



Productivity and Growth

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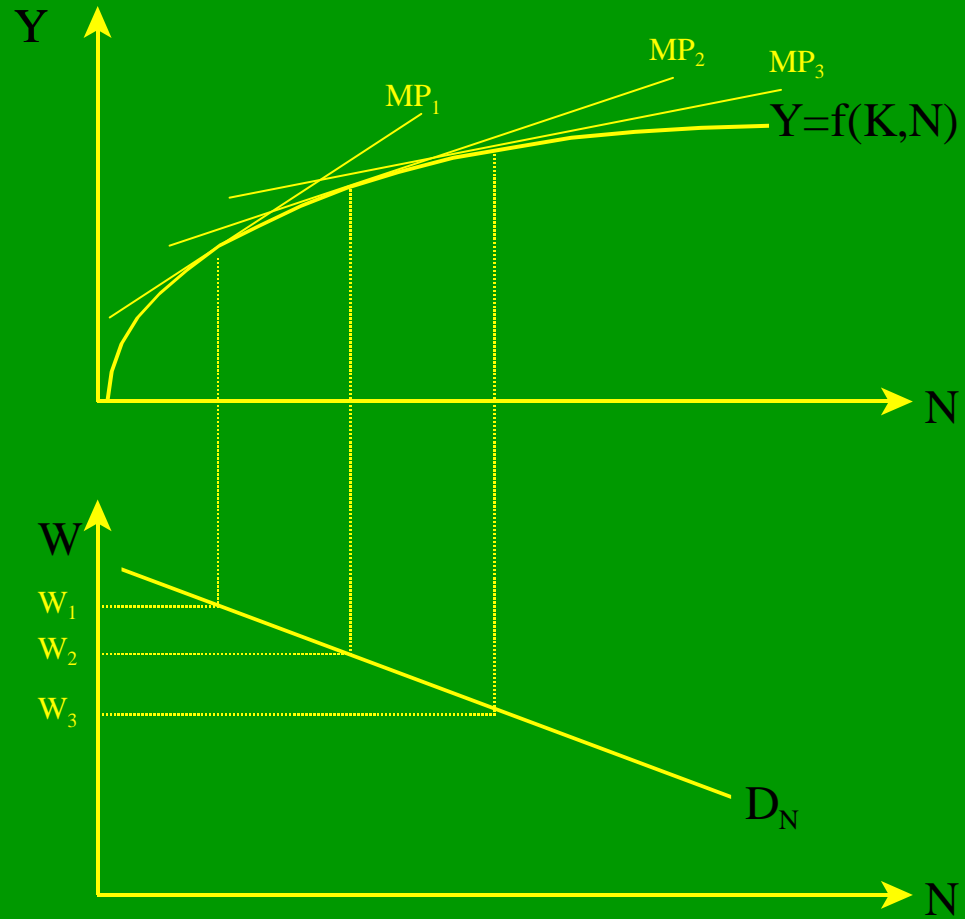


The Many Challenges of Economic Development?

- ☯ Malpractice Insurance
- ☯ Workforce Development
- ☯ Air Service
- ☯ Economic Diversification
- ☯ Higher Education
- ☯ Out-Migration
- ☯ Imports
- ☯ Tax Incentives



Productivity Dictates Wages





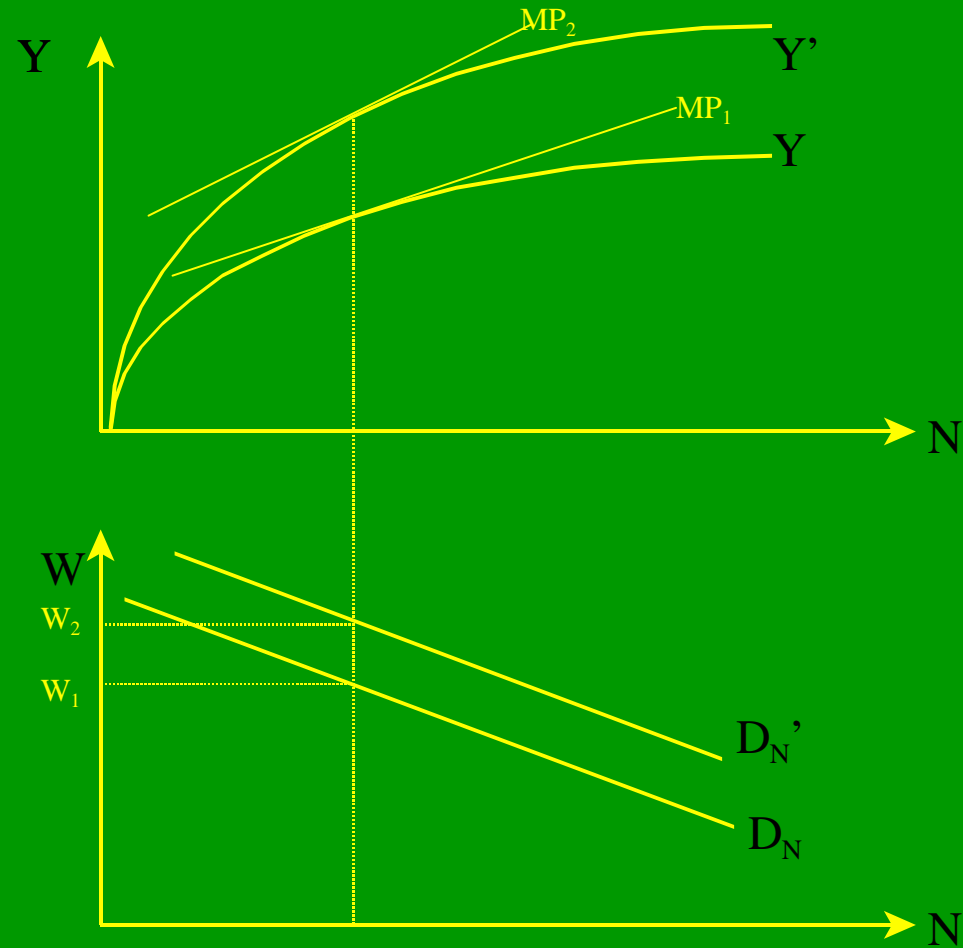
See! It ain't just theory.



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research



To increase wages you've got to increase productivity





So how do you increase productivity?

Public Capital

- ✓ Physical Infrastructure
- ✓ Flow of Services
- ✓ Social Overhead Capital
- ✓ *Explains less than 10% of state differences*

Private Capital

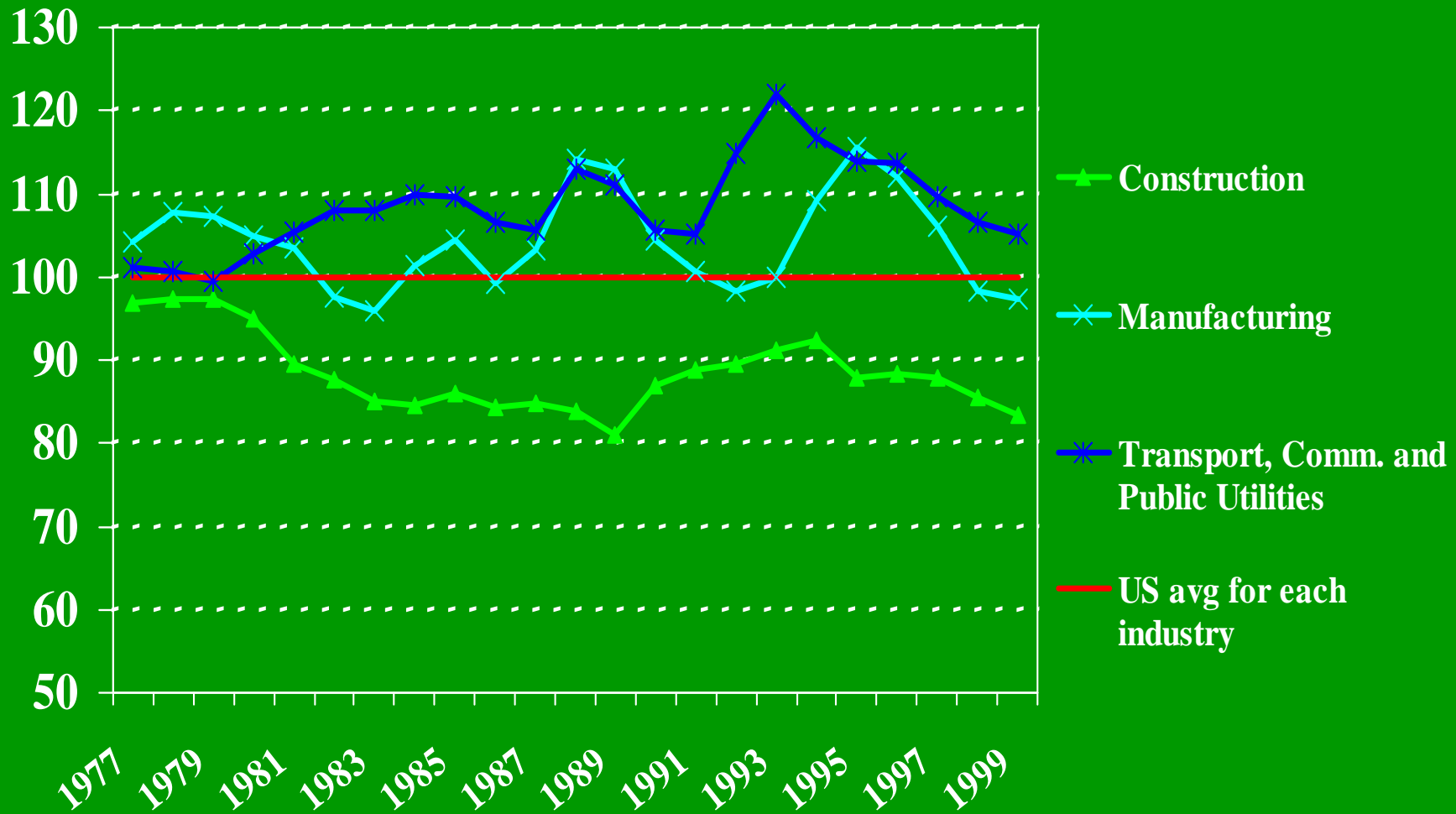
- ✓ Physical Capital
- ✓ Taxation Policy
- ✓ Access to Financial Capital
- ✓ *Explains less than 15% of state differences*

Human Capital

- ✓ Literacy
- ✓ Education
- ✓ Health
- ✓ *Explains 60%-75% of state differences*



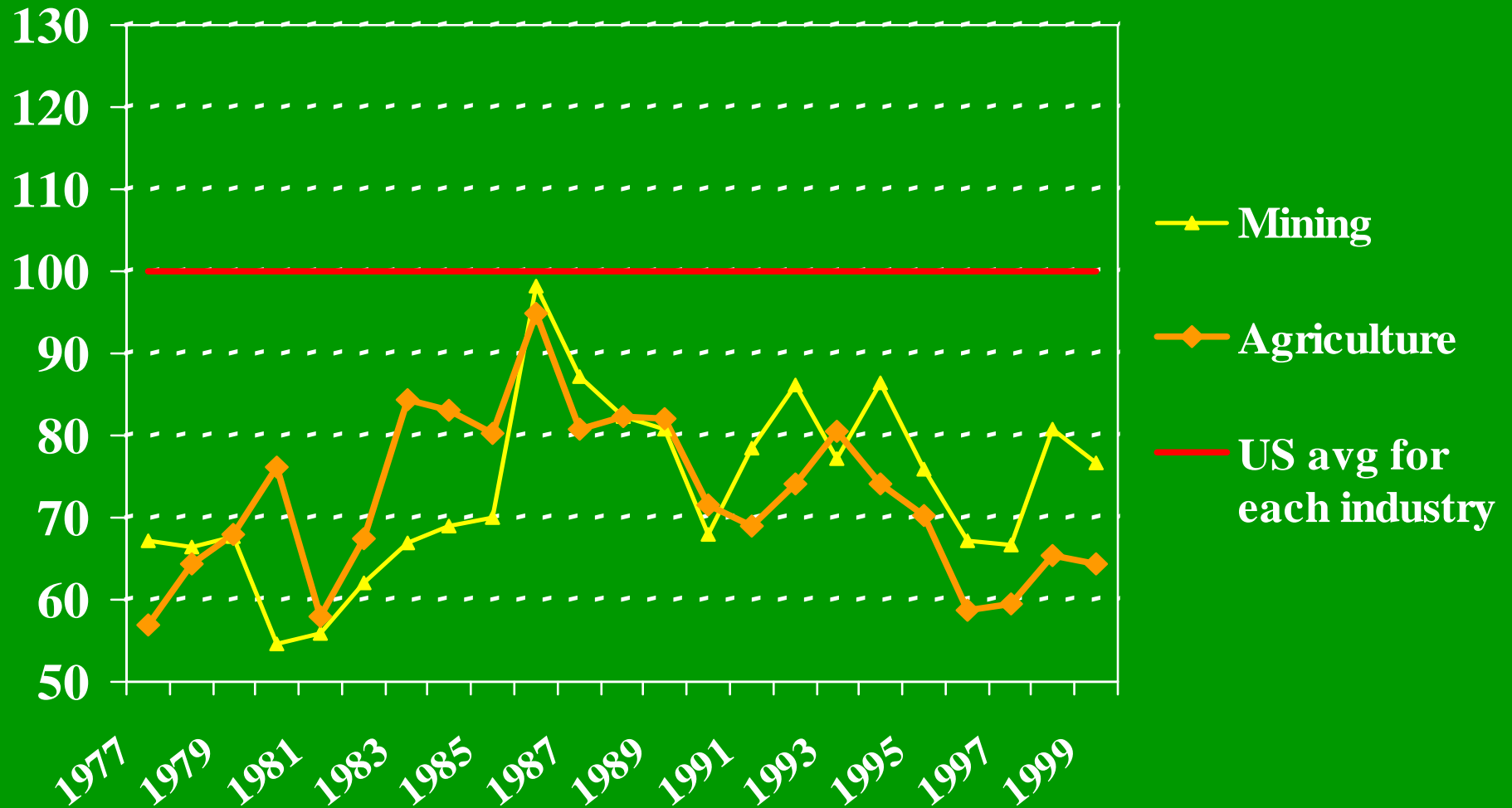
Relative Productivity of Capital Intensive Industries (US=100)



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research



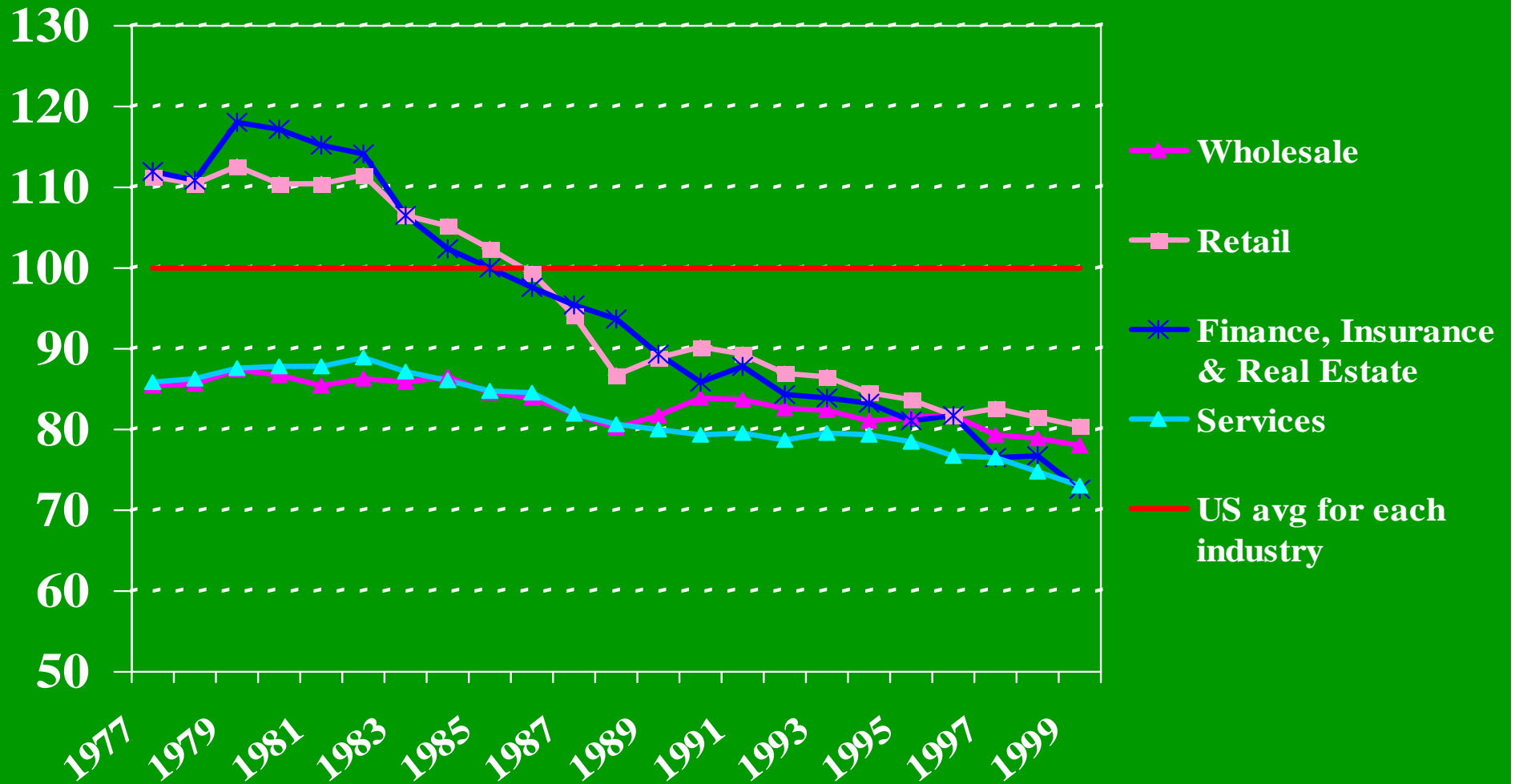
Relative Productivity of Resource Based Industries (US=100)



