NEVADA'S GENERAL FUND: GROWTH & VOLATILITY

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Study Purpose & Supporting Conclusions

- **Words matter**

  - **"Volatility" is a term often misunderstood & misused regarding Nevada's General Fund ("GF")**

  - **There are two types of GF volatility**
    - Short-term due to economic/business cycle
    - Long-term due to structure of tax system compared to the growth – & the **nature** of the growth -- of the Nevada economy

- **Simple historical average tax revenue growth rates *<u>can</u>* & *<u>do</u>* mask many of Nevada's GF structural issues**

Study Purpose & Supporting Conclusions, cont.

- **The negative structural characteristics of the GF's tax "portfolio" are a valid underlying reason for concern over revenue sources**

- **The four major sources of revenue in the GF are**
  - Sales & use taxes
  - Gross gaming tax
  - Modified business tax
  - Licenses

- **Review of the GF's major revenue sources suggests that Nevada's tax "portfolio" has consistently suffered from an inadequate response to both the business cycle & long-run economic growth**

Study Purpose & Supporting Conclusions, cont.

- **Federal (revenue) sequestration requiring states to trim expectations of federal transfers puts additional pressure on the state GF**
- **Given all of the above, a debate on tax revenue reform is not only justified but crucial**
- **The tax "portfolio" of Nevada's GF as it exists will/would always be a source of *some* contention, as the portfolio simply lags long-run growth; the tension over its composition will never just "go away"**
- **Note: Reform of state revenue channels is crucial regardless of whether such reform is "revenue neutral"**

Key Questions & Conclusions

- **In the context of Nevada's portfolio of taxes, two current discussions at the Legislature are needed:**

  - ***Is optimal reform achieved via an expanded business tax/license fee?***
    - There are several variants of such a tax ranging from direct business taxes to an expanded differentiated license fee
    - For example, a flat business license fee within each of a series of steps by revenue is a possibility (with or without a (partial) inflation adjustment)
    - The proposed plan by Governor Sandoval is one variant of an expanded business tax/license fee & fits into a discussion of this option for reform

- **In our opinion, given the current Nevada economy & tax system, Constitutional issues & time constraints, the option of an expanded business tax or flat license fee is the best avenue for viable legislative discussion of tax reform**

Key Questions & Conclusions, cont.

- ***Is a significant broadening of sales taxes to services also some part – or possibly all – of the solution?***
  - Structuring of such a tax can be a complicated, problematic maze with associated administrative complications
  - There are potential problems with heavily hitting lower income families & no obvious method to provide tax credits
  - Could be counter-productive to business investment if applied at the production phase

- ***In our opinion, in the short- to medium-term, a broad service tax expansion is not a viable option for Nevada***

Key Questions & Conclusions, cont.

Tax revenues respond to economic changes & trends. As such, the questions that must be asked also include:

- **How do Nevada's tax revenues grow & what are the changes in types of revenues & total revenue across "average" years (i.e., what is our measure of volatility)?**

- **More specifically, how does Nevada compare to a selected set of states without a personal income tax?**

- **Do these results provide important insights but potentially mask structural issues in Nevada's GF? (Hint: Yes!)**

Key Questions & Conclusions, cont.

More questions in the broader context of tax structures across the 50 states:

- **What's the data & evidence for the growth of average & total state tax revenues & any associated volatility?**
- **Is there a tradeoff between taxes with high growth rates with high volatility & low growth rates with low volatility?**

Our Approach: Tax Revenue Growth & Volatility in Charts & Pictures, 1993-2013

- **This presentation has 5 sections including supporting charts**

1. **Tax Revenue Growth & Volatility** by broad types & based on the combined experience of the 50 states
2. **Growth & Volatility: Nevada Compared to the Other States** & to a select subset of states without a personal income tax
3. **Final Observations on Nevada Tax Revenue Growth & Volatility**
4. **Nevada General Fund Observations**
5. **Final Observations & Conclusions**

- **Major Data Source**

  Bureau financial statistics on state governments from Annual Survey of State Government Tax Collections

  - Covers tax collections by state governments for property taxes, sales & gross receipts taxes, license taxes, individual income taxes & other taxes
  - Only federal database of broad tax categories consistent across all states
  - Used for relative (%) comparisons in median growth rates by agencies like the Federal Reserve

Tax Revenue Growth & Volatility – The 50 States Combined

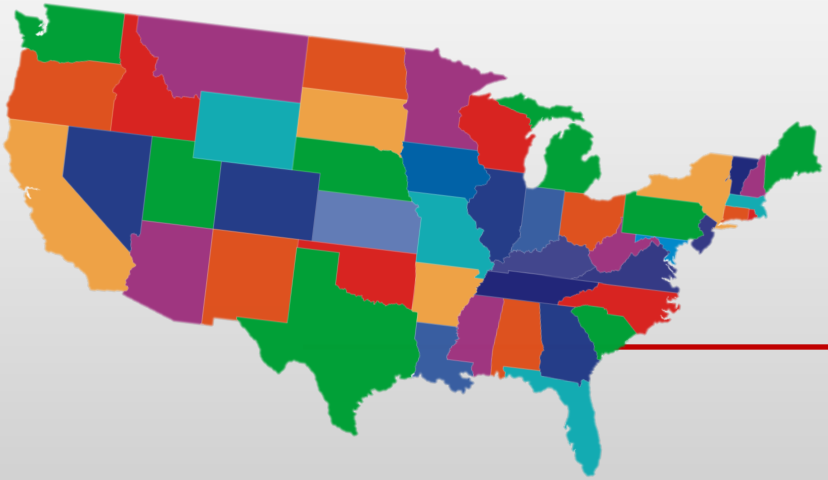
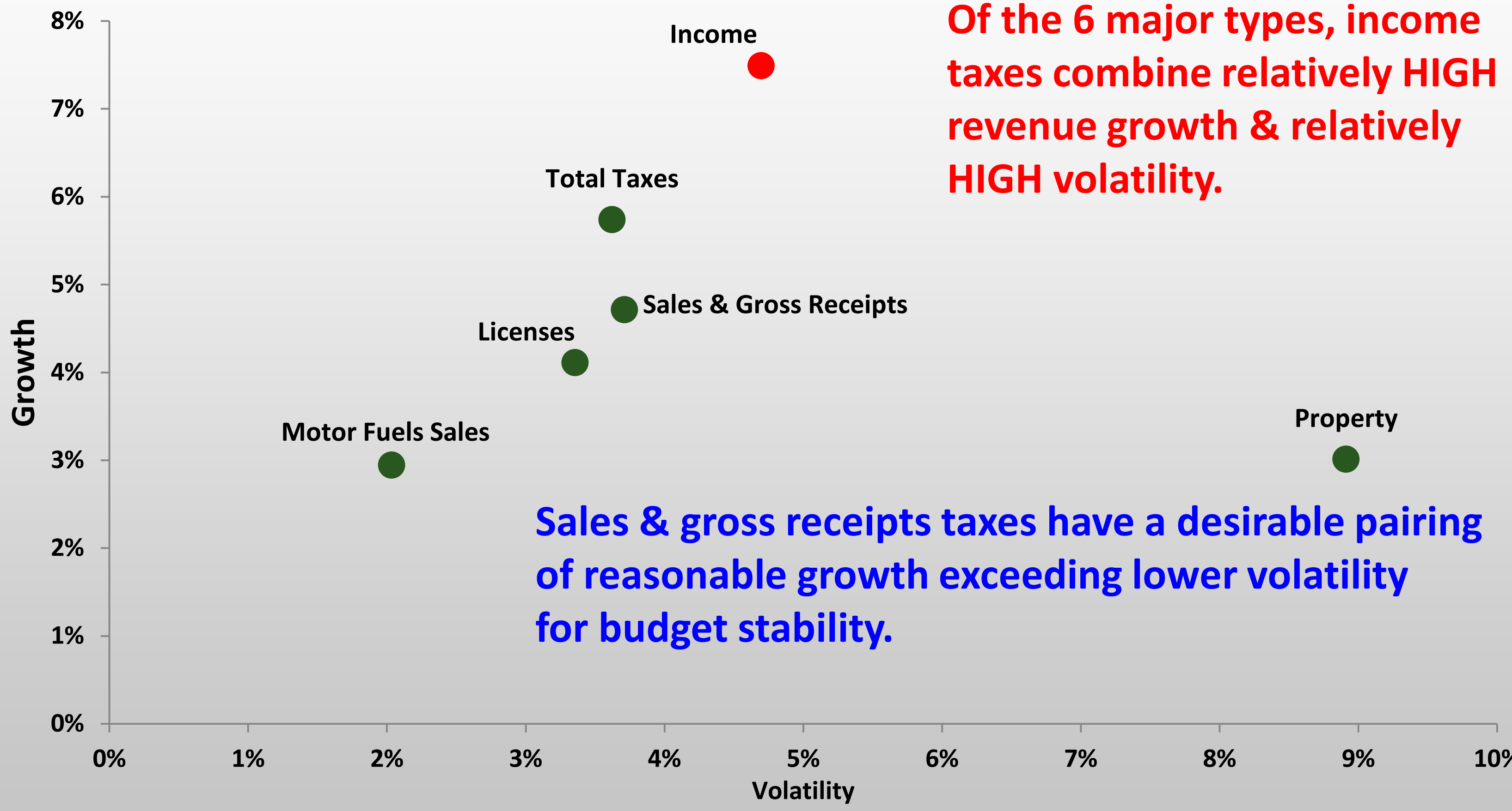


Figure 1: State (ALL) Tax Type Revenue Growth & Volatility: Year-over-Year % Change in Annual Revenues (1993-2013)



Of the 6 major types, income taxes combine relatively HIGH revenue growth & relatively HIGH volatility.

Sales & gross receipts taxes have a desirable pairing of reasonable growth exceeding lower volatility for budget stability.

Note: Volatility uses the "interquartile range" (a measure of variability, based on dividing a data set into quartiles) to measure how spread-out values are around the median growth rate.

Figure 1 Explained

- **Income taxes (whether personal or corporate) have the highest tax growth rate (7.49%) & highest level of volatility (4.70%)**
  - States relying on income taxes need restraint in budget policies in good years + healthy rainy day funds in bad years to fill the gap
  - A high rate of volatility relative to the median growth rate indicates that actual income tax revenues may be difficult to forecast over time
- **Nationally, over the past 20 years, both Motor Fuels Taxes & Property Taxes have grown at about 3% per year**
  - However, Property Taxes have higher volatility & are less predictable than Motor Fuels Taxes
- **Overall, the relatively low volatility of sales & direct business taxes (gross receipts or revenues) of 3.71% helps states offset the higher volatility of other taxes like income taxes**
  - Result: lower overall tax volatility of 3.62%

Figure 2: State (Income & Sales) Tax Growth & Volatility: Year-over-Year % Chng, Annual Revenues (1993-2013)

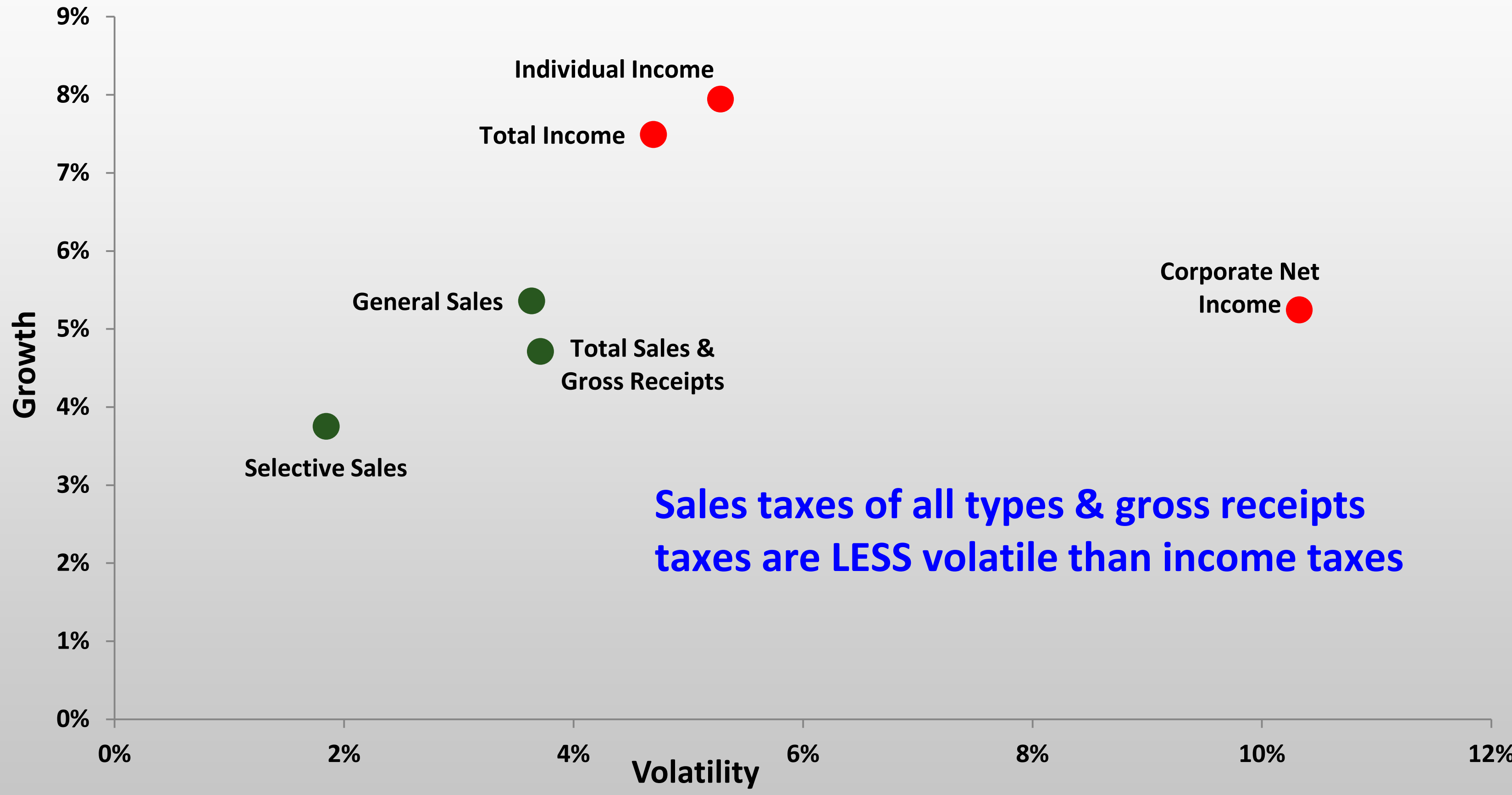


Figure 2 Explained

- **Sales & direct business taxes (whether based on gross receipts or revenues) are reported two ways: "general sales & gross receipts taxes" & "selective sales taxes"**
  - Selective sales taxes have a lower growth rate (3.75%) than general sales & gross receipts taxes
- **Income taxes are reported as two major types: "personal income tax" & "corporation net income"**
  - Corporate income taxes are highly volatile (10.32%) compared to their growth rate (5.25%)
  - Corporate income taxes are more volatile than personal income taxes
- **Takeaway: In contrast to corporate income taxes, sales &/or gross receipts taxes provide less revenue growth (4.71%) but much less volatility (3.71%) for stability in state budgeting**

