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SOME THOUGHTS ON LOCAL FISCAL IMPACTS FROM GAS DEVELOPMENT

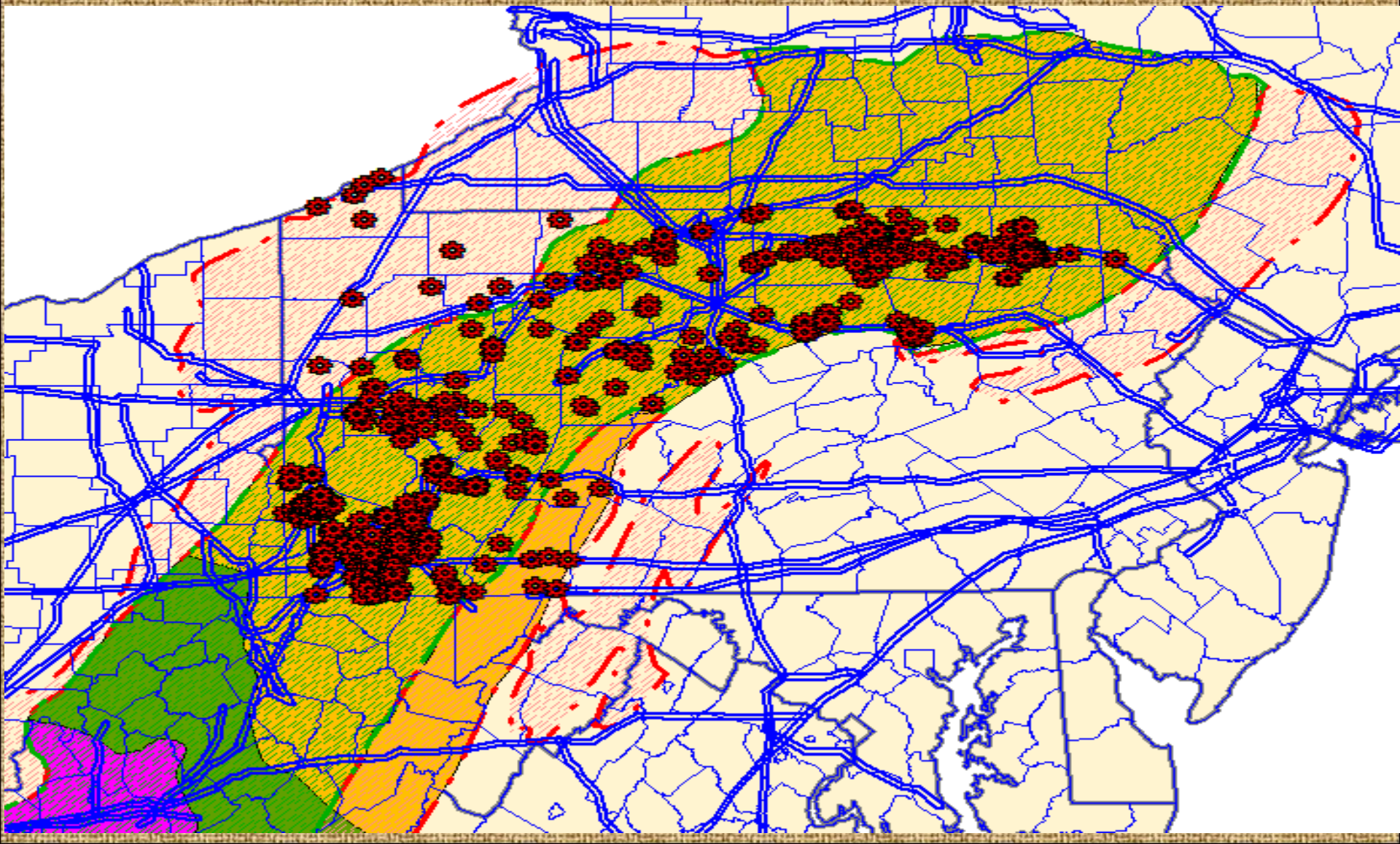
Penn State **Extension**

The economics of "typical" conventional gas well in the Appalachian Basin

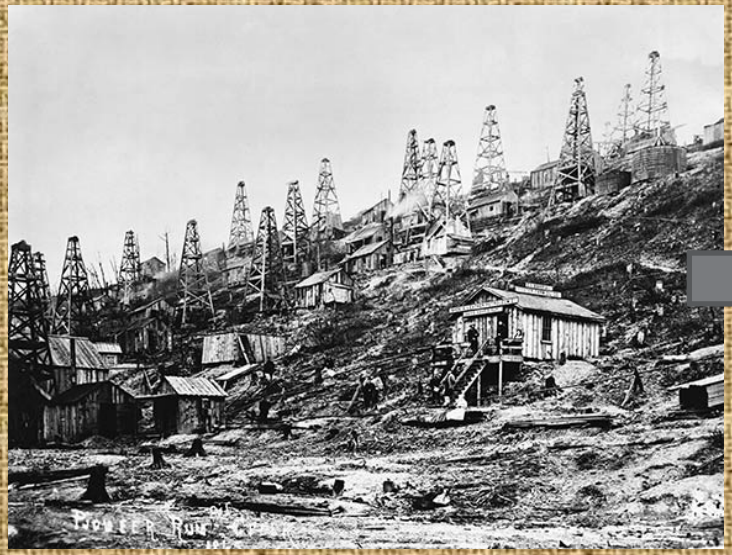
- 3 to 4 mmcf per day in Marcellus
- Estimated 4+ bcf lifetime per well
- Mineral right owner gets minimum 1/8th share
  - Up to $2 million over lifetime = 30 years (@$4 mcf)

  (one well covers approximately 80 acres)
- 20 million acres of play in PA
- 100 rigs in PA
- 1000 wells/year
- It will be around a while!

Drilling activity & potential target(s) – NE PA

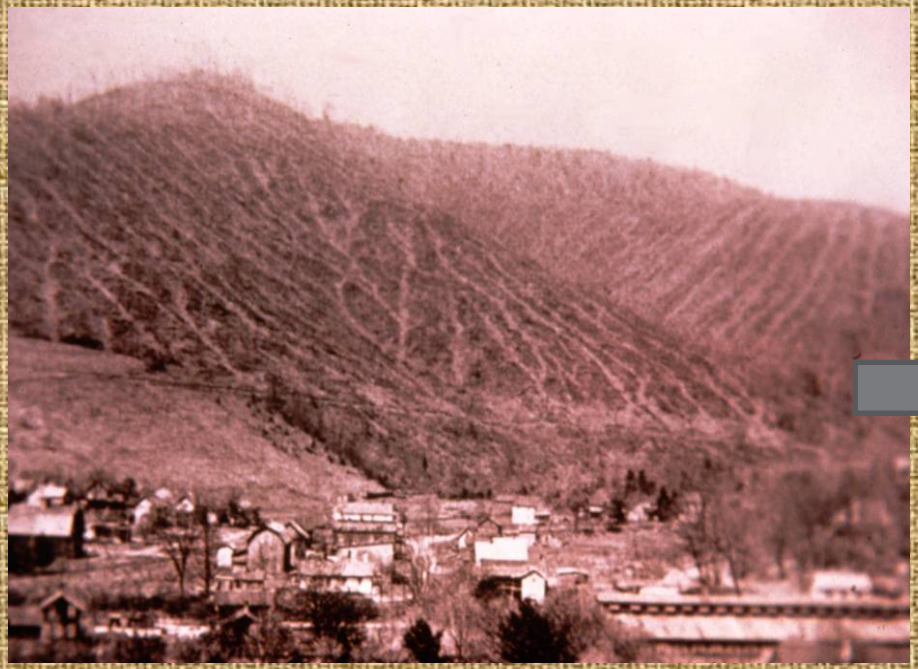


From boom to bust

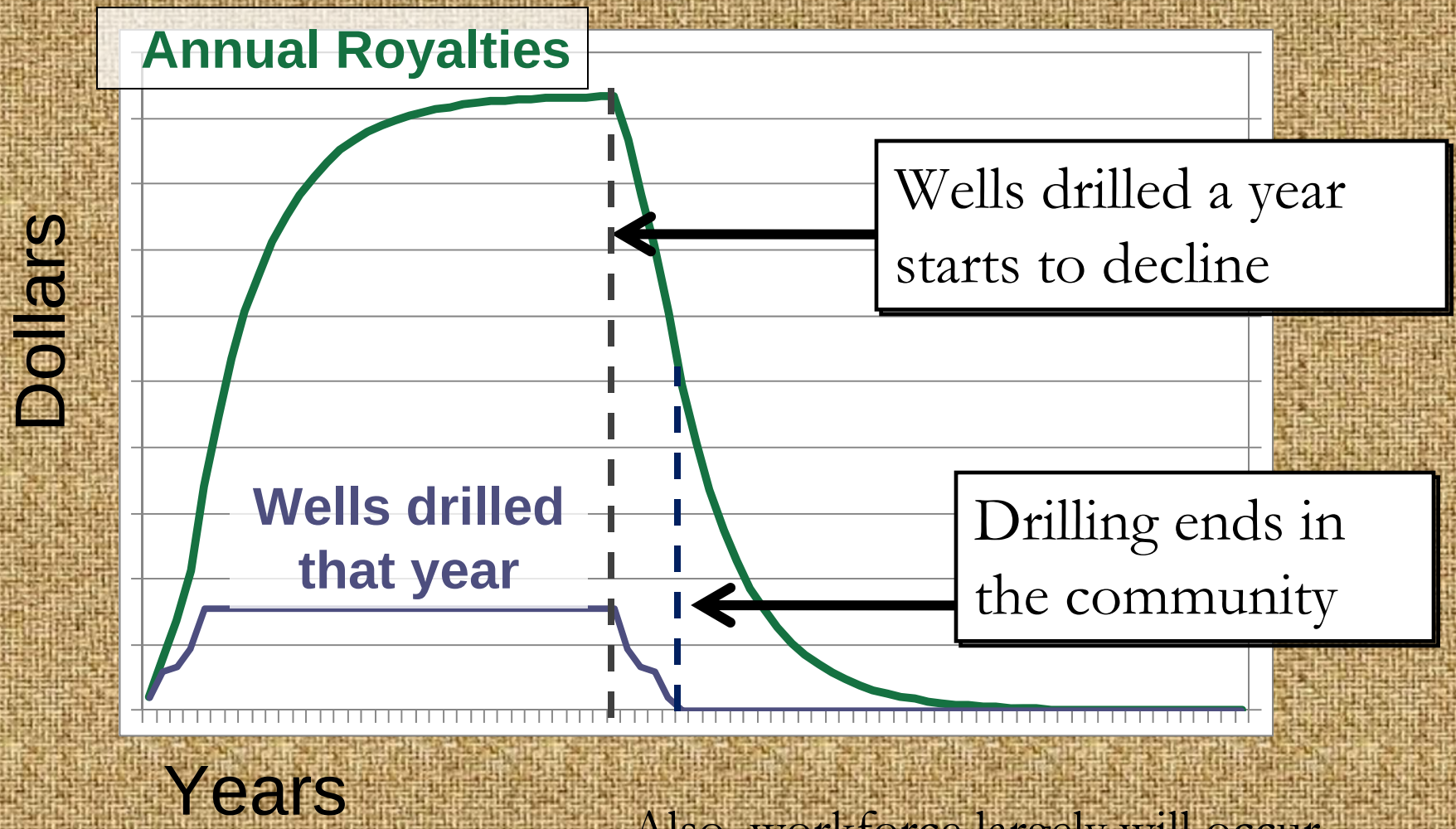


When is gone its gone!

The play will not last forever!



Example: Annual Total Royalties in a Community



Also, workforce largely will occur DURING the drilling phase

Senate proposal - Impact fee

- Year 1- $50,000 per-well fee
- Year 2- $40,000 per-well fee
- Year 3- $40,000 per-well fee
- Year 4-10 - $20,000 per-well fee
- Year 11-20 - $10,000 per-well fee
- That's $370,000 per well
- Depending on wells drilled from $100m to $300m by 2015

Senate proposal - Impact fee

- 55% stays at local level
  - counties 36%
  - "host municipalities" 37%
  - all other municipalities 27%
- 45% the state
- Local ordinances
- Blanket bonding

How much of production is captured?

- According to The Pennsylvania Budget and Policy Center
- 3.8 billion cubic feet of production per well
  - used a constant estimated price of $4.28 per thousand cubic feet over 50 years
- About 2% effective tax rate

