

# THE STRUCTURED EXIT

## A Four-Part Series on Limited Government in Wyoming

### Part 1: Estimating the Structural Deficit in Wyoming

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There are two types of budget deficits: cyclical and structural. Policy measures aimed at eliminating a deficit must be tuned to the type of deficit they are applied to. This paper, the first in a series of four, suggests a method for determining whether or not Wyoming is faced with a structural or cyclical deficit. Subsequent papers will propose appropriate policies to eliminate the deficit.

#### *Structural vs. cyclical deficits*

Budget deficits are as old as government but did not become a topic relevant to economists until the 1920s. Failed attempts by the British government to combine a shrinking budget deficit with a growing economy sparked an intense debate that stretched across both academia and politics. The most famous participant, economist John Maynard Keynes, was among the first to define cyclical budget deficits as being caused by recessions. He soon drew the conclusion that the best way to combat a cyclical deficit was a series of active policy measures against the recession. His contributions to the political debate are well summarized by the following passage from his essay *Can Lloyd George Do It?*, a criticism of British fiscal policy of the early 1920s:

There is work to be done. There are men to do it. Why not bring them together? No, says Mr. Baldwin. There are mysterious reasons of high finance and economic theory why this is impossible. It would be most rash. It would probably ruin the country. Your food would cost you more. ... Abra would rise, cadabra would fall.

His academic work on the cyclical deficit led to *The General Theory of Employment, Interest and Money*, where Keynes comprehensively analyzes both the nature of, and policies against, cyclical deficits. His work laid the foundation for the development of modern fiscal policy which, to a large extent, has consisted of antirecession measures.

Through the 1960s American and European governments generally were successful in

controlling or eliminating budget deficits. In the 1970s a new trend emerged with deficits that persisted throughout an entire business cycle. Defying hitherto successful Keynesian theory, these new deficits proved immune to almost all fiscal and monetary measures thrown at them. A rare exception was the deficit in the U.S. government's budget. During president Reagan's second term the U.S. budget deficit reversed course, from growing to shrinking. A radical change to the structure of U.S. taxes combined with rapid growth in the tax base – GDP – eventually led to balanced budgets in the mid 1990s.

During the 1980s a new term emerged in both the political and the academic deficit debate. In order to distinguish between the deficits that had been successfully addressed since at least the 1920s, economists and politicians began talking about structural deficits. Defined, conventionally, as the deficit that remains when the economy is at full capacity, the structural deficit is immune to Keynesian fiscal policies.

The key to successful elimination of budget deficits is the identification of the type of budget deficit. If it were possible to measure exactly where an economy is in the business cycle, that it would be easy to determine precisely what deficit is showing in a budget. However, even with highly sophisticated statistical methods at hand, economists can never pinpoint the exact position of a given economy in, or between, growth periods and recessions.

Therefore, the determination of the nature of a deficit, based strictly on business-cycle indicators, such as full economic capacity or the distance from that point, can never be better than approximate. An assessment of the share of spending comprised by entitlements can reinforce the identification of the type of deficit.

### ***Why the type of deficit matters***

The more of a deficit that has structural causes, the more ineffective Keynesian fiscal policy will be. As an example, the American Recovery and Reinvestment Act was intended to stimulate private-sector activity in the midst of a recession. With improved activity, theory prescribed, more tax revenue would come and eventually a balanced budget. However, the ARRA had no discernible effect on the federal deficit: it was approximately as large in 2014, three years after the end of the ARRA, as it was in 2008, the first year of the recession and one year before the bill's enactment.

Counter-cyclical tax cuts are also ineffective against structural deficits. The reason is, simply, that a counter-cyclical tax cut is temporary. If economic activity has not increased as a result of the tax cut, the only effect of the cut will be a temporary decline in government revenue.

Just as policies against cyclical deficