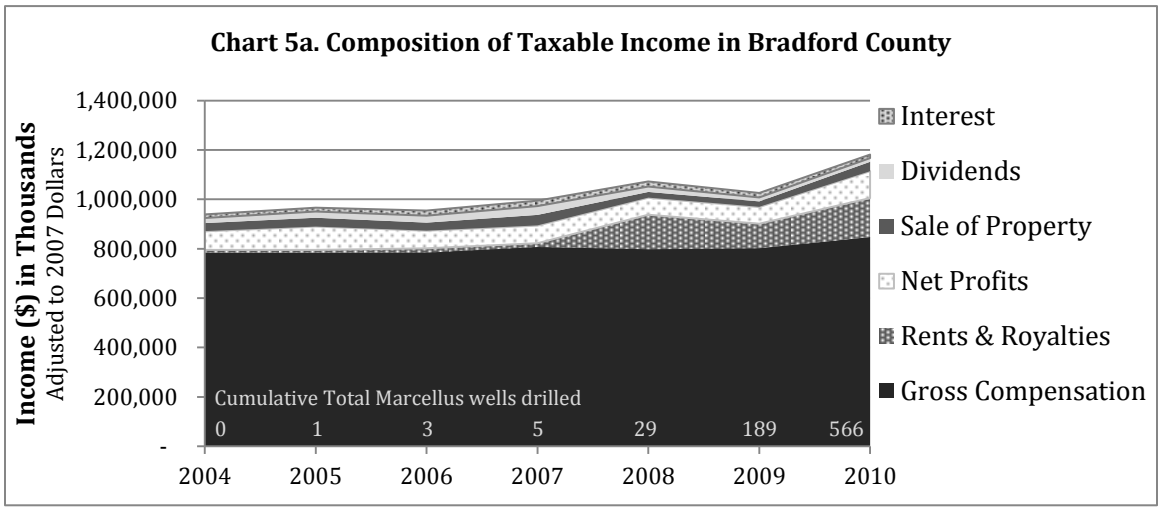
Average changes in the distribution of residents' total income in Pennsylvania counties are shown in Table 5. In 2004, prior to the boom in Marcellus Shale development, the average composition of income across all Pennsylvania counties was fairly similar, with gross compensation accounting for around 83 percent of total taxable income. In 2010, several years after the boom in development, the composition of income between counties with much Marcellus Shale development and counties with little or no development is quite different. In counties with Marcellus shale, rents, royalties, patents and copyrights income on average has become a much larger share of total local taxable income, going from 1.3 percent of total income in 2004 in counties with 90 or more wells, to 8.0 percent in 2010.

Table 5. Proportion of Sources of Total Income 2004 to 2010, by Drilling Activity

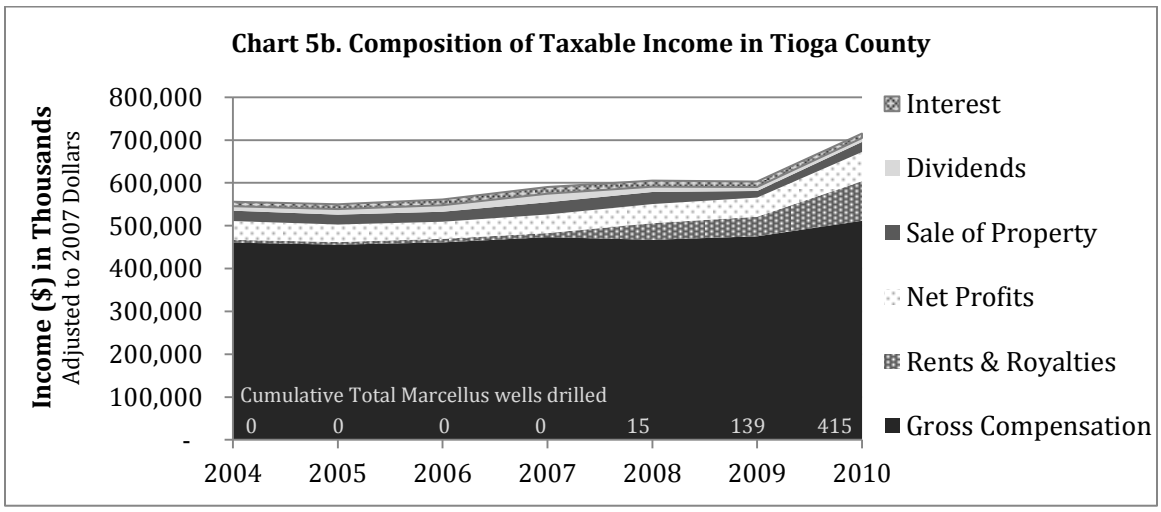
	90 or more Marcellus wells		10 to 89 Marcellus wells		1 to 9 Marcellus wells		No Marcellus wells		Pennsylvania	
	2004	2010	2004	2010	2004	2010	2004	2010	2004	2010
Gross Compensation	84.4%	78.0%	82.4%	77.4%	84.4%	83.5%	83.6%	83.9%	82.2%	81.4%
Rents & Royalties	1.3%	8.0%	1.5%	5.4%	1.3%	2.0%	1.2%	1.4%	1.2%	1.7%
Net Profits	7.9%	8.6%	8.8%	9.5%	7.8%	8.6%	8.2%	8.8%	8.4%	9.5%
Sale of Property	3.6%	3.0%	4.2%	4.6%	3.5%	2.9%	3.9%	3.0%	4.7%	3.9%
Dividends	2.0%	1.4%	2.2%	1.8%	2.2%	1.9%	2.0%	1.8%	2.4%	2.1%
Interest	1.7%	1.4%	1.7%	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%	1.6%

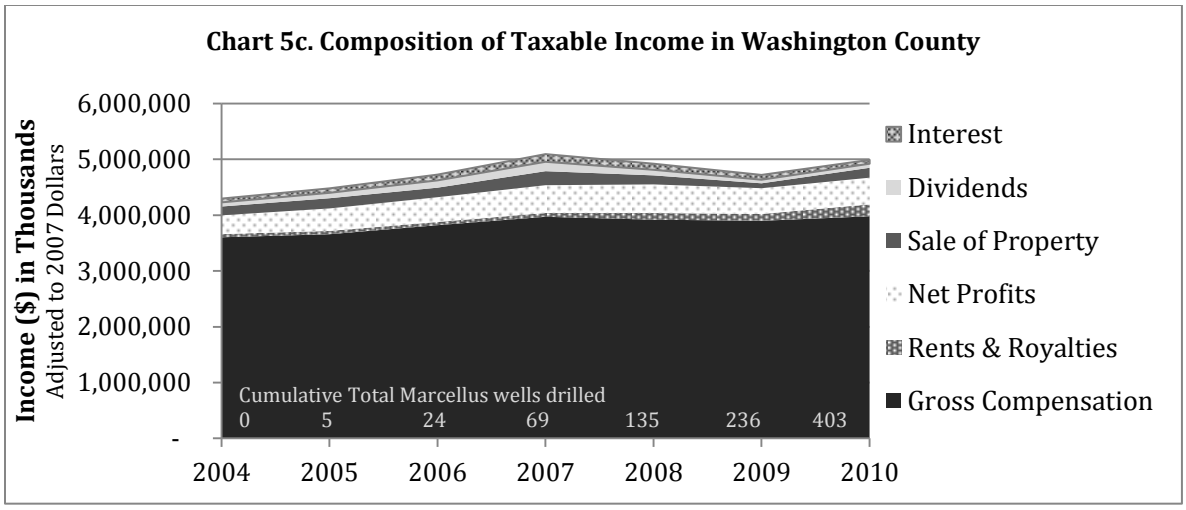
Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics

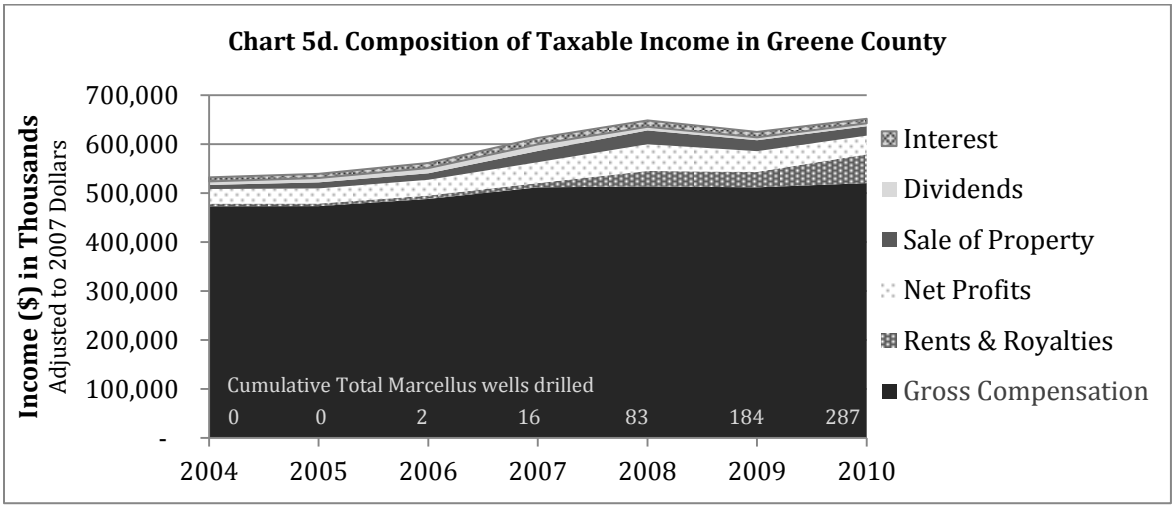
The impacts of Marcellus activity on total income are best seen in the counties with the most extensive Marcellus development. Bradford County, for example, experienced the most drilling activity of any Pennsylvania county through 2010, and has experienced significant economic impacts, with a 19.1 percent increase in total taxable income between 2007 and 2010 (adjusted for inflation). Much of this increase is due to lease and royalty income (see Chart 5a), with an increase of 986.5 percent. Gross compensation received by Bradford County residents increased by 4.9 percent during this same time period, while net profits to local business owners increased by 50.5 percent. The increases in income to mineral right owners and to local businesses thus outpaced increases in wages and salaries.