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research



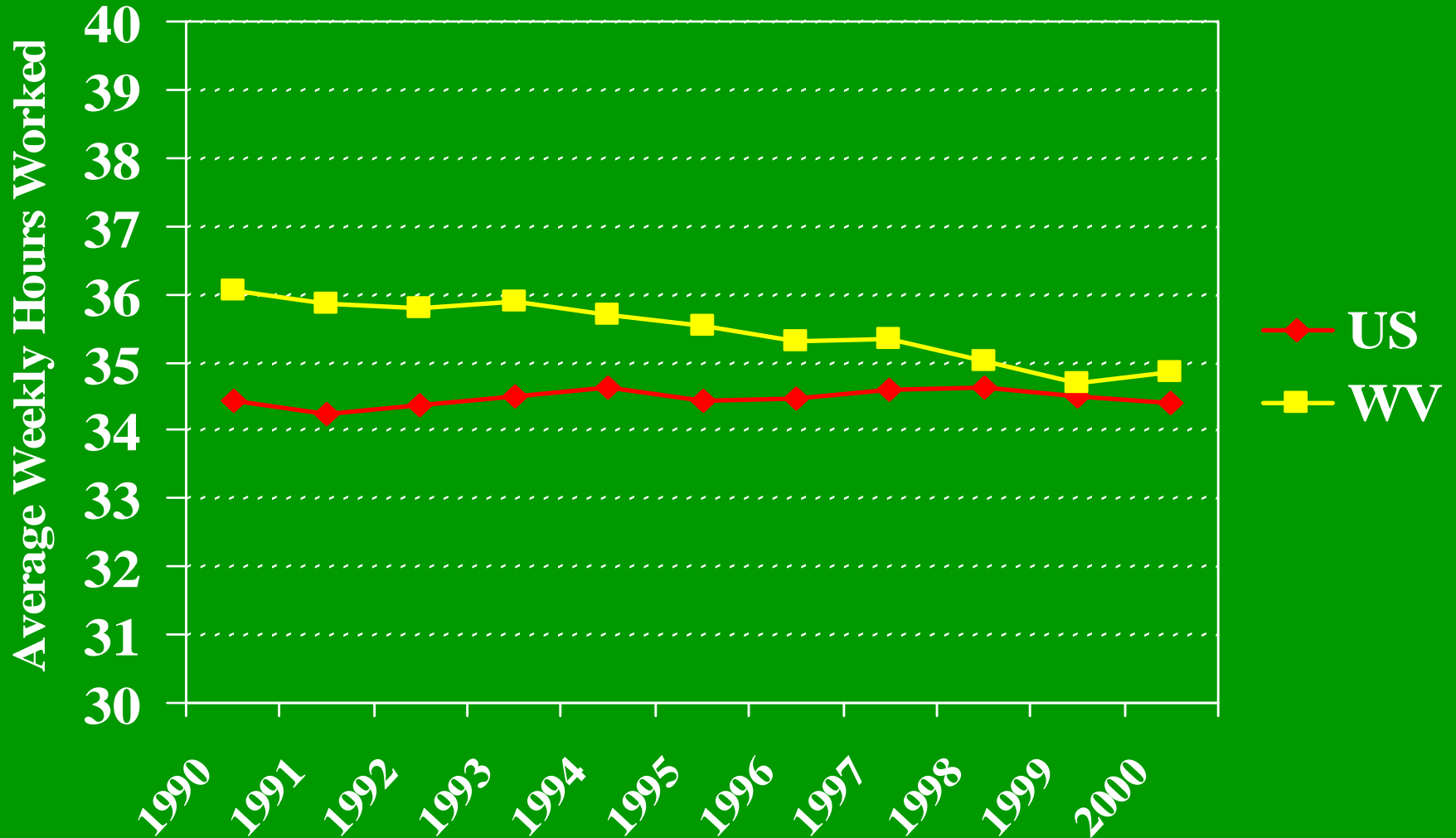
Relative Productivity of Labor Intensive Industries (US=100)



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research



Is Productivity Affected by Hours Worked? or “We Work Harder!”



Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research

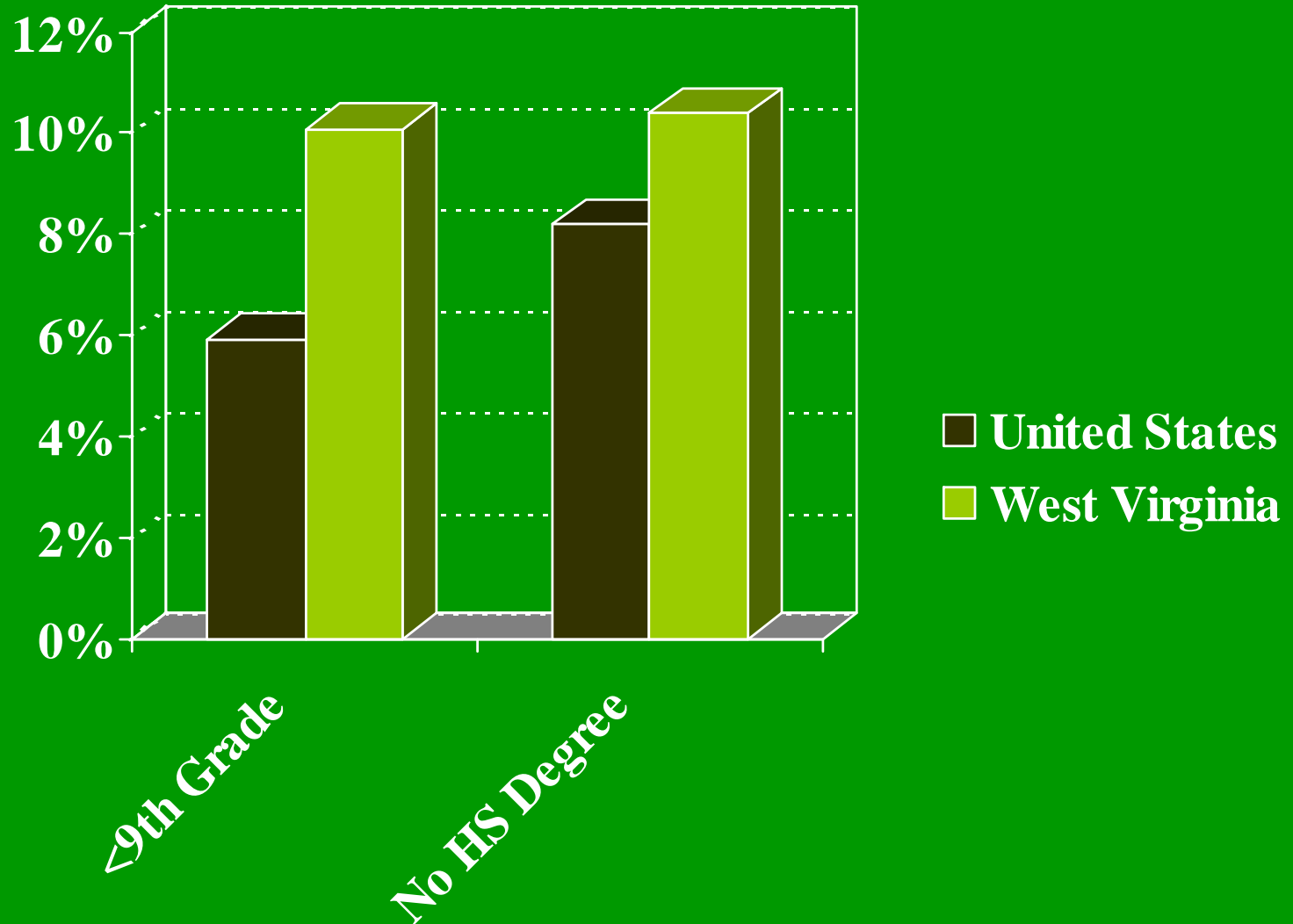


Where does WV stand?

- ☯ Public Capital: Roads, Bridges, Rail, Air, Justice System, Defense.
- ☯ Private Capital: Banking system, taxation system, legal system (tort, civil litigation, contracts)
- ☯ Human Capital: education, training, health, culture



>25 Years Old With No Diploma (1990 Census)