Rank	State	Current Severance Tax Rate
1	Texas	7.5% of market value of gas produced (reduced tax rate for "high cost wells“ ~ approx. 3.7%) And property tax on value
2	Wyoming	6% of taxable value (gross sales minus certain processing and transportation costs) and property tax but no corporate tax
3	Oklahoma	7% of average monthly price of gas plus 0.095% excise tax But no property tax and low corporate income tax
4	New Mexico	8.67-9.5%, depending on county and school district
5 *	Louisiana	$0.331 per MCF (7/1/09 to 6/30/10 – reset each year)
6	Colorado	2% to 5% based on gross income
7 *	Alaska	25% to 50% of net income
8	Utah	5% when gas over $1.50 MCF
9	Kansas	4.33% (8% rate – 3.67% property tax credit)
10	California	Conservation fee of $0.00880312 per MCF but high property tax
11	Alabama	8% production tax and 4-8% privilege tax
12	Arkansas	5% (Effective 1/1/09)
13	Michigan	5.25% (5% severance tax and 0.25% oil/gas fee)
14	West Virginia	5% + $0.047 per MCF
15	Pennsylvania	None

Scenario of revenue to township

- 20 wells in township
- Local govts (including county) get $203,000 per well = $8,140,000 assuming only 20 wells over 50 years
- Township gets 37% of that = $3,011,800
- How many miles of road can that fix?
- $100,000 per mile for basic road = 30 miles

Impacts on municipal governments in Susquehanna and Washington Counties, 2010

- Public services requires $$
- Anecdotes vs facts
- Analysis of municipal audit data (2001-2009) in Washington and Susquehanna counties
- Gas picked up in 2007 but wells first drilled in 2004/5
- Key informant interviews with local officials in both counties, and with gas industry representatives in Spring 2011

Marcellus issues differ between Northeast & Southwest

	Northeast (Susquehanna)	Southwest (Washington)
Population & Population Density	Low	High
Ownership of Mineral Rights	Mostly by Surface Owners	Many Surface Owners don't Own
Quality of Gas	Dry – pipeline ready	'wet' – requires processing
Infrastructure	Dispersed	More developed
History of Natural Gas Development	No	Yes
Geography	Forested, mountainous	Farmland, forests, urban
Local regulations	Not many	Yes, almost every township

Findings

- No consistent and measurable relationship between Marcellus activity and municipal expenditures or revenues
- Most townships said they have "not spent a nickel"
- Service Impacts
  - Road Maintenance
    - Repairs paid for by the gas companies
  - Police & enforcing local regulations
  - Time spent by local officials & personnel
    - Most common indirect cost

Findings (cont.)

- Revenue Impacts
  - Little increase in local tax revenue (EIT or RTT) due to Marcellus activity
  - No property tax on gas
  - Industry in-kind contributions
    - Can be significant
  - Leasing & royalty income from municipal land

Implications

- Few fiscal impacts now on local government revenues
- Marcellus activity is affecting municipal governments, but experience so far varies
- Impacts likely will increase in the future
- Role of zoning and planning
  - Everyone wants consistency
- Communication with gas companies

Implications (cont.)

- Need to monitor over time; this study provided a baseline
- Recent economic impact study found similar local impacts
  - "Only 18 percent said they've received a boost in taxes, while about one-quarter said their costs have increased, mostly due to road repairs."

Final thoughts

- Will impact fee work?
- Why no property tax on gas?
- Lots of uncertainty (costs; risks; long run implications)
- Should there be rainy day/legacy fund to help communities after the boom?