The same pattern of growth in income from rents, royalties, patents and copyrights can be seen in Tioga, Washington and Greene County (see Charts 5b, 5c, and 5d). As the number of Marcellus wells increased within a county, the proportion of income from rents, royalties, patents and copyrights income also increased. The change was less dramatic in Washington County, likely due to its much larger economy and population and potentially because a larger share of its mineral rights are not owned by local residents due to past mineral and gas activity.







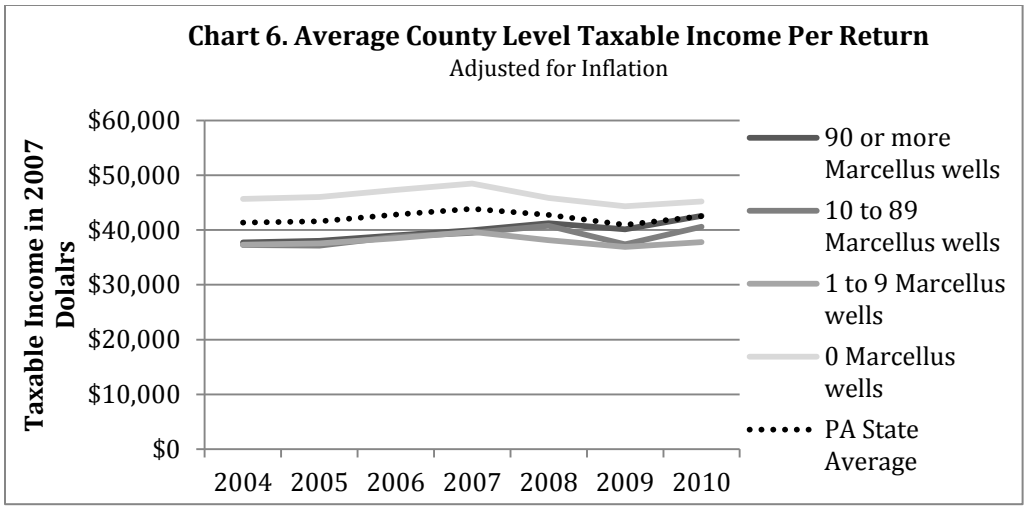
Source for Charts 5a -5d: PA Department of Revenue, Personal Income Tax Statistics

III. Per Tax Return Taxable Income of County Residents

Considering these changes on a per tax return basis helps better convey the changes occurring within the Marcellus counties, and particularly the relative impact of these changes on county residents. As with the totals reported earlier, the per tax return analyses are averages so they do not reflect how these changes are distributed across residents; some residents are doing quite well, for example, while others are not.

Many of the counties without Marcellus wells are in the relatively wealthy areas around Philadelphia. Not surprisingly, non-Marcellus counties thus had higher average taxable income per tax return in 2004 than counties with Marcellus wells (see Chart 6). Most of the Marcellus activity, in contrast, has been in very rural and relatively less wealthy counties. Marcellus development appears to be changing this; taxable incomes per tax return in Marcellus counties are closing the gap with wealthier non-Marcellus counties.

In the four year time frame of 2007 to 2010, the state average change in taxable income per return at the county level was a decrease of 2.4 percent when adjusting for inflation, but counties with 90 or more wells on average had a 12.7 percent increase in per return taxable income. Tioga County saw an increase of 17.6 percent in per tax return income during this time period, while Bradford County saw an increase of 17 percent and Greene County saw an increase of 12.2 percent as reported on state tax returns (see Appendix C).

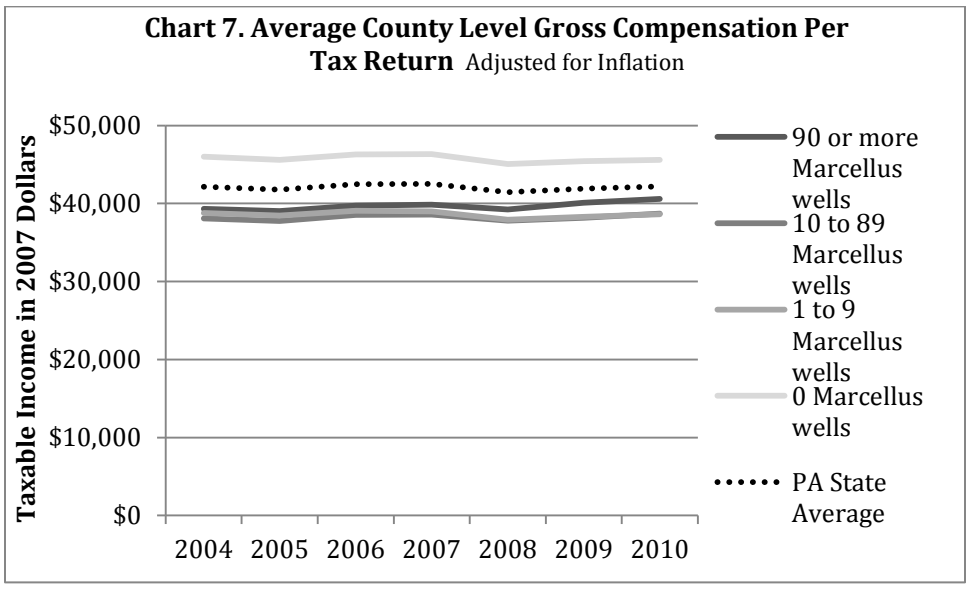


Source for Chart 6: PA Dept. of Revenue, Personal Income Tax Statistics

The following sections examine the three largest components of personal income potentially affected by Marcellus development, and their influences on per tax return and per capita income. The increases are not equally distributed across all residents or taxpayers; across the state in 2010, 83 percent of tax returns reported gross compensation income, 4.9 percent of returns reported income from rents, royalties, patents and copyrights, and 12.4 percent of returns reported net profits income.

A. Gross Compensation Per Tax Return

Gross compensation per tax return reporting such income in the counties with Marcellus on average has been much lower than in the wealthier parts of the Commonwealth (see Chart 7). Since 2007, differences in gross compensation between the counties have changed slightly, but still remain quite large. From 2007 to 2010, gross compensation per tax return reporting such income in counties with 90 or more wells grew slightly faster than in counties with fewer wells, but the average still lagged the state average. Per tax return gross compensation income decreased an average of 1 percent across the state between 2007 and 2010, but increases among the counties with the most Marcellus activity were on average even larger (see Appendix D).

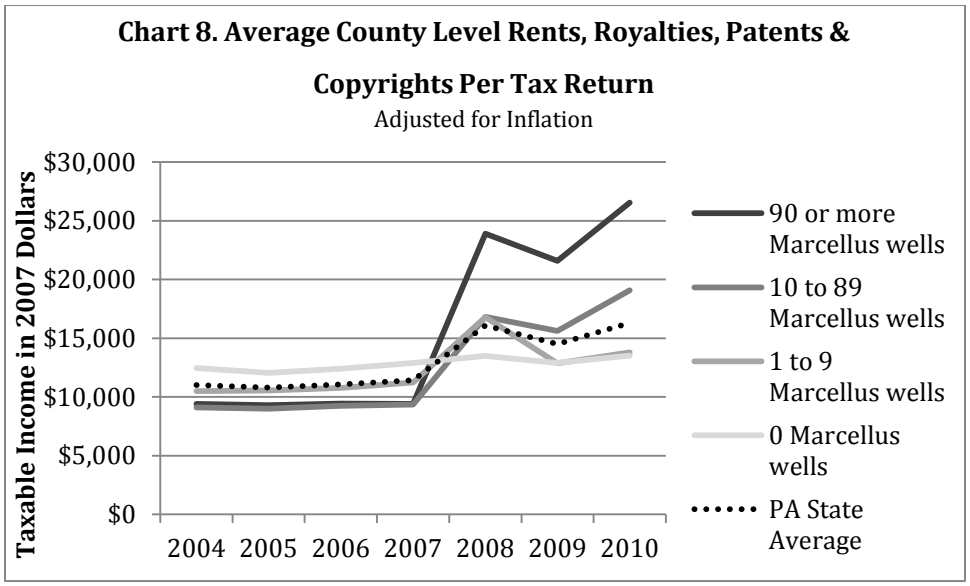


Sources for Chart 7: PA Dept. of Revenue, Personal Income Tax Statistics; US Census Population

B. Rents, Royalties, Patents, and Copyrights Per Tax Return

In contrast, counties with much Marcellus activity on average are experiencing major increases in per tax return Rents, Royalties, Patents and Copyrights income, a result of leasing and royalty payments to mineral rights owners (see Chart 8). Such increases account for much of why per tax return taxable incomes in counties with Marcellus activity are approaching the higher incomes of wealthier counties without Marcellus activity. These average per return income increases are greatest in counties with the most Marcellus wells, substantially increasing since the boom in development began in 2007. The data indicates that in 2010, annual leasing and royalty income in the highest drilling activity counties was $26,537 per tax return reporting such income (inflation adjusted to 2007 dollars). This varied from an average of $30,266 per tax return reporting such income in Bradford County, to $48,287 per tax return in Susquehanna County and $36,810 per tax return in Greene County (see Appendix E).