GROWTH & VOLATILITY - NEVADA VS. THE OTHER STATES

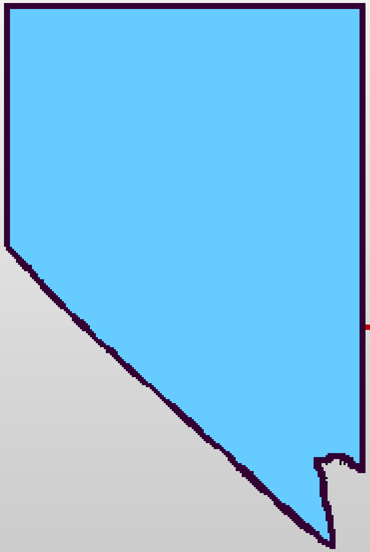


Figure 3: All States & Nevada

Figure 4: Selected States (No Personal Income Tax) & Nevada

Figure 3: Tax Revenue Growth & Volatility, All States,1993-2013

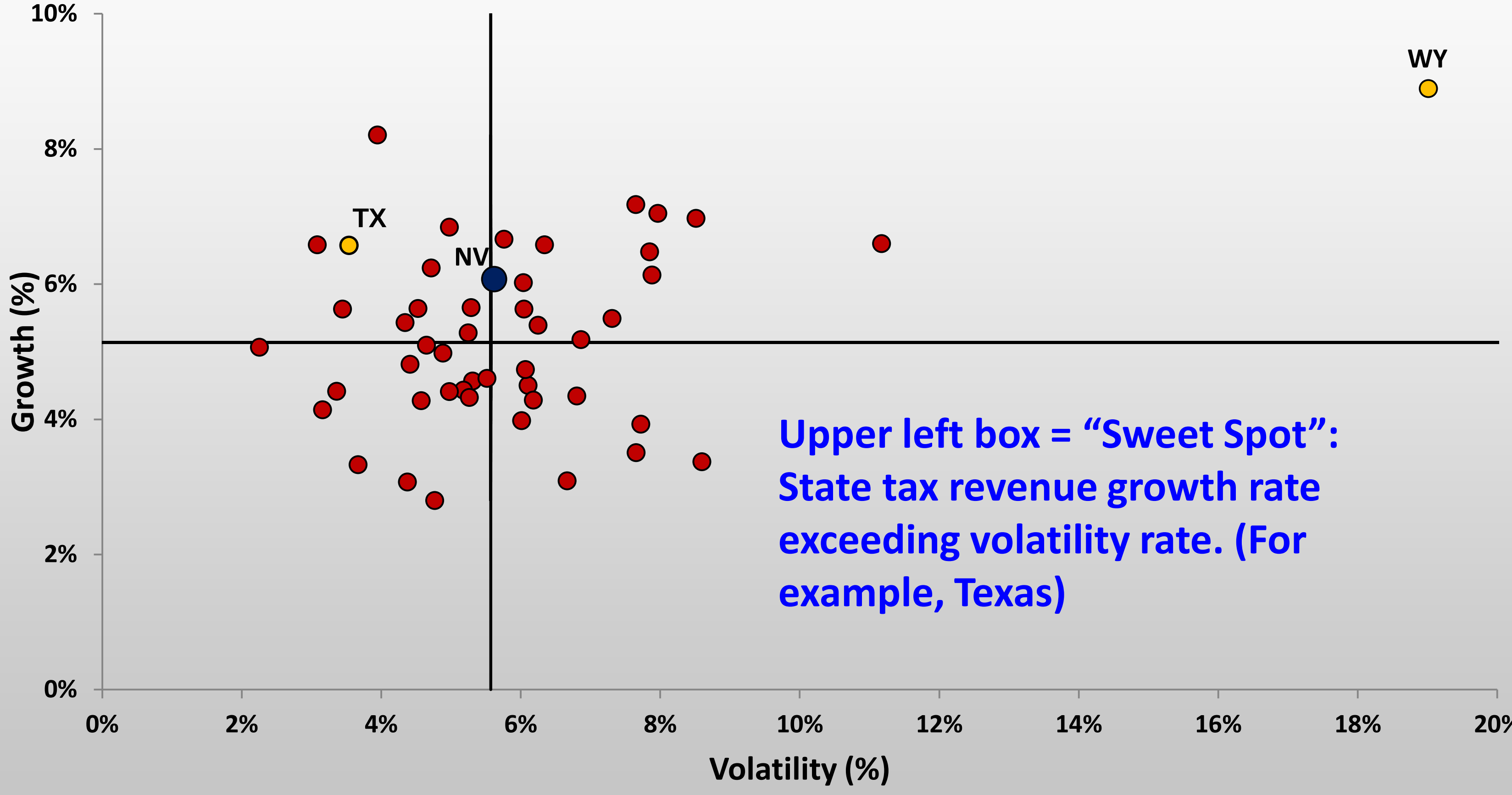


Figure 3 Explained: All State Data 1993-2013

- Excluding Alaska, all other states combined tax growth & volatility are shown as dots (Nevada in blue)