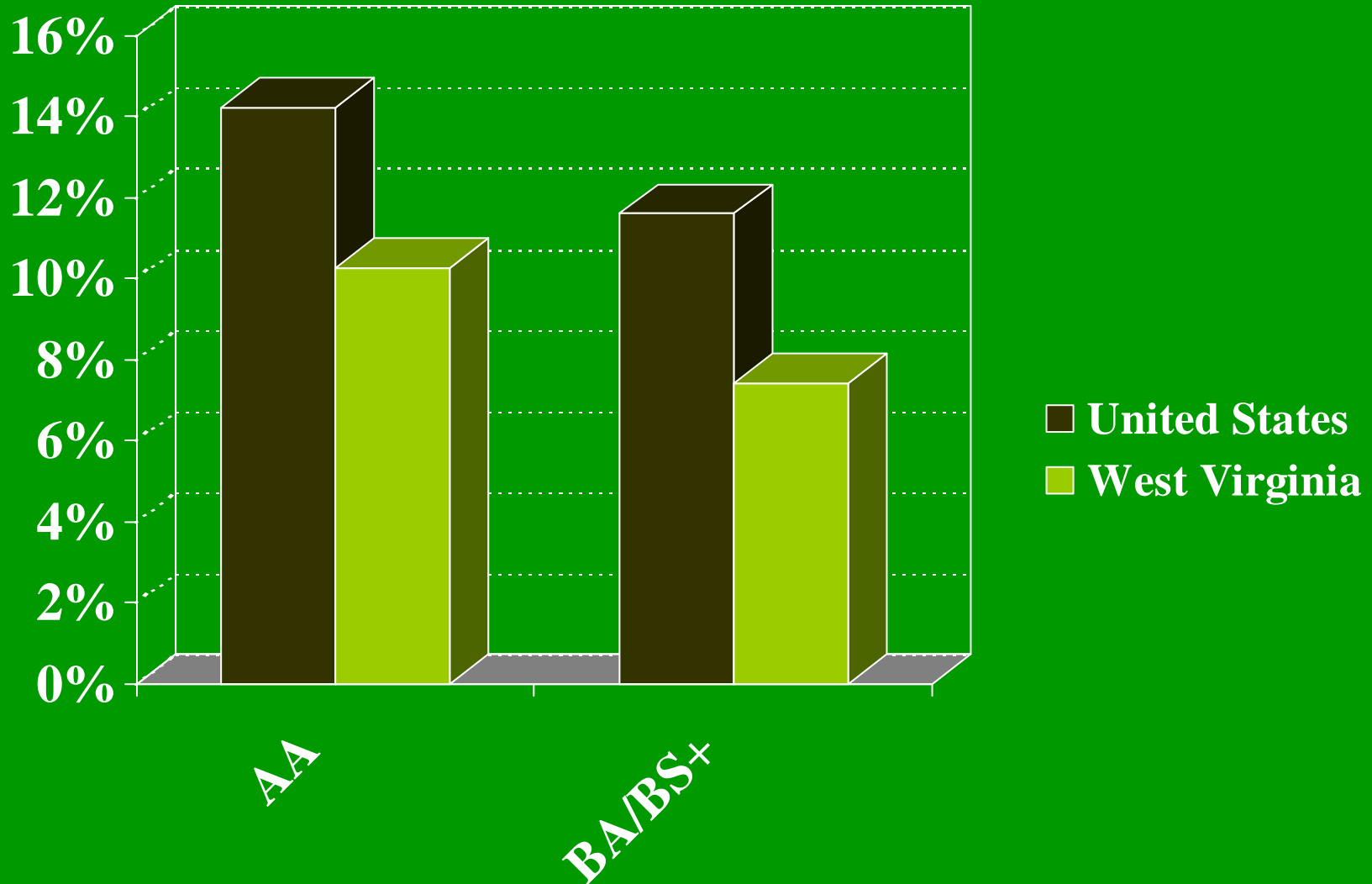


Source: U.S. Bureau of the Census



College or University

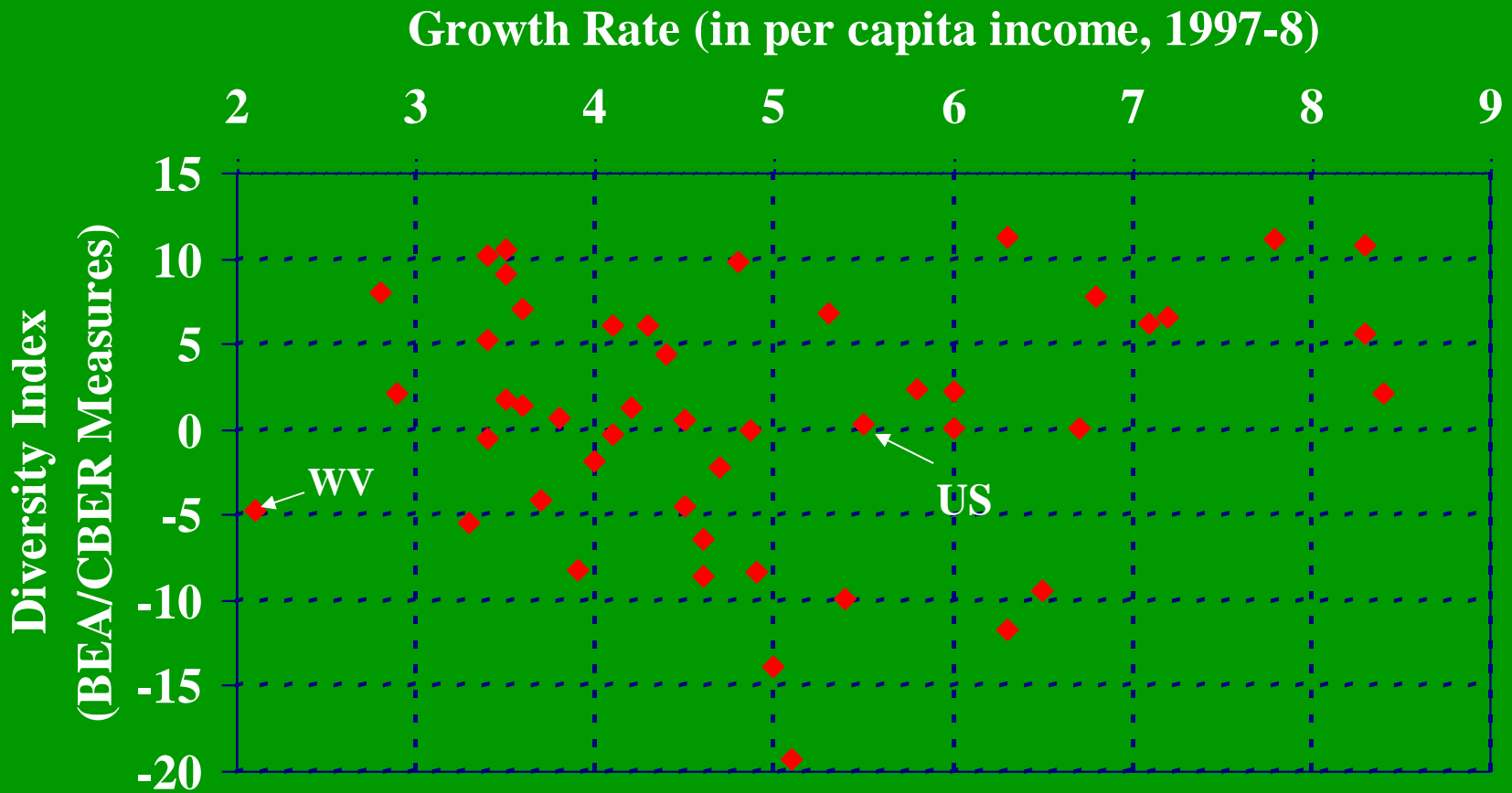
(1990 Census)