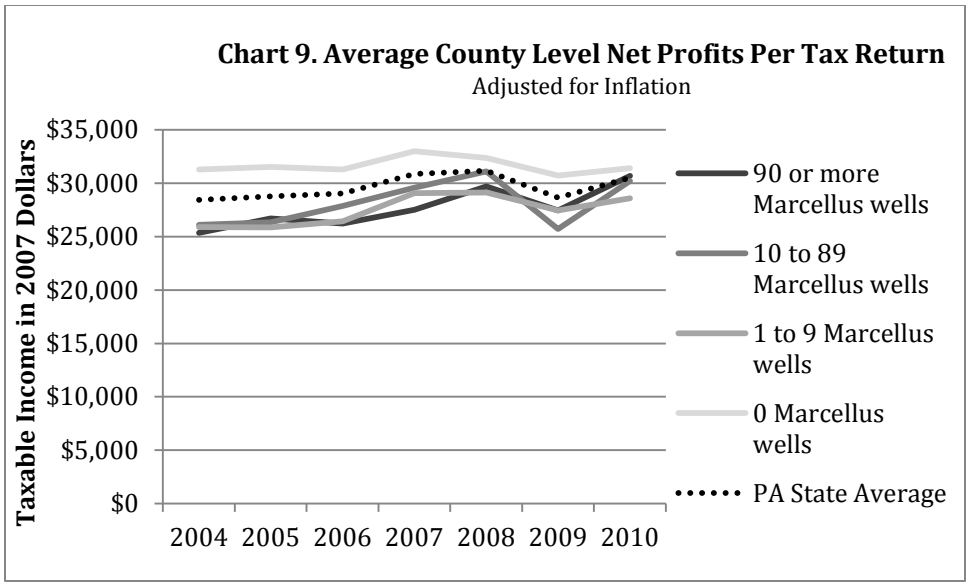
These numbers are very large and show that some residents of the Marcellus counties are receiving substantially higher incomes from lease and royalty dollars. However, the portion of each county's population receiving this income is rather small. For example, just 4.9 percent of tax returns filed in Pennsylvania in 2010 reported receiving income from rents, royalties, patents and copyrights (see Appendix G). In Bradford County, 19.2 percent of tax returns filed reported receiving income of this type, as did 14.3 percent of tax returns in Susquehanna County and 10.9 percent in Greene County.



Sources for Chart 8: PA Dept. of Revenue, Personal Income Tax Statistics, US Census Population

C. Net Profits Per Tax Return

Changes in net profits income per tax return reporting such income also help to explain the increase in total taxable income in Marcellus counties. Average increases in per return net profits income in counties with 10 or more wells are much larger than increases in counties with 9 or fewer or no Marcellus wells (see Chart 9). In counties with 90 or more Marcellus wells, per tax return net profits income increased from $25,345 in 2004 to $30,693 in 2010, a 21 percent increase (inflation adjusted to 2007 dollars). In those same counties per capita net profits income increased from $1,254 in 2004 to $1,600 in 2010, a 27.6 percent increase (see Appendix F).



Sources for Chart 9: PA Dept. of Revenue, Personal Income Tax Statistics; US Census 2010 Population

IV. Local Retail Sale Activity (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 don't perfectly track retail sales because food and clothing are excluded from the tax). The state sales tax data indicate collections in counties with high Marcellus activity on average outperformed collections in counties with less or no Marcellus activity. State collections in counties with 150 or more Marcellus wells drilled between July 1, 2007, and June 30, 2012, for example, experienced an average increase of 26.9 percent (see Table 6) compared to an average decrease of 12.6 percent in counties with no Marcellus activity during this same time period. This indicates that counties with much Marcellus activity on average are experiencing large increases in retail activity.

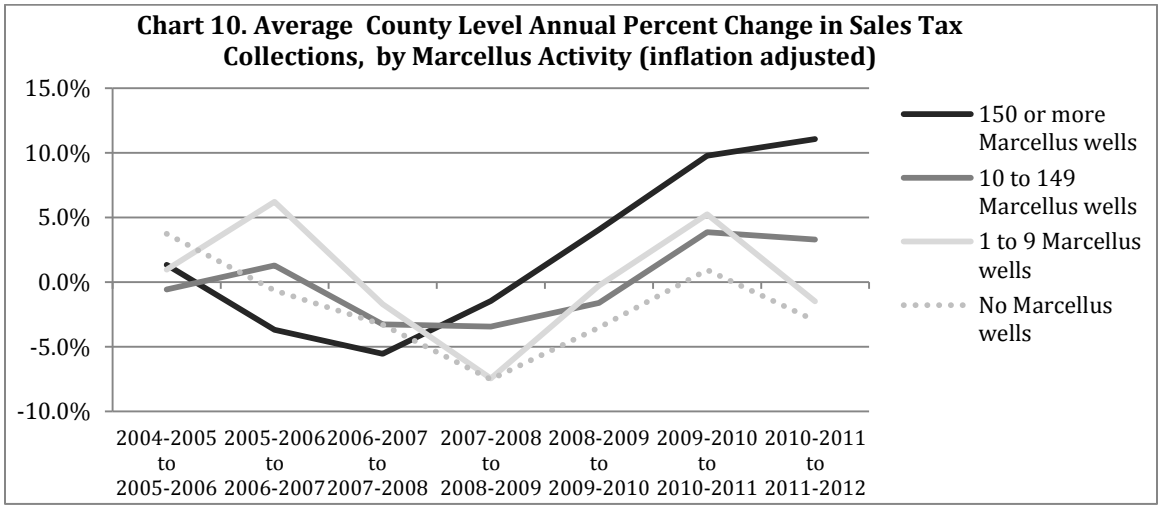
The increases between 2007 and 2012 were particularly dramatic in several counties; Sales Tax collections in Greene County increased 111.6 percent, collections in Bradford County increased 55.9 percent, and collections in Susquehanna County increased 30.4 percent when adjusting for inflation during this time period (see Appendix H). While not all counties with Marcellus activity experienced such large increases in retail activity, these counties with Marcellus activity on average greatly outperformed the counties without Marcellus activity. Of the 29 counties in 2012 without Marcellus activity, all but one experienced decreases in state Sales Tax collections.

Table 6. Average Change in State Sales Tax Collections, by Marcellus Activity

Level of Marcellus Activity in County	Percent Change (inflation adjusted) (number of counties at level of Marcellus activity		
	July 1, 2007 to June 30, 2010	**July 1, 2007 to June 30, 2011**	**July 1, 2007 to June 30, 2012**
150 or more Marcellus wells	7.6% (5)	17.8% (6)	26.9% (8)
10 to 149 Marcellus wells	-4.2% (13)	1.2% (16)	2% (19)
1 to 9 Marcellus wells	-4.5% (13)	-5.6% (15)	-4.5% (11)
No Marcellus wells	-10.9% (36)	-9.7% (30)	-12.6% (29)
State Average at the County Level	-7% (67)	-3.7% (67)	-2.4% (67)
Sources: PA DEP; PA Dept. of Revenue, Tax Compendium			

Chart 10 shows the increase in Sales Tax collections in counties with 150 or more Marcellus wells over time and the comparison to Sales Tax collections in other counties with fewer or no Marcellus wells. Since the growth in drilling Marcellus wells began in 2007, state sales tax collections in counties with 150 or more wells on average have been steadily experiencing an increase. Patterns for counties with less than 149 wells or no Marcellus wells are less clear. However, since 2007 counties with Marcellus wells on average have seen greater increases or smaller decreases in Sales Tax collections than counties with no Marcellus wells.

The large increase in Sales Tax collections in counties with much Marcellus activity indicates an increase in retail sales in those counties. This data suggests that greater Marcellus activity has a positive effect on retail spending in Pennsylvania counties. Prior to the boom in Marcellus development in 2007, state sales tax collections in counties with no Marcellus wells on average grew faster than in counties with 150 or more wells. Since the onset of drilling, this has switched, with state collections in counties with 150 or more wells growing much faster than in those with no wells.



Source for Chart 10: PA Dept. of Revenue, Tax Compendium

V. Realty Transfer Tax Collections

Pennsylvania's Realty Transfer Tax is a one percent tax on the sale of real estate (many municipal 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.

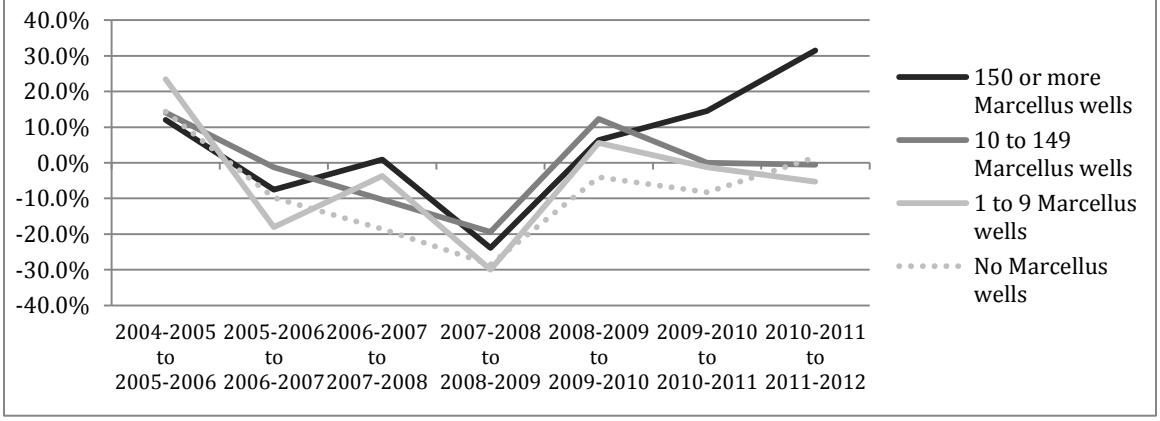
State Realty Transfer Tax collections in counties with 150 or more wells on average increased 26.5 percent between 2007 and 2012 when adjusting for inflation, compared to an average 35.2 percent decline in counties with no Marcellus drilling (see Table 7). The large increase observed between 2007 and 2012 in counties with 150 or more wells is exaggerated by the large increase within Greene County in the most recent fiscal year. Greene County, with 447 Marcellus wells as of June 2012, experienced a Realty Transfer Tax increase of 192.3 percent between June 2007 and July 2012, which was far above the increase of all other counties in that group[1]. The average change in state Realty Transfer Tax collections among counties with 150 or more wells is 2.9 percent if not including collections in Greene County, which is still a much better performance than seen in counties with fewer or no Marcellus wells.

[1] A phone call to a representative of the Recorder of Deeds Office in Greene County explained that this increase is a result of large transfers of mineral rights, the creation of transportation lines, and the increasing value of real estate in the county.