- Figure 3 lines show combined median revenue growth rate of 5.13% in total taxes for states & median volatility for that growth of 5.57%
  - Median lines create 4 boxes

- Upper left box = “Sweet Spot” where total state tax revenue growth rate exceeds corresponding level of volatility

  - For example, total tax growth rate in Texas (1993-2013) = 6.57% with relatively low volatility (3.54%)
  - In contrast, states like Wyoming – with its mix of mining severance taxes, royalties & other extractive industry taxes – can dramatically fluctuate & have high volatility

Figure 3 Explained: All State Data 1993-2013, cont.

- **Nevada has a relative tax revenue growth rate of 6.07% & volatility of 5.62%**
  - Nevada appears to be doing "okay" in contrast to other states; it's centered at median volatility with higher than median total tax revenue growth
    - **So…why do we have a continual debate on tax revenue in Nevada related to issues with the GF?**
    - **Again, we ask:** ***Do simple growth rates mask underlying factors?***

Figure 4: Tax Revenue Growth & Volatility, Select States with No Personal Income Tax,1993-2013

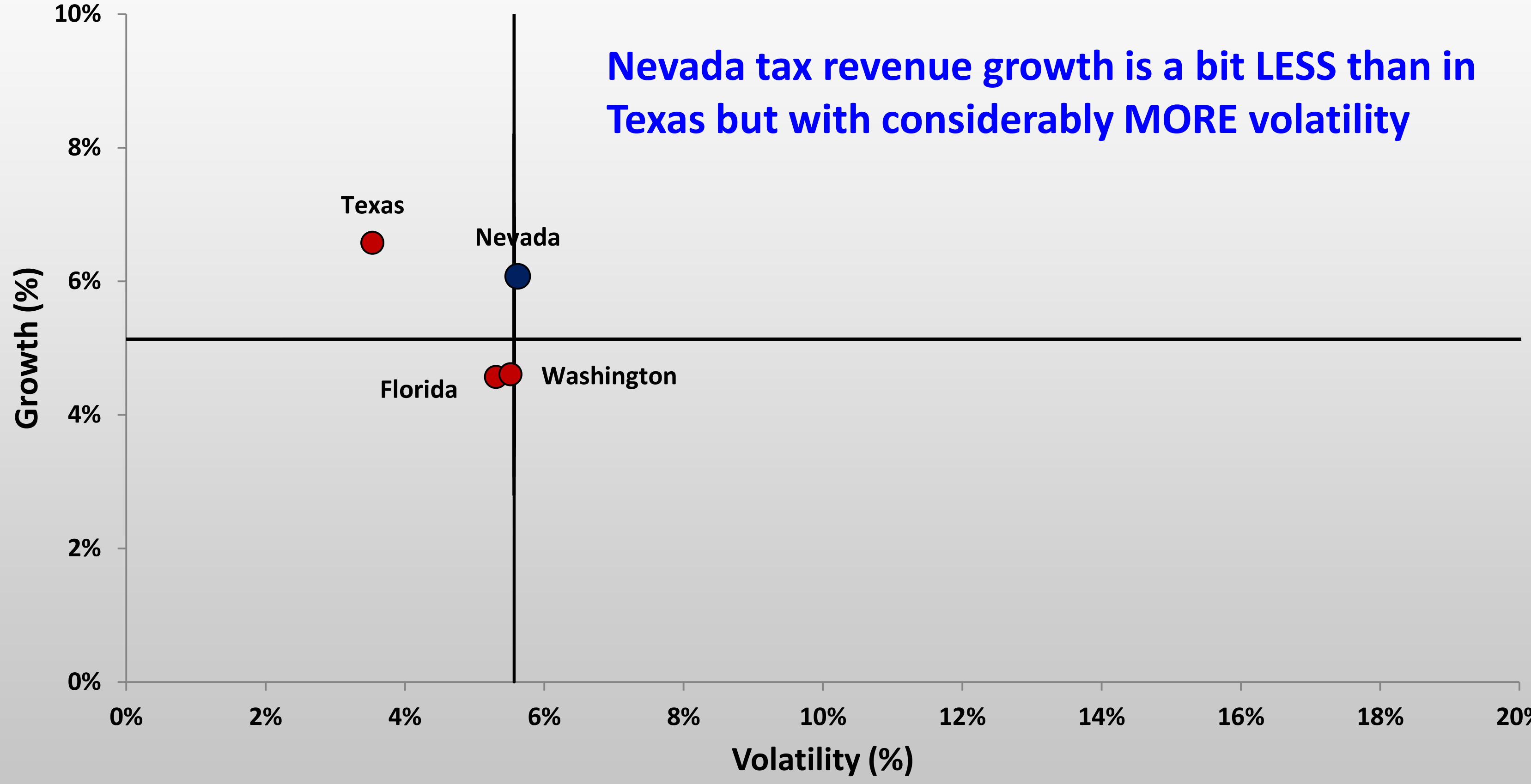


Figure 4 Explained: Tax Revenue Growth &Volatility, Select States, 1993-2013

- **Given the wide disparity in state tax systems, Figure 4 compares Nevada with three other states that have no state income tax:**
  - Florida
  - Texas
  - Washington

- **Note: There are four other states that do not tax personal income, but the tax and/or economic structures of three of them (Alaska, South Dakota & Wyoming) are not comparable to Nevada**

  - Why? For example, Alaska’s severance taxes equaled 78.3% of the state’s total tax collections in 2013

Figure 4: Tax Revenue Growth &Volatility, Select States, 1993-2013, cont.

- **Nevada's tax revenue growth rate is 2nd to that of Texas – but Nevada's growth has a lot more volatility (5.6% vs. 3.5%)**

- **Nevada's explosive population growth over the data set period led the nation & leads to the logical question:**
  - **Why isn't Nevada's tax revenue growth rate a lot higher?**
    - **The answer is a combination of three major contributing factors:**
      1. Lack of diversification through/in economic development
      2. Tax structure doesn't emulate the modern economy
      3. New rapid population growth includes children who on average use State services to a greater degree & more need for technical worker training in advanced industries so simple population growth & per capita averages don't tell the whole revenue story

Contributing factor #1: Lack of diversification in/through economic development

- **Diversification through economic development is at the forefront of Nevada's efforts but still relatively new**

- **Five existing economic development diversity ranking indices compare employment & industry concentrations to a set of slightly different weighting measures of national or state employment**

    - Nevada = <u>only</u> state (along with Wyoming) that generally appears in the 5 indices as "Least Diverse"

(The five indices noted above are outlined & calculated in *Industrial Diversity & Economic Performance: A Spatial Analysis*, Hoa P. D. Tran, University of Nebraska, Dissertation, College of Business Administration, 2011 (Tran, op. cit, Table 5.1.1))

Contributing factor #1: Lack of diversification in/through economic development, cont.

- **Why does this matter?**

  - State public finance & state economic growth research work suggests a direct relationship between state revenue volatility & diversification through economic development

  - Diversification through economic development tends to create more stable economy, i.e., helps smooth economic/business cycle

Conclusion: Nevada's tax revenue growth volatility <u>will likely decline</u> as public & private efforts to improve conditions supporting diversification through economic development bear fruit

Contributing factor #2: Tax structure doesn't emulate the modern economy

- **Historically, many state tax systems (including Nevada's) did not modernize & broaden to emulate their evolving economies**

- **Research literature suggests that better matching the tax structure to a state's economic base tends to reduce revenue volatility**

  - If a state tax system is modernized & that modernization is combined with a proactive economic development strategy, it **will** help reduce revenue volatility

- **The legislative challenge: Selecting the best way to achieve alignment with the economy <u>combined</u> with effective development strategy**

Contributing factor #2: Tax structure doesn't emulate the modern economy, cont.

- **As has been said many times, there is no single "Magic Bullet" that will perfectly align Nevada's tax structure regardless of revenue neutrality**

  - ***So, again: Is an optimal alignment achieved via an expanded business tax/license fee or some version or variant of a gross receipts tax?***

  - ***Or is a significant broadening of sales taxes to services the solution?***
    - Structuring complications + potential problems with heavily hitting lower income families + counter-productive to business investment if tax is applied at the production phase

  - ***Would a thorough review, amending & modifying of the existing tax structure suffice?***

  - ***Is the answer a combination or "blend" of the above?***

Reflections on Nevada's Population, Economic & Tax Revenue Growth

- **Nevada's historical population growth has actually been phenomenal**

- **25 years of data on Nevada's population growth (implied growth in associated housing & retail sales):**

  - From 1990-2000, population change in U.S. was 13.1%, while Nevada's population grew by 66.3%

  - From 2000-2010, Nevada's population leaped again by 35.1%, while U.S. population grew by just 9.7%

  - From 2010 to (July) 2014, Nevada's population growth once again significantly beat U.S. growth - 5.13% vs. 3.28% even as labor force migration nationwide slowed

Reflections on Nevada's Economic Growth & Tax Revenue Growth, cont.

- Even with different measures of economic growth (e.g., population, employment or income), Nevada is generally viewed as a top state for economic growth over the period from 1995-2009 & one of the top growth states even with the Great Recession (1994-2013)