Source: U.S. Bureau of the Census

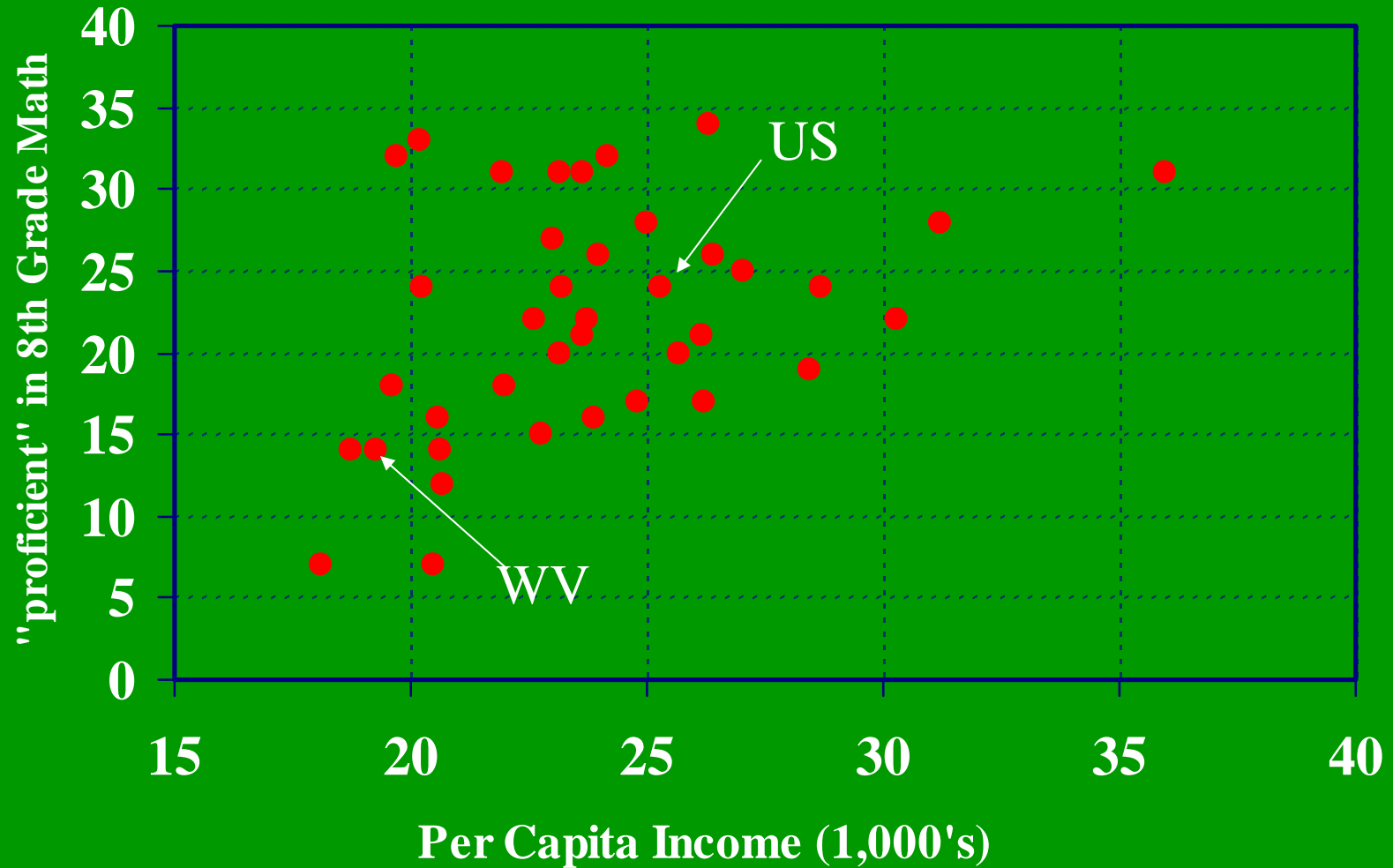


Economic diversity & growth: is it really a problem?





Education & Income at the State Level are Correlated!





Time Frame of Impacts

☯ Public Capital: 5-25 years (end loaded, except for construction impact)

☯ Private Capital: 1-5 years (front loaded investment)

☯ Human Capital: 20-50 years (except for amenity impact)



Synergies

☯ More and better infrastructure & public capital lower firm costs freeing revenues for capital investment and worker training

☯ Tax reform stimulates short term investment and increases long term productivity

☯ Education reform provides both amenity and productivity impacts



Conclusions

- ✓ WV Productivity not growing at national pace, lowering incomes (and sure to get worse before it gets better).
- ✓ Education & Workforce development our #1 need to reverse the growing productivity/income gap.
- ✓ Change in two or more areas (e.g ed reform and taxes) may cause growth to accelerate, but it needs to set records to catch up.
- ✓ Traditional economic development methods are snake oil!