Table 7. Average Change in State Realty Transfer Tax Collections, by Marcellus Activity			
Level of Marcellus Activity in County	**Percent Change** (number of counties at level of Marcellus activity		
	July 1, 2007 to June 30, 2010	**July 1, 2007 to June 30, 2011**	**July 1, 2007 to June 30, 2012**
150 or more Marcellus wells	-17.4% (5)	-0.8% (6)	26.5% (8)
10 to 149 Marcellus wells	-13.8% (13)	-19.8% (16)	-18.5% (19)
1 to 9 Marcellus wells	-22.2% (13)	-21.9% (15)	-30.8% (11)
No Marcellus wells	-30.6% (36)	-37.8% (30)	-35.2% (29)
State Average at the county level	-24.7% (67)	-26.6% (67)	-22.4% (67)
Sources: PA DEP; PA Dept. of Revenue, Tax Compendium			

Chart 11 shows changes in Realty Transfer Tax collections over time. On average, all four groups of counties saw large declines in Realty Transfer Tax collections between fiscal years 2007-2008 to 2008-2009, although counties with 10 or more Marcellus wells on average experienced a smaller decline than counties with less wells or none at all (21.6 percent decrease and 29.3 percent decrease, respectively). Counties with no Marcellus wells did not experience positive changes in Realty Transfer Tax collections until two years after other counties with Marcellus wells. Since fiscal year 2008 to 2009, state collections in counties with 150 or more wells have seen a steady increase in Realty Transfer Tax collections. This means that the counties with much drilling activity on average saw large increases in either real estate sales activity, real estate prices paid, or a combination of both during that year.

Chart 11. Average County Level Percent Change in Realty Transfer Tax Collections, by Marcellus Activity (inflation adjusted)



Source for Chart 11: PA Dept. of Revenue, Tax Compendium

VI. Implications

The Pennsylvania Department of Revenue data show major tax collection patterns associated with Marcellus Shale development. Counties with much Marcellus Shale drilling activity witnessed, on average, much larger percentage increases in residents' personal income. In addition, they had faster growth in state sales tax collections, and smaller declines in realty transfer tax collections than did other Pennsylvania counties. The 21.6 percent increase in total taxable income between 2007 to 2010 in Tioga County is remarkable, as is the 20.5 percent increase in Sullivan County and 19.1 percent increase in Bradford County, particularly when statewide taxable income fell an average of 2 percent during this same time period. The data demonstrate that major economic benefits from Marcellus shale development are going to local residents, regardless of the presence of 'non-local' workers.

There were differences between the types of taxable income. Income increases typically were proportionally the largest for mineral right owners, and the second largest for local business owners. While there were important increases in gross compensation for workers, these tended to be much lower than the increases experienced by the other taxpayers, both proportionally and in real numbers, which may reflect the presence of non-resident who take their wages out of the county.

It is also important to note that in the high drilling activity counties, wages and salaries (represented by Gross Compensation Tax data) are increasing faster than total employment of county residents. In other words, it would suggest that much of the employment effect for local residents from Marcellus work is either higher wages or more hours worked for existing workers, rather than new hiring.

The proportionally large increases in rents, royalties, patents, and copyrights income indicate that much of the local economic benefit of Marcellus activity is going to residents who own the mineral rights. Increases in this income tended to be much larger in the northeast region of the Commonwealth than in the southwest. This likely reflects the major prior history of mineral and oil and gas development in the southwest, and the resulting severing of mineral and surface rights.

The increases in sales tax collections are particularly important, because they indicate that Marcellus development is very positively affecting the local retail sector. The increases in Sales Tax in several counties between 2007 and 2012, particularly Bradford (55.9 percent) and Greene (111.6 percent) are especially remarkable. The slight decline in number of residents reporting Net Profits income suggest that although many of the Marcellus counties are experiencing increased retail spending, the spending is occurring over fewer locally owned businesses . Those retail businesses that are surviving, however, are likely seeing increased spending and experiencing greater incomes because of this.

It is important to note that this analysis finds correlations between Marcellus shale activity and local economic activity; it does not prove that Marcellus shale activity was the cause of these economic changes. There was wide variation between counties within the same levels of drilling activity, so the experience of any individual county is different from the averages. Economic activity in these counties is affected by a wide variety of factors, in addition to Marcellus shale, so drilling by itself cannot fully explain all the changes and differences between counties. Yet the cross-tab analysis does convey general trends and influences associated with Marcellus development.

Because the state data was compiled at the county level, we were unable to examine how the economic benefits are distributed across residents within counties. Per capita analysis can hide important differences in the experience between taxpayers. Evidence suggests that major differences exist, such as between large landowners and low income residents who rent (see, for example, Kelsey, Metcalf and Salcedo, 2012).

This analysis still only reflects the early stages of natural gas drilling and does not include the cost impacts of Marcellus development, such as on the local cost-of-living or the environment. It also does not consider 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.

There has been much discussion about the local benefits of Marcellus shale development to Pennsylvania residents and debate about the benefits going to non-Pennsylvania residents. The analysis in this report shows that regardless of benefits going to non-Pennsylvanians, residents in counties with much Marcellus activity on average are receiving economic benefits from the shale development, with taxable incomes on average rising faster than in counties without the development.

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References and Data Sources:

Costanzo, Charles, and Timothy W. Kelsey. "Marcellus Shale and Local Collection of State Taxes: What the 2011 Pennsylvania Tax Data Say." Cooperative Extension, The Pennsylvania State University, 2011.

Costanzo, Charles, and Timothy W. Kelsey. "State Tax Implications of Marcellus Shale: What the Pennsylvania Data Say in 2010." Cooperative Extension, The Pennsylvania State University, 2011.

Jacobson, Michael, and Timothy W. Kelsey. "Impacts of Marcellus Shale Development on Municipal Governments in Susquehanna and Washington Counties, 2010." Cooperative Extension, The Pennsylvania State University. 2011.

Kelsey, Timothy W., Riley Adams, and Scott Milchak. "Real Property Tax Base, Market Values, and Marcellus Shale: 2007 to 2009. Center for Economic and Community Development White Paper Series. University Park, PA: Penn State University. 2012.

Kelsey, Timothy W., William Hartman, Kai A. Schafft, Yetkin Borlu, and Charles Costanzo. "Marcellus Shale Gas Development and Pennsylvania School Districts: What Are the Implications for School Expenditures and Tax Revenues?" Cooperative Extension, The Pennsylvania State University. 2012.

Kelsey, Timothy W., Alex Metcalf, and Rodrigo Salcedo. "Marcellus Shale: Land Ownership, Local Voice, and the Distribution of Lease and Royalty Dollars." Center for Economic and Community Development White Paper Series. University Park, PA: Penn State University. 2012.

Kelsey, Timothy W., and Melissa M. Ward. "Natural Gas Drilling Effects on Municipal Governments Throughout Pennsylvania's Marcellus Shale Region, 2010." Cooperative Extension, The Pennsylvania State University. 2011.

Pennsylvania Department of Environmental Protection. Office of Oil and Gas Management. Spud Report 2004-2013. Downloaded January 17, 2013.
http://www.depreportingservices.state.pa.us/ReportServer/Pages/ReportViewer.aspx?%2fOil_Gas%2fSpud_External_Data

Pennsylvania Department of Revenue. "Tax Compendium." 2007-08; through 2010-2012.
http://www.portal.state.pa.us/portal/server.pt/community/reports_and_statistics/17303/tax_compendium/602434

Pennsylvania Department of Revenue. "Personal Income Statistics." 2007, 2008, 2009, and 2010.
http://www.portal.state.pa.us/portal/server.pt/community/personal_income_tax_statistics/14832

Appendix A. Counties by Drilling Activity

County Groupings for the Sales and Realty Transfer Tax Analysis (based upon Marcellus shale wells drilled between July 1, 2007, and June 30, 2012)				County Groupings for the Personal Income Tax Analysis (based on Marcellus wells drilled between January 1, 2007, and December 31, 2010)			
150 or more wells	**10 to 149 wells**	**1 to 9 wells**	**0 wells**	**90 or more wells**	**10 to 89 wells**	**1 to 9 wells**	**0 wells**
Bradford	Allegheny	Bedford	Adams	Bradford	Armstrong	Allegheny	Adams
Fayette	Armstrong	Blair	Berks	Fayette	Butler	Beaver	Berks
Greene	Beaver	Cambria	Bucks	Greene	Centre	Bedford	Bucks
Lycoming	Butler	Columbia	Carbon	Lycoming	Clarion	Blair	Carbon
Susquehanna	Cameron	Crawford	Chester	Susquehanna	Clearfield	Cambria	Chester
Tioga	Centre	Lackawanna	Cumberland	Tioga	Clinton	Cameron	Crawford
Washington	Clarion	Luzerne	Dauphin	Washington	Elk	Columbia	Cumberland
Westmoreland	Clearfield	Mercer	Delaware	Westmoreland	Indiana	Forest	Dauphin
	Clinton	Venango	Erie		Jefferson	Huntingdon	Delaware
	Elk	Warren	Franklin		McKean	Lackawanna	Erie
	Forest	Wayne	Fulton		Potter	Luzerne	Franklin
	Indiana		Huntingdon		Somerset	Warren	Fulton
	Jefferson		Juniata		Sullivan	Wayne	Juniata
	Lawrence		Lancaster		Wyoming		Lancaster
	McKean		Lebanon				Lawrence
	Potter		Lehigh				Lebanon
	Somerset		Mifflin				Lehigh
	Sullivan		Monroe				Mercer
	Wyoming		Montgomery				Mifflin
			Montour				Monroe
			Northampton				Montgomery
			Northumberland				Montour
			Perry				Northampton
			Philadelphia				Northumberland
			Pike				Perry
			Schuylkill				Philadelphia
			Snyder				Pike
			Union				Schuylkill
			York				Snyder
							Union
							Venango
							York