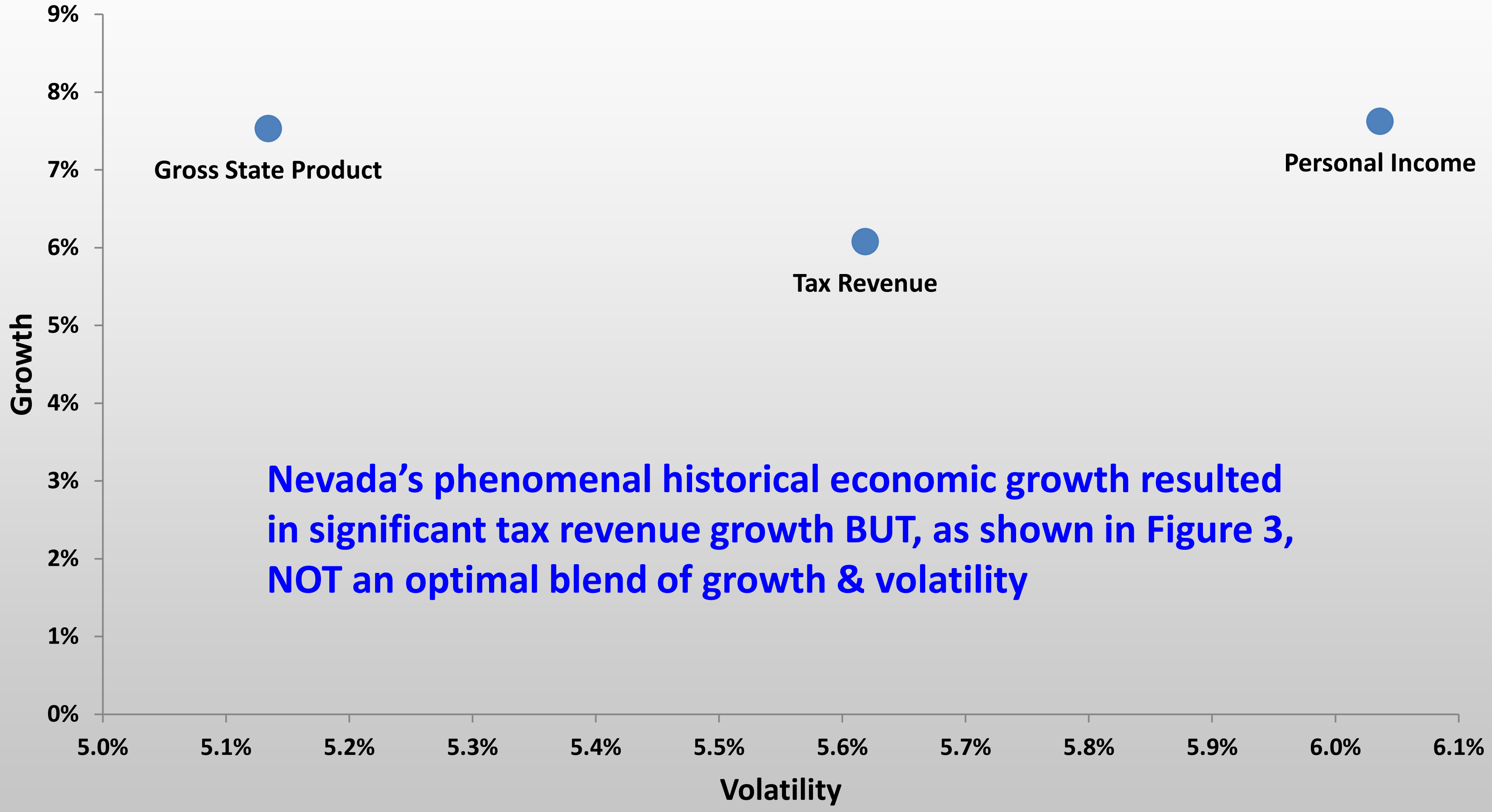
    - If we accept the research literature findings that economic growth is a primary driver of state revenue growth, then WHY is Nevada NOT the top revenue growth state, or one of the top revenue growth states, rather than being just average as a pairing of both growth & volatility ?

    - Why is Nevada higher in median tax volatility even though it doesn't have a system of income taxes, which are highly volatile?

Figure 5 on the next slide presents the respective values for growth & volatility in tax revenue discussed above, plus Gross State Product & Personal Income.

Gross State Product is a (statistical) measure of the total value of state output (value added of all industries within a state)

Figure 5: Nevada: Gross State Product, Personal Income & Tax Revenue Growth & Volatility, 1993-2013 (median)



Nevada General Fund Observations

Observations: Nevada's General Fund

- **Overview**
  - **Most forecasts of Nevada's economic growth call for a slower rate of growth as the state matures**
  - **There are concerns about GF tax revenues as Nevada moves forward**

- **2013-2015 biennium forecasted shares of GF revenue:**
  - Sales & Use Taxes - 34%
  - Gaming Tax - 25.5%
  - MBT - 9.3%
  - Licenses - 5.2%

- **The GF does not get the majority of total state & local tax collections from major revenue sources like sales & use taxes, motor fuels taxes & property taxes**

- **Thus, revenues retained by the GF are subject to Constitutional provisions, earmarks & major exemptions**

Observations: Nevada's General Fund, cont.