Figure 5. Trend of Revenues in WA county

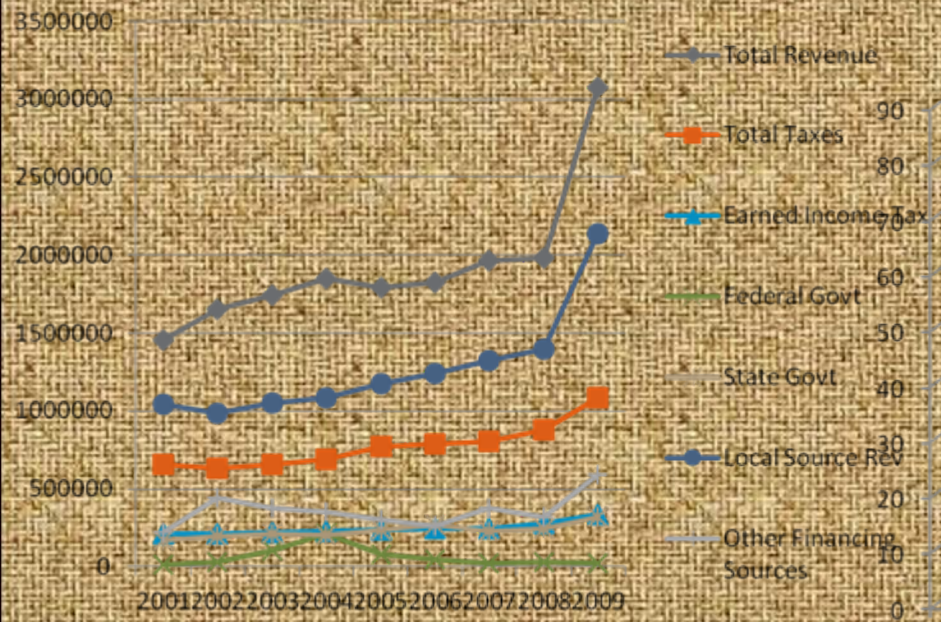
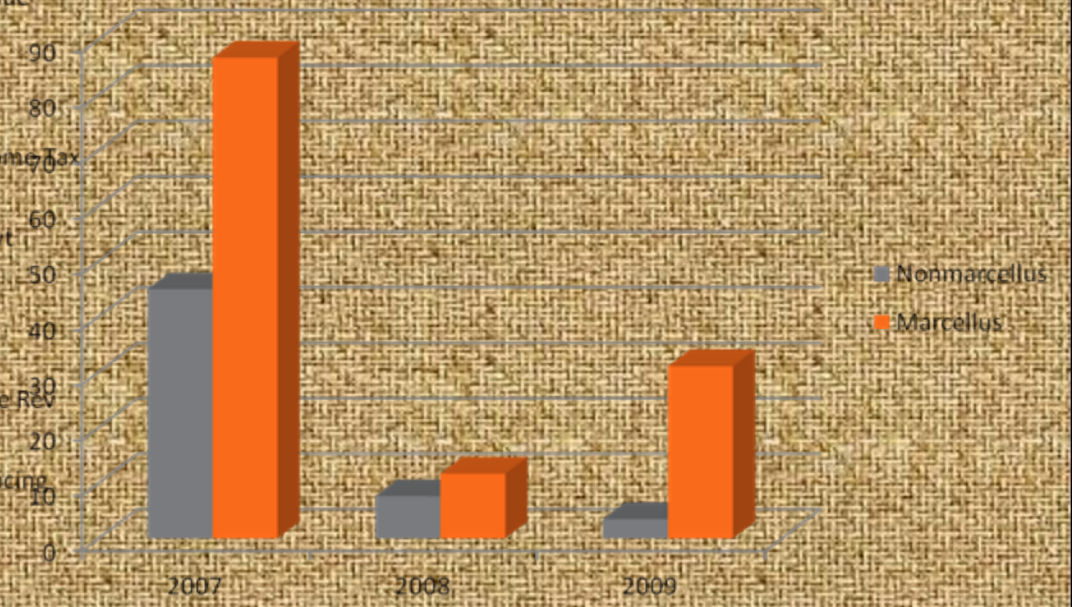


Figure 15. Mean % change in total revenue from base year 2006 in SQ



Trends of Revenues in SQ county

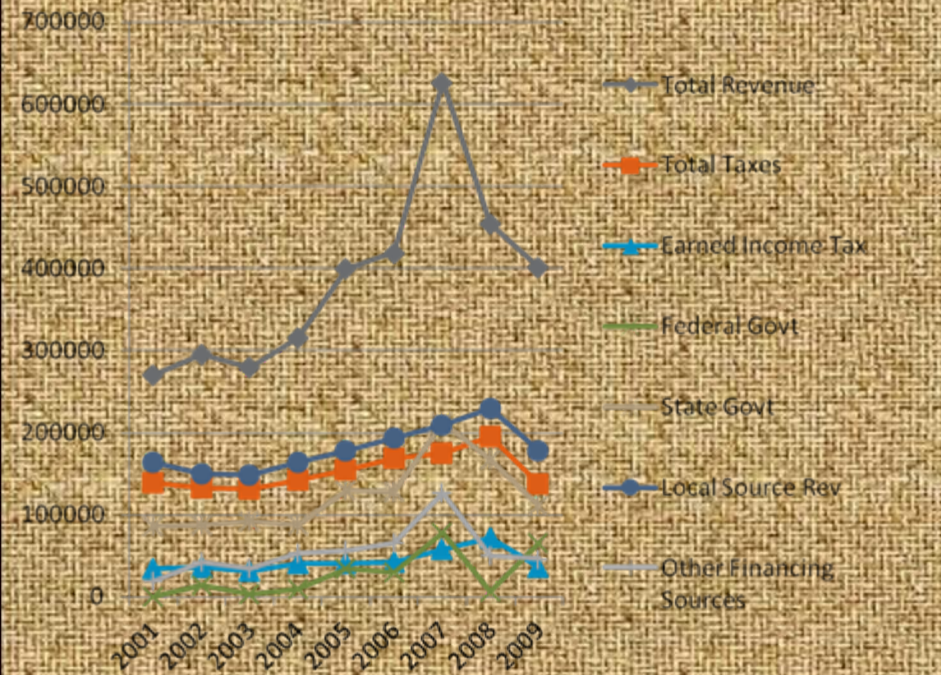


Figure 19. Mean % change in total revenue from base year 2006 in WA

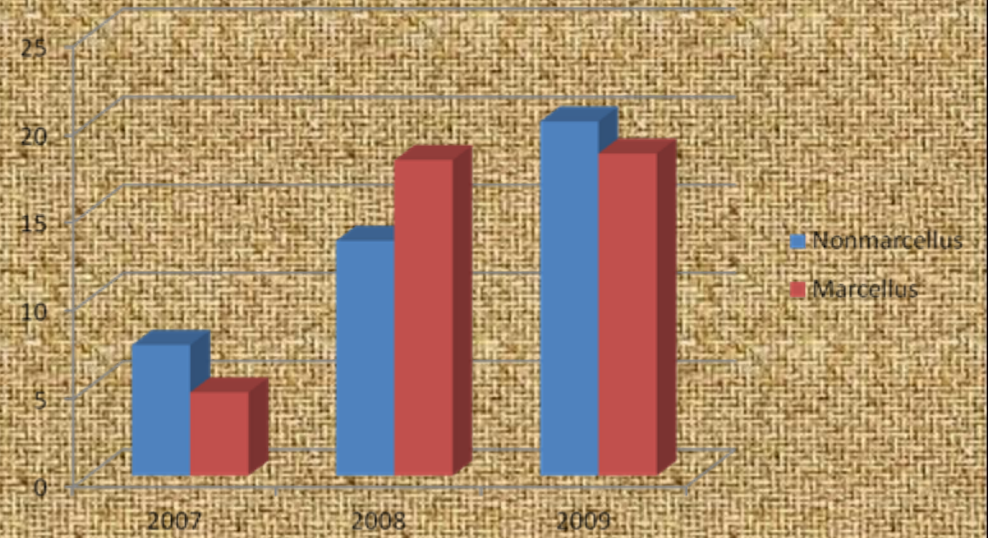


Figure 4. Trend of expenditures in SQ county

Figure 18. Mean % change in total expenditure from base year 2006 in SQ

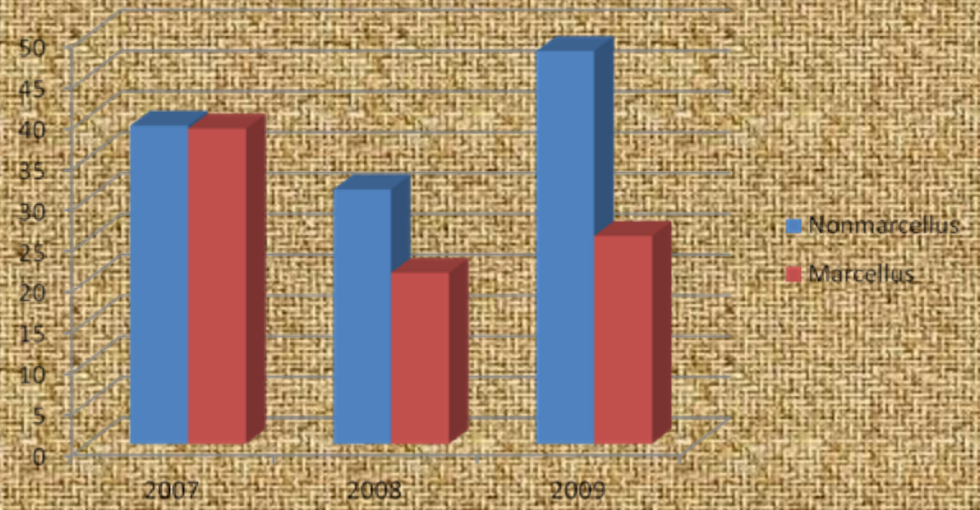


Figure 6. Trend of major expenditures in WA county

Figure 22. Mean % change in total expenditure from base year 2006 in WA