Source: PA DEP, Office of Oil and Gas Management, Wells Drilled by County

Appendix B. Changes in Taxable Income, by County (adjusted for inflation*), 2007 to 2010					
County	**Marcellus Wells Drilled 2007-2010**	**Change in Taxable Income**	**Change in Gross Compensation Income**	**Change in Rents, Royalties, Patents and Copyrights Income**	**Change in Net Profits Income**
Pennsylvania	*2,876*	*-7.7%*	*-2.6%*	*39.0%*	*-1.5%*
Adams	0	-3.5%	1.6%	17.8%	-12.3%
Allegheny	4	-5.5%	0.4%	25.1%	13.0%
Armstrong	65	4.9%	-12.6%	74.9%	-17.1%
Beaver	2	0.1%	3.6%	49.5%	9.4%
Bedford	1	-6.7%	0.8%	-24.5%	-28.7%
Berks	0	-12.6%	-5.2%	-11.3%	-10.2%
Blair	4	-7.1%	-4.0%	25.8%	-2.6%
Bradford	563	19.1%	4.9%	986.5%	50.5%
Bucks	0	-8.1%	-3.2%	15.5%	2.2%
Butler	68	-1.9%	0.4%	114.6%	0.8%
Cambria	3	-3.7%	-1.2%	13.3%	-0.5%
Cameron	8	-17.4%	-12.1%	60.8%	-2.1%
Carbon	0	-10.5%	-5.6%	-17.6%	-16.6%
Centre	53	-1.9%	3.2%	32.2%	2.9%
Chester	0	-6.5%	3.2%	20.8%	2.9%
Clarion	10	-1.5%	-0.9%	238.3%	-0.7%
Clearfield	70	-2.1%	1.7%	70.0%	-9.8%
Clinton	48	2.7%	5.8%	-5.9%	5.1%
Columbia	1	-8.9%	-6.5%	165.5%	-6.8%
Crawford	0	-8.7%	-5.3%	-6.3%	7.4%
Cumberland	0	-13.2%	-7.4%	7.3%	-11.0%
Dauphin	0	-5.9%	-1.6%	10.0%	0.7%
Delaware	0	-12.1%	-5.6%	-5.1%	-7.5%
Elk	36	-3.5%	-5.0%	57.8%	-0.5%
Erie	0	-9.6%	-6.1%	1.9%	-2.9%
Fayette	127	-7.3%	-4.3%	36.6%	-5.1%
Forest	6	-10.4%	-10.1%	41.0%	5.2%
Franklin	0	-7.8%	0.0%	6.8%	-7.2%
Fulton	0	-14.0%	-8.4%	16.2%	-13.6%
Greene	285	6.8%	1.7%	601.0%	-10.9%
Huntingdon	1	-10.8%	-8.0%	14.0%	-8.7%
Indiana	18	-8.5%	-5.0%	28.4%	-27.0%
Jefferson	14	-7.6%	-3.9%	48.2%	-12.9%

Juniata	0	-2.0%	1.0%	-6.0%	-5.4%
Lackawanna	1	-4.7%	1.5%	12.1%	-6.0%
Lancaster	0	-9.3%	-4.5%	9.0%	-9.4%
Lawrence	0	-8.0%	-8.7%	97.3%	0.4%
Lebanon	0	-9.8%	-3.9%	7.2%	-12.5%
Lehigh	0	-13.8%	-7.5%	6.2%	-13.1%
Luzerne	2	-5.2%	-2.3%	52.9%	1.9%
Lycoming	159	-3.7%	-1.3%	137.4%	2.7%
McKean	35	-8.6%	-6.4%	41.6%	5.2%
Mercer	0	-9.3%	-5.9%	1.4%	7.4%
Mifflin	0	-0.4%	4.1%	19.5%	-4.9%
Monroe	0	-10.2%	-4.4%	-10.4%	-22.4%
Montgomery	0	-13.4%	-6.2%	13.6%	-4.8%
Montour	0	-5.1%	1.1%	8.7%	-10.3%
Northampton	0	-6.3%	-0.5%	24.0%	-7.9%
Northumberland	0	-6.4%	-3.5%	25.0%	11.0%
Perry	0	-10.6%	-9.3%	13.5%	-3.7%
Philadelphia	0	-4.2%	-1.0%	10.1%	8.8%
Pike	0	1.8%	7.3%	14.8%	-5.3%
Potter	58	8.1%	-3.1%	634.8%	56.9%
Schuylkill	0	-8.0%	-5.0%	45.7%	4.6%
Snyder	0	-11.1%	-7.9%	9.1%	-14.6%
Somerset	12	-4.6%	-0.5%	27.9%	-3.3%
Sullivan	22	20.5%	2.1%	1949.0%	-1.3%
Susquehanna	248	16.0%	2.1%	779.2%	17.8%
Tioga	415	21.6%	8.1%	887.3%	56.9%
Union	0	-10.5%	-3.6%	44.1%	-22.8%
Venango	0	-3.4%	0.9%	83.8%	10.9%
Warren	2	-14.2%	-6.5%	8.8%	-25.8%
Washington	379	-2.1%	0.2%	230.7%	-4.5%
Wayne	4	-22.3%	-18.0%	61.6%	-18.5%
Westmoreland	125	-2.7%	0.5%	27.3%	7.7%
Wyoming	27	-2.5%	-10.9%	534.6%	13.0%
York	0	-7.8%	-2.6%	7.3%	-10.6%

Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics, 2007 and 2010.
***Inflation adjusted to 2007**

Appendix C. Per Tax Return Total Income (adjusted for inflation*), by County							
		Per Tax Return			Per Capita		
County	Marcellus Wells Drilled, 2007 to 2010	2007	2010	Per Tax Return Percent Change '07-'10	2007	2010	Per Capita Percent Change '07-'10
Pennsylvania	*2,876*	*$53,748*	*$50,649*	*-5.8%*	*$23,757*	*$21,933*	*-7.7%*
Adams	0	45,148	42,687	-5.5%	20,101	19,398	-3.5%
Allegheny	4	57,113	54,794	-4.1%	26,121	24,697	-5.5%
Armstrong	65	40,354	47,991	18.9%	20,650	21,668	4.9%
Beaver	2	40,785	40,387	-1.0%	18,252	18,275	0.1%
Bedford	1	36,108	33,994	-5.9%	15,859	14,796	-6.7%
Berks	0	50,455	45,119	-10.6%	23,095	20,184	-12.6%
Blair	4	39,165	38,304	-2.2%	17,809	16,537	-7.1%
Bradford	563	37,149	43,469	17.0%	15,842	18,875	19.1%
Bucks	0	75,439	69,092	-8.4%	35,437	32,567	-8.1%
Butler	68	54,849	54,942	0.2%	25,697	25,218	-1.9%
Cambria	3	36,161	36,672	1.4%	16,528	15,917	-3.7%
Cameron	8	34,522	30,961	-10.3%	16,932	13,992	-17.4%
Carbon	0	38,664	35,979	-6.9%	17,725	15,857	-10.5%
Centre	53	49,753	48,691	-2.1%	17,519	17,194	-1.9%
Chester	0	97,297	86,533	-11.1%	41,118	38,452	-6.5%
Clarion	10	37,002	37,478	1.3%	15,671	15,433	-1.5%
Clearfield	70	35,363	34,788	-1.6%	15,026	14,704	-2.1%
Clinton	48	34,658	34,742	0.2%	13,310	13,675	2.7%
Columbia	1	39,902	38,877	-2.6%	17,681	16,114	-8.9%
Crawford	0	37,177	35,280	-5.1%	15,763	14,397	-8.7%
Cumberland	0	54,077	50,263	-7.1%	27,459	23,824	-13.2%
Dauphin	0	47,437	45,514	-4.1%	22,337	21,022	-5.9%
Delaware	0	73,522	67,087	-8.8%	32,588	28,655	-12.1%
Elk	36	38,494	38,827	0.9%	19,834	19,138	-3.5%
Erie	0	42,267	39,386	-6.8%	18,533	16,744	-9.6%
Fayette	127	35,521	35,385	-0.4%	16,569	15,354	-7.3%
Forest	6	30,072	29,679	-1.3%	9,634	8,631	-10.4%
Franklin	0	44,594	40,237	-9.8%	19,532	18,000	-7.8%
Fulton	0	39,057	35,271	-9.7%	17,807	15,318	-14.0%
Greene	285	39,596	44,421	12.2%	15,637	16,703	6.8%
Huntingdon	1	36,019	34,313	-4.7%	15,263	13,611	-10.8%
Indiana	18	41,418	40,294	-2.7%	17,469	15,992	-8.5%
Jefferson	14	36,328	35,097	-3.4%	17,549	16,220	-7.6%
Juniata	0	36,775	35,463	-3.6%	15,393	15,081	-2.0%

Lackawanna	1	43,414	41,045	-5.5%	18,895	18,013	-4.7%
Lancaster	0	50,521	46,441	-8.1%	23,361	21,188	-9.3%
Lawrence	0	39,386	40,171	2.0%	18,859	17,351	-8.0%
Lebanon	0	43,645	40,483	-7.2%	21,206	19,119	-9.8%
Lehigh	0	52,864	47,161	-10.8%	25,334	21,850	-13.8%
Luzerne	2	41,329	39,746	-3.8%	18,751	17,774	-5.2%
Lycoming	159	39,047	38,429	-1.6%	17,920	17,264	-3.7%
McKean	35	39,407	37,681	-4.4%	16,976	15,521	-8.6%
Mercer	0	38,945	36,670	-5.8%	17,033	15,454	-9.3%
Mifflin	0	34,177	32,395	-5.2%	13,891	13,838	-0.4%
Monroe	0	47,104	42,886	-9.0%	18,622	16,715	-10.2%
Montgomery	0	90,227	82,248	-8.8%	44,467	38,501	-13.4%
Montour	0	50,126	49,050	-2.1%	24,441	23,205	-5.1%
Northampton	0	52,236	48,743	-6.7%	23,345	21,872	-6.3%
Northumberland	0	35,274	34,236	-2.9%	15,878	14,855	-6.4%
Perry	0	40,770	38,917	-4.5%	20,056	17,920	-10.6%
Philadelphia	0	40,100	38,812	-3.2%	13,947	13,357	-4.2%
Pike	0	46,223	42,800	-7.4%	16,042	16,337	1.8%
Potter	58	35,679	39,282	10.1%	15,049	16,265	8.1%
Schuylkill	0	38,796	37,433	-3.5%	17,743	16,326	-8.0%
Snyder	0	38,259	35,505	-7.2%	16,753	14,890	-11.1%
Somerset	12	37,754	37,069	-1.8%	17,026	16,238	-4.6%
Sullivan	22	33,763	40,780	20.8%	15,043	18,132	20.5%
Susquehanna	248	36,338	41,332	13.7%	15,055	17,464	16.0%
Tioga	415	33,947	39,909	17.6%	13,924	16,932	21.6%
Union	0	46,592	44,039	-5.5%	17,694	15,834	-10.5%
Venango	0	34,813	34,135	-1.9%	15,209	14,685	-3.4%
Warren	2	40,077	34,812	-13.1%	17,641	15,128	-14.2%
Washington	379	51,786	51,772	0.0%	24,445	23,942	-2.1%
Wayne	4	41,049	37,825	-7.9%	20,723	16,092	-22.3%
Westmoreland	125	46,473	45,791	-1.5%	21,361	20,775	-2.7%
Wyoming	27	37,947	40,787	7.5%	19,573	19,078	-2.5%
York	0	49,662	46,952	-5.5%	23,071	21,273	-7.8%

Source: PA DEP; PA Dept. of Revenue, Personal Income Tax statistics 2007-2010; US Census Pennsylvania Quickfacts 2010.
***Inflation adjusted to 2007 dollars**

Appendix D. Per Tax Return Gross Compensation Income (adjusted for inflation*), by County							
County	Marcellus Wells Drilled, 2007 to 2010	Per Tax Return		Per Tax Return Percent Change '07-'10	Per Capita		Per Capita Percent Change '07-'10
		2007	2010		2007	2010	
Pennsylvania	*2,876*	*$49,991*	*$49,468*	*-1.0%*	*$18,318*	*$17,845*	*-2.6%*
Adams	0	43,366	43,163	-0.5%	16,248	16,505	1.6%
Allegheny	4	52,576	52,729	0.3%	19,701	19,771	0.4%
Armstrong	65	39,861	40,042	0.5%	16,600	14,505	-12.6%
Beaver	2	42,726	43,078	0.8%	15,693	16,258	3.6%
Bedford	1	34,930	35,304	1.1%	12,407	12,508	0.8%
Berks	0	47,515	45,983	-3.2%	18,116	17,181	-5.2%
Blair	4	37,816	37,881	0.2%	14,228	13,666	-4.0%
Bradford	563	37,571	38,351	2.1%	12,905	13,538	4.9%
Bucks	0	70,004	67,669	-3.3%	27,414	26,523	-3.2%
Butler	68	53,810	54,870	2.0%	20,885	20,965	0.4%
Cambria	3	38,056	39,152	2.9%	13,773	13,608	-1.2%
Cameron	8	34,113	32,659	-4.3%	13,457	11,831	-12.1%
Carbon	0	39,978	38,994	-2.5%	15,007	14,172	-5.6%
Centre	53	45,397	46,553	2.5%	13,357	13,782	3.2%
Chester	0	80,986	79,273	-2.1%	28,671	29,582	3.2%
Clarion	10	36,684	36,913	0.6%	12,341	12,225	-0.9%
Clearfield	70	35,313	35,707	1.1%	12,237	12,450	1.7%
Clinton	48	35,469	36,231	2.1%	11,270	11,921	5.8%
Columbia	1	40,411	40,056	-0.9%	14,688	13,734	-6.5%
Crawford	0	36,006	35,142	-2.4%	12,179	11,538	-5.3%
Cumberland	0	50,902	50,398	-1.0%	21,183	19,612	-7.4%
Dauphin	0	46,260	46,360	0.2%	18,652	18,347	-1.6%
Delaware	0	65,067	63,570	-2.3%	23,947	22,610	-5.6%
Elk	36	38,352	37,618	-1.9%	15,980	15,188	-5.0%
Erie	0	40,264	38,874	-3.5%	770	706	-8.4%
Fayette	127	36,186	36,572	1.1%	13,696	13,106	-4.3%
Forest	6	31,082	31,147	0.2%	7,706	6,927	-10.1%
Franklin	0	42,551	41,494	-2.5%	27,712	26,023	-6.1%
Fulton	0	38,464	37,283	-3.1%	153,215	153,176	0.0%
Greene	285	40,514	42,901	5.9%	13,229	13,456	1.7%
Huntingdon	1	36,976	36,224	-2.0%	12,868	11,840	-8.0%
Indiana	18	39,963	40,150	0.5%	13,325	12,660	-5.0%
Jefferson	14	34,333	34,173	-0.5%	13,084	12,577	-3.9%

Juniata	0	37,286	36,932	-0.9%	12,126	12,243	1.0%
Lackawanna	1	40,752	40,731	-0.1%	14,801	15,019	1.5%
Lancaster	0	45,226	43,844	-3.1%	17,218	16,445	-4.5%
Lawrence	0	39,244	39,389	0.4%	15,187	13,868	-8.7%
Lebanon	0	42,340	41,789	-1.3%	17,008	16,347	-3.9%
Lehigh	0	50,912	48,606	-4.5%	20,294	18,765	-7.5%
Luzerne	2	40,483	39,812	-1.7%	15,202	14,850	-2.3%
Lycoming	159	38,164	38,053	-0.3%	14,489	14,295	-1.3%
McKean	35	37,362	36,394	-2.6%	13,073	12,242	-6.4%
Mercer	0	38,879	38,059	-2.1%	13,588	12,781	-5.9%
Mifflin	0	34,803	34,339	-1.3%	11,321	11,785	4.1%
Monroe	0	46,125	44,608	-3.3%	15,498	14,814	-4.4%
Montgomery	0	74,970	73,687	-1.7%	30,329	28,437	-6.2%
Montour	0	51,809	53,229	2.7%	20,140	20,354	1.1%
Northampton	0	51,362	50,608	-1.5%	19,010	18,906	-0.5%
Northumberland	0	36,170	35,952	-0.6%	13,375	12,909	-3.5%
Perry	0	42,586	41,495	-2.6%	17,565	15,939	-9.3%
Philadelphia	0	38,798	38,844	0.1%	11,853	11,740	-1.0%
Pike	0	47,066	46,218	-1.8%	13,326	14,300	7.3%
Potter	58	36,202	35,438	-2.1%	12,032	11,660	-3.1%
Schuylkill	0	39,272	38,871	-1.0%	14,710	13,968	-5.0%
Snyder	0	37,975	36,902	-2.8%	13,240	12,194	-7.9%
Somerset	12	36,086	36,836	2.1%	12,960	12,889	-0.5%
Sullivan	22	33,631	33,731	0.3%	10,987	11,219	2.1%
Susquehanna	248	35,964	35,898	-0.2%	11,791	12,036	2.1%
Tioga	415	34,626	35,943	3.8%	11,277	12,191	8.1%
Union	0	44,005	44,429	1.0%	13,067	12,602	-3.6%
Venango	0	35,066	35,430	1.0%	12,236	12,342	0.9%
Warren	2	37,836	35,271	-6.8%	13,327	12,457	-6.5%
Washington	379	49,997	50,617	1.2%	19,111	19,149	0.2%
Wayne	4	39,146	38,068	-2.8%	15,249	12,497	-18.0%
Westmoreland	125	45,915	46,408	1.1%	17,025	17,113	0.5%
Wyoming	27	37,920	37,333	-1.5%	16,038	14,291	-10.9%
York	0	47,946	47,737	-0.4%	18,919	18,417	-2.6%

Sources: PA DEP; PA Dept. of Revenue, Personal Income Tax Statistics 2007-2010; US Census Pennsylvania Quickfacts 2010.
***Inflation adjusted to 2007 dollars**

Appendix E. Per Tax Return Rents, Royalties, Patents & Copyrights Income (adjusted for inflation*), by County							
County	Marcellus Wells Drilled, 2007 to 2010	Per Tax Return 2007	Per Tax Return 2010	Per Tax Return Percent Change '07-'10	Per Capita 2007	Per Capita 2010	Per Capita Percent Change '07-'10
Pennsylvania	*2,876*	*$14,230*	*$17,370*	*22.1%*	*$263*	*$366*	*39.0%*
Adams	0	11,565	12,684	9.7%	232	2,524	986.5%
Allegheny	4	15,799	17,760	12.4%	222	2,197	887.3%
Armstrong	65	7,106	10,945	54.0%	310	1,027	230.7%
Beaver	2	10,118	11,791	16.5%	216	1,513	601.0%
Bedford	1	11,203	8,253	-26.3%	332	2,921	779.2%
Berks	0	20,713	16,832	-18.7%	248	589	137.4%
Blair	4	14,458	17,504	21.1%	275	376	36.6%
Bradford	563	6,434	30,266	370.4%	276	352	27.3%
Bucks	0	19,621	20,699	5.5%	218	370	70.0%
Butler	68	12,415	20,833	67.8%	294	631	114.6%
Cambria	3	8,717	9,401	7.8%	311	544	74.9%
Cameron	8	7,318	11,949	63.3%	233	1,712	634.8%
Carbon	0	13,135	10,389	-20.9%	319	421	32.2%
Centre	53	16,462	19,944	21.2%	219	206	-5.9%
Chester	0	20,768	22,159	6.7%	225	355	57.8%
Clarion	10	8,129	24,255	198.4%	245	347	41.6%
Clearfield	70	7,420	10,992	48.1%	326	2,071	534.6%
Clinton	48	11,592	10,635	-8.3%	205	4,192	1949.0%
Columbia	1	9,838	21,319	116.7%	406	521	28.4%
Crawford	0	6,191	5,835	-5.8%	343	508	48.2%
Cumberland	0	14,960	16,270	8.8%	241	308	27.9%
Dauphin	0	13,787	14,380	4.3%	354	1,197	238.3%
Delaware	0	21,135	19,079	-9.7%	186	298	60.8%
Elk	36	8,683	12,316	41.8%	208	293	41.0%
Erie	0	12,415	12,184	-1.9%	272	340	25.1%
Fayette	127	9,917	11,902	20.0%	308	388	25.8%
Forest	6	10,348	14,594	41.0%	304	491	61.6%
Franklin	0	11,648	11,434	-1.8%	163	185	13.3%
Fulton	0	6,457	6,905	6.9%	155	231	49.5%
Greene	285	7,343	36,810	401.3%	206	315	52.9%
Huntingdon	1	9,891	11,142	12.7%	212	231	8.8%
Indiana	18	8,376	10,637	27.0%	292	221	-24.5%
Jefferson	14	6,670	9,443	41.6%	213	565	165.5%