- **Our focus: statistically-based observations on the growth features of the General Fund's four major revenue streams:**

  - **Gaming Tax**
  - **Sales & Use Taxes**
  - **Modified Business Taxes (MBT)**
  - **Insurance Premium Tax**

The following observations are based on widely-accepted tax elasticity models & base-level data on Nevada's four major tax revenue sources, based on prior & ongoing work at or associated with UNLV

Observations: TECHNICAL NOTES on Nevada's GF Elasticity Measurement

- Elasticity estimates herein come from Nevada's tax base
- Fact: Revenues are affected by the economic behavior of those being taxed PLUS the tax itself
- Important: Focus should be on tax **base**, not tax revenues
  - This separates policy discussions from revenue estimates, &
  - Focuses policy discussions on behavior of the tax-base within the present & future state economy
- Value: Better understanding of which tax types grow revenue faster or are more volatile than others, regardless of policies
- Also: Helps predict what a tax structure will yield in future & what types of policies might be needed to smooth out volatility of peaks & troughs
- Takeaway: Underlying structural behavior is what is important, not mere calculations of revenue changes

Observations: Nevada's GF, cont.

Gaming Tax

- **Consistently exhibits long-run growth BUT lags state economic growth & changes in make-up of Nevada's economy**
- **Relatively low volatility compared to Nevada's business cycle so has stabilizing effect on GF BUT more volatile compared to national business cycle & economic influences outside Nevada**
- **Conclusion: Unless gaming tax is continually reexamined as to yield, the base, or a combination of factors, revenue growth does not & will not keep up with Nevada's economic growth, creating an obvious problem for the GF**

Observations: Nevada's GF, cont.

Sales & Use Tax
&
Modified Business Tax ("MBT")

- Sales & use taxes & the MBT generally keep up (or slightly less so) with Nevada's economic growth trend over time
- They also tend to have "average"/median volatility with economic/business cycle
- Conclusion: Their tax-bases at best "keep up" & don't generate new or additional revenue above Nevada's economic growth rate

Observations: Nevada’s GF, cont.

Insurance Premium Tax

- **Long-run growth does outpace Nevada’s economic growth rate**
- **Also exhibits low volatility over economic/business cycle**
- **However, it’s a broad-based tax on service products used (& often legally required) by businesses & households**
- **Conclusion: Not a tax generally considered for significant expansion given the often necessary nature of the service**

Final Observations & Conclusions

Final Observations & Conclusions

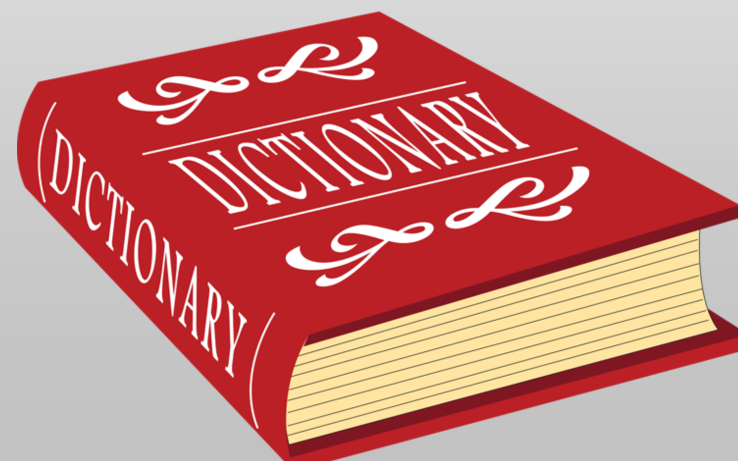
- **Given all these facts, a thoughtful reexamination of Nevada's total tax system structure by Governor Sandoval & the Nevada Legislature is warranted**

- **Given historically strong & rapid economic & population growth, the average growth rates of Nevada taxes imply a more positive view of Nevada revenues than is warranted & "mask" serious structural issues**

- **Reform of existing taxes, or adding new taxes, should not be done in isolation, but in light of how the whole portfolio interacts & is influenced by Nevada's economic structure & growth**

- **Based upon this presentation, the best option at this time for discussion of tax reform is not a broadening of the sales tax to services but rather an expanded business tax/license fee.**

Terms Defined



Terms Defined

- **Elasticity: how responsive a state tax is to either changes over time as the state economy changes (long-run estimates), or how responsive is the state tax to changes over the business cycle (short-run estimates).**

- **Income taxes include both personal income taxes & business income taxes (as traditionally defined on net business income).**

- **Licenses include items & fees (but not sales taxes) associated with motor vehicles, corporations, tobacco products, alcoholic beverages, amusements, etc.**

- **Motor Fuels are a subcategory of sales taxes but are shown separately for interest given their use in highway funding. Motor fuels taxes are directly impacted by the extent to which fixed rates & other formulas are important across states.**

Source: U.S. Census Bureau

Terms Defined, cont.

- Property taxes are those directly stemming from state revenue collections as general or centrally assessed. These are directly affected by various caps & formula changes over the period.

- Property taxes do not include direct county specific collections & usage at the county level. For Nevada, an excellent overview of the property tax system is *Understanding Nevada's Property Tax System,* 2013-2014 edition, Nevada Taxpayers Association.

- Sales & Direct Business Taxes (Gross Receipts or Revenues) include general sales taxes & direct taxes on business gross receipts either for all businesses or selected industries. Thus, existing gross receipts or margins taxes are included, as well as taxes on a portion of the gross receipts of a specifically delineated industry in several states (such as rental automobile agencies or casino revenues). The split between general sales taxes & various versions of gross receipts is not separately reported.

Source: U.S. Census Bureau

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