Juniata	0	9,298	7,862	-15.4%	203	231	14.0%
Lackawanna	1	15,943	15,938	0.0%	272	304	12.1%
Lancaster	0	17,232	16,776	-2.6%	238	280	17.8%
Lawrence	0	9,393	17,377	85.0%	301	267	-11.3%
Lebanon	0	13,014	13,608	4.6%	350	404	15.5%
Lehigh	0	17,378	17,875	2.9%	190	156	-17.6%
Luzerne	2	12,717	17,122	34.6%	386	467	20.8%
Lycoming	159	11,089	19,385	74.8%	283	266	-6.3%
McKean	35	11,855	15,840	33.6%	305	327	7.3%
Mercer	0	7,661	7,245	-5.4%	182	200	10.0%
Mifflin	0	8,400	8,880	5.7%	326	310	-5.1%
Monroe	0	15,630	13,754	-12.0%	18	17	-6.0%
Montgomery	0	22,164	24,382	10.0%	20	20	3.4%
Montour	0	8,587	8,952	4.3%	2,304	2,460	6.8%
Northampton	0	15,055	16,959	12.6%	94	109	16.2%
Northumberland	0	7,721	9,088	17.7%	348	379	9.0%
Perry	0	9,103	9,766	7.3%	203	400	97.3%
Philadelphia	0	11,162	11,229	0.6%	262	281	7.2%
Pike	0	14,875	13,551	-8.9%	260	276	6.2%
Potter	58	7,123	37,404	425.1%	253	257	1.4%
Schuylkill	0	10,836	14,897	37.5%	150	179	19.5%
Snyder	0	7,876	8,446	7.2%	195	175	-10.4%
Somerset	12	8,324	10,080	21.1%	486	553	13.6%
Sullivan	22	6,675	42,632	538.7%	210	228	8.7%
Susquehanna	248	9,515	48,287	407.5%	210	261	24.0%
Tioga	415	6,898	29,960	334.3%	144	180	25.0%
Union	0	11,500	15,524	35.0%	160	182	13.5%
Venango	0	7,292	11,509	57.8%	80	88	10.1%
Warren	2	7,538	8,031	6.5%	149	171	14.8%
Washington	379	12,640	22,757	80.0%	155	226	45.7%
Wayne	4	12,181	14,608	19.9%	184	201	9.1%
Westmoreland	125	11,520	12,933	12.3%	261	376	44.1%
Wyoming	27	10,138	31,060	206.4%	211	387	83.8%
York	0	15,915	16,172	1.6%	265	284	7.3%

Sources: PA DEP; PA Dept. of Revenue Personal Income Tax Statistics 2007-2010; US Census Pennsylvania Quickfacts 2010.
***Inflation adjusted to 2007 dollars**

Appendix F. Per Tax Return Net Profits Income (adjusted for inflation*), by County							
County	Marcellus Wells Drilled, 2007 to 2010	Per Tax Return		Per Tax Return Percent Change '07-'10	Per Capita		Per Capita Percent Change '07-'10
		2007	2010		2007	2010	
Pennsylvania	*2,876*	*$39,617*	*$39,056*	*-1.4%*	*$2,122*	*$2,090*	*-1.5%*
Adams	0	29,735	25,558	-14.0%	1,150	1,732	50.5%
Allegheny	4	45,312	50,588	11.6%	1,036	1,625	56.9%
Armstrong	65	32,893	31,131	-5.4%	2,412	2,304	-4.5%
Beaver	2	24,480	25,872	5.7%	1,115	993	-10.9%
Bedford	1	31,114	21,485	-30.9%	1,374	1,618	17.8%
Berks	0	34,540	31,143	-9.8%	1,412	1,450	2.7%
Blair	4	32,082	33,463	4.3%	1,279	1,214	-5.1%
Bradford	563	19,413	29,647	52.7%	1,738	1,871	7.7%
Bucks	0	46,113	46,351	0.5%	1,346	1,213	-9.8%
Butler	68	35,844	37,086	3.5%	2,080	2,096	0.8%
Cambria	3	26,724	28,315	6.0%	1,761	1,459	-17.1%
Cameron	8	17,983	18,444	2.6%	1,362	2,138	56.9%
Carbon	0	24,548	22,519	-8.3%	1,512	1,555	2.9%
Centre	53	29,730	30,234	1.7%	948	996	5.1%
Chester	0	64,427	61,065	-5.2%	1,577	1,569	-0.5%
Clarion	10	24,823	26,107	5.2%	1,842	1,939	5.2%
Clearfield	70	27,526	24,684	-10.3%	1,586	1,792	13.0%
Clinton	48	22,429	22,351	-0.3%	1,442	1,423	-1.3%
Columbia	1	24,299	24,412	0.5%	2,083	1,521	-27.0%
Crawford	0	25,843	28,809	11.5%	2,345	2,042	-12.9%
Cumberland	0	41,350	39,600	-4.2%	1,975	1,911	-3.3%
Dauphin	0	34,359	33,805	-1.6%	1,412	1,402	-0.7%
Delaware	0	52,861	49,383	-6.6%	849	831	-2.1%
Elk	36	30,567	27,901	-8.7%	776	816	5.2%
Erie	0	33,819	33,151	-2.0%	2,320	2,622	13.0%
Fayette	127	27,249	27,322	0.3%	1,663	1,620	-2.6%
Forest	6	19,630	23,594	20.2%	2,354	1,920	-18.5%
Franklin	0	30,728	27,367	-10.9%	1,234	1,227	-0.5%
Fulton	0	22,269	19,818	-11.0%	1,064	1,164	9.4%
Greene	285	29,302	28,415	-3.0%	1,436	1,463	1.9%
Huntingdon	1	19,442	19,145	-1.5%	1,966	1,458	-25.8%
Indiana	18	38,429	30,745	-20.0%	1,993	1,421	-28.7%
Jefferson	14	34,973	32,536	-7.0%	1,213	1,130	-6.8%

Juniata	0	23,928	22,050	-7.8%	1,079	986	-8.7%
Lackawanna	1	36,603	33,267	-9.1%	1,698	1,597	-6.0%
Lancaster	0	40,331	35,825	-11.2%	1,608	1,411	-12.3%
Lawrence	0	25,370	28,389	11.9%	1,794	1,611	-10.2%
Lebanon	0	30,209	28,116	-6.9%	3,253	3,323	2.2%
Lehigh	0	34,258	29,908	-12.7%	1,151	960	-16.6%
Luzerne	2	31,233	32,524	4.1%	4,151	4,271	2.9%
Lycoming	159	27,548	28,791	4.5%	1,620	1,739	7.4%
McKean	35	39,687	43,136	8.7%	2,491	2,216	-11.0%
Mercer	0	25,862	27,788	7.4%	1,563	1,574	0.7%
Mifflin	0	24,019	21,859	-9.0%	3,121	2,887	-7.5%
Monroe	0	27,715	22,551	-18.6%	1,587	1,540	-2.9%
Montgomery	0	65,659	64,642	-1.5%	1,610	1,493	-7.2%
Montour	0	33,750	29,843	-11.6%	1,317	1,137	-13.6%
Northampton	0	35,749	32,180	-10.0%	1,710	1,617	-5.4%
Northumberland	0	22,271	25,706	15.4%	2,942	2,665	-9.4%
Perry	0	21,405	22,116	3.3%	1,455	1,460	0.4%
Philadelphia	0	28,167	28,283	0.4%	1,831	1,602	-12.5%
Pike	0	24,775	22,427	-9.5%	1,845	1,604	-13.1%
Potter	58	20,361	33,865	66.3%	1,299	1,396	7.4%
Schuylkill	0	35,195	38,746	10.1%	1,419	1,349	-4.9%
Snyder	0	27,236	22,223	-18.4%	1,365	1,060	-22.4%
Somerset	12	33,299	33,163	-0.4%	4,887	4,653	-4.8%
Sullivan	22	20,639	20,516	-0.6%	1,888	1,694	-10.3%
Susquehanna	248	19,986	24,305	21.6%	1,696	1,563	-7.9%
Tioga	415	18,295	27,826	52.1%	1,031	1,144	11.0%
Union	0	34,170	28,258	-17.3%	1,279	1,231	-3.7%
Venango	0	23,549	26,390	12.1%	929	1,010	8.8%
Warren	2	39,781	30,814	-22.5%	1,205	1,141	-5.3%
Washington	379	44,223	42,622	-3.6%	1,561	1,633	4.6%
Wayne	4	29,339	29,754	1.4%	1,876	1,603	-14.6%
Westmoreland	125	34,105	36,618	7.4%	2,335	1,802	-22.8%
Wyoming	27	22,888	29,378	28.4%	1,161	1,288	10.9%
York	0	31,770	29,437	-7.3%	1,605	1,435	-10.6%

Sources: PA DEP; PA Dept. of Revenue Personal Income Tax Statistics 2007-2010; US Census Pennsylvania Quickfacts 2010.
***Inflation adjusted to 2007 dollars**

Appendix G. Proportion of Tax Returns Reporting Specific Types of Taxable Income, 2010					
County	Marcellus Wells Drilled, 2007 - 2010	Total Taxable Income	Gross Compensation	Rents, Royalties, Patents & Copyrights	Net Profits
Pennsylvania	*2,876*	*100%*	*83.3%*	*4.9%*	*12.4%*
Adams	0	100%	84.1%	4.9%	12.1%
Allegheny	4	100%	83.2%	4.2%	11.5%
Armstrong	65	100%	80.2%	11.0%	10.4%
Beaver	2	100%	83.4%	4.3%	9.9%
Bedford	1	100%	81.4%	6.1%	15.2%
Berks	0	100%	83.5%	3.5%	11.6%
Blair	4	100%	83.6%	5.1%	11.2%
Bradford	563	100%	81.3%	19.2%	13.5%
Bucks	0	100%	83.2%	4.1%	15.2%
Butler	68	100%	83.2%	6.6%	12.3%
Cambria	3	100%	80.1%	4.5%	10.0%
Cameron	8	100%	80.2%	5.5%	10.0%
Carbon	0	100%	82.5%	3.4%	9.7%
Centre	53	100%	83.8%	6.0%	14.6%
Chester	0	100%	84.0%	4.7%	15.7%
Clarion	10	100%	80.4%	12.0%	13.0%
Clearfield	70	100%	82.5%	8.0%	11.6%
Clinton	48	100%	83.6%	4.9%	11.3%
Columbia	1	100%	82.7%	6.4%	11.2%
Crawford	0	100%	80.5%	11.2%	14.8%
Cumberland	0	100%	82.1%	4.2%	11.8%
Dauphin	0	100%	85.7%	3.0%	10.1%
Delaware	0	100%	83.3%	3.8%	13.7%
Elk	36	100%	81.9%	5.8%	11.4%
Erie	0	100%	84.0%	5.1%	10.9%
Fayette	127	100%	82.6%	7.3%	10.2%
Forest	6	100%	76.5%	6.9%	11.9%
Franklin	0	100%	81.9%	4.8%	12.2%
Fulton	0	100%	82.4%	6.0%	13.2%
Greene	285	100%	83.4%	10.9%	9.3%
Huntingdon	1	100%	82.4%	5.2%	13.0%
Indiana	18	100%	79.5%	12.3%	12.5%
Jefferson	14	100%	79.6%	11.6%	13.6%
Juniata	0	100%	78.0%	5.9%	17.2%
Lackawanna	1	100%	84.0%	4.4%	10.9%

Lancaster	0	100%	82.2%	5.0%	16.3%
Lawrence	0	100%	81.5%	5.3%	11.9%
Lebanon	0	100%	82.8%	4.4%	12.1%
Lehigh	0	100%	83.3%	3.3%	11.6%
Luzerne	2	100%	83.4%	4.1%	10.1%
Lycoming	159	100%	83.6%	6.8%	11.2%
McKean	35	100%	81.7%	5.3%	10.9%
Mercer	0	100%	79.7%	8.4%	11.9%
Mifflin	0	100%	80.3%	4.7%	14.4%
Monroe	0	100%	85.2%	3.3%	12.1%
Montgomery	0	100%	82.4%	4.8%	15.4%
Montour	0	100%	80.8%	5.4%	12.0%
Northampton	0	100%	83.3%	3.4%	10.8%
Northumberland	0	100%	82.8%	4.6%	10.3%
Perry	0	100%	83.4%	4.0%	12.1%
Philadelphia	0	100%	87.8%	2.3%	10.4%
Pike	0	100%	81.1%	3.3%	13.3%
Potter	58	100%	79.5%	11.1%	15.2%
Schuylkill	0	100%	82.4%	3.5%	9.7%
Snyder	0	100%	78.8%	5.7%	17.2%
Somerset	12	100%	79.9%	7.0%	13.2%
Sullivan	22	100%	74.8%	22.1%	15.6%
Susquehanna	248	100%	79.3%	14.3%	15.8%
Tioga	415	100%	79.9%	17.3%	13.8%
Union	0	100%	78.9%	6.7%	17.7%
Venango	0	100%	81.0%	7.8%	11.3%
Warren	2	100%	81.3%	6.6%	10.9%
Washington	379	100%	81.8%	9.8%	11.7%
Wayne	4	100%	77.2%	7.9%	15.2%
Westmoreland	125	100%	81.3%	6.0%	11.3%
Wyoming	27	100%	81.8%	14.3%	13.0%
York	0	100%	85.2%	3.9%	10.8%
Sources: PA DEP; Dept of Revenue, Personal Income Tax Statistics 2010					

Appendix H. Local Collections of Sales Tax and Realty Transfer Tax (adjusted for inflation*), 2007 and 2012							
County	Marcellus Wells Drilled, July 1, 2007 to June 30, 2012	Sales Tax Collections ($ thousands)			Realty Transfer Tax Collections ($ thousands)		
		07-'08 Collections	11-'12 Collections	% Change	07-'08 Collections	11-'12 Collections	% Change
Pennsylvania	*5602*	*$8,496,554*	*$8,086,011*	*-4.8%*	*$491,897*	*$315,657*	*-35.8%*
Adams	0	22,247	20,283	-8.8%	4,359	1,983	-54.5%
Allegheny	13	562,098	552,812	-1.7%	38,326	32,039	-16.4%
Armstrong	122	10,661	9,828	-7.8%	820	739	-9.8%
Beaver	22	26,721	24,165	-9.6%	4,582	2,535	-44.7%
Bedford	1	18,758	21,447	14.3%	1,013	640	-36.9%
Berks	0	176,189	140,578	-20.2%	15,265	7,562	-50.5%
Blair	6	76,681	81,232	5.9%	3,446	1,584	-54.0%
Bradford	1,069	12,144	18,929	55.9%	1,306	1,514	15.9%
Bucks	0	209,788	196,840	-6.2%	39,326	22,566	-42.6%
Butler	136	66,424	66,333	-0.1%	7,590	6,362	-16.2%
Cambria	7	43,031	34,080	-20.8%	2,433	1,385	-43.1%
Cameron	15	552	452	-18.2%	117	63	-46.4%
Carbon	0	13,719	13,162	-4.1%	2,435	1,196	-50.9%
Centre	63	38,851	36,184	-6.9%	6,008	4,187	-30.3%
Chester	0	198,318	178,052	-10.2%	36,447	24,642	-32.4%
Clarion	20	9,174	8,957	-2.4%	656	485	-26.1%
Clearfield	141	20,717	20,375	-1.7%	1,538	1,179	-23.3%
Clinton	95	6,430	7,627	18.6%	732	669	-8.6%
Columbia	3	19,132	18,179	-5.0%	1,451	1,095	-24.5%
Crawford	1	15,550	15,250	-1.9%	1,250	1,015	-18.8%
Cumberland	0	144,455	131,898	-8.7%	13,796	8,123	-41.1%
Dauphin	0	163,094	159,159	-2.4%	7,226	6,904	-4.5%
Delaware	0	163,183	163,809	0.4%	25,969	14,858	-42.8%
Elk	58	5,384	5,782	7.4%	519	466	-10.1%
Erie	0	81,573	67,935	-16.7%	5,963	4,838	-18.9%
Fayette	198	30,735	28,771	-6.4%	1,791	1,616	-9.8%
Forest	10	1,082	823	-23.9%	115	82	-28.7%
Franklin	0	36,077	28,405	-21.3%	6,535	3,049	-53.3%
Fulton	0	2,513	1,607	-36.1%	310	149	-51.8%
Greene	465	4,524	9,572	111.6%	778	2,205	183.4%
Huntingdon	1	5,777	5,252	-9.1%	914	714	-21.8%
Indiana	41	19,696	20,617	4.7%	1,168	1,136	-2.8%

Jefferson	33	8,461	9,465	11.9%	628	622	-0.9%
Juniata	0	4,043	3,723	-7.9%	468	328	-29.9%
Lackawanna	2	63,389	66,387	4.7%	5,079	3,827	-24.6%
Lancaster	0	215,159	191,600	-10.9%	20,300	13,881	-31.6%
Lawrence	17	23,325	23,325	0.0%	1,563	1,195	-23.6%
Lebanon	0	37,472	32,296	-13.8%	4,765	2,777	-41.7%
Lehigh	0	160,691	121,004	-24.7%	16,343	9,564	-41.5%
Luzerne	2	97,936	85,882	-12.3%	8,806	5,406	-38.6%
Lycoming	578	32,087	35,613	11.0%	2,737	2,461	-10.1%
McKean	55	22,766	25,115	10.3%	474	439	-7.4%
Mercer	0	28,180	22,295	-20.9%	2,054	1,531	-25.5%
Mifflin	0	7,260	6,929	-4.6%	738	584	-20.8%
Monroe	0	40,007	34,757	-13.1%	7,717	3,770	-51.1%
Montgomery	0	398,340	344,051	-13.6%	56,950	31,365	-44.9%
Montour	0	4,598	4,400	-4.3%	635	439	-30.9%
Northampton	0	63,566	59,960	-5.7%	14,019	7,496	-46.5%
Northumberland	0	60,917	32,085	-47.3%	1,478	1,188	-19.6%
Perry	0	5,380	4,943	-8.1%	1,025	661	-35.5%
Philadelphia	0	455,387	420,675	-7.6%	58,689	33,922	-42.2%
Pike	0	10,111	9,939	-1.7%	3,512	1,756	-50.0%
Potter	66	4,710	5,531	17.4%	368	294	-20.1%
Schuylkill	0	32,153	26,047	-19.0%	2,693	2,253	-16.3%
Snyder	0	10,737	9,437	-12.1%	969	631	-34.8%
Somerset	20	16,160	16,137	-0.1%	2,251	1,279	-43.2%
Sullivan	58	1,069	1,330	24.4%	251	216	-14.1%
Susquehanna	556	8,022	10,461	30.4%	1,025	981	-4.3%
Tioga	782	7,582	8,444	11.4%	952	1,003	5.3%
Union	0	11,375	11,281	-0.8%	1,086	876	-19.4%
Venango	2	16,284	14,445	-11.3%	680	544	-20.0%
Warren	4	11,122	12,585	13.2%	626	448	-28.4%
Washington	618	57,854	65,027	12.4%	6,583	8,050	22.3%
Wayne	4	30,748	22,398	-27.2%	2,517	1,231	-51.1%
Westmoreland	212	113,119	100,413	-11.2%	8,826	6,943	-21.3%
Wyoming	106	7,290	8,409	15.4%	566	421	-25.6%
York	0	121,182	102,964	-15.0%	20,339	9,697	-52.3%

Sources: PA DEP; PA Department of Revenue, Tax Compendium 2007 and 2010.
***Inflation adjusted to 2007 dollars**

This publication is available in alternative media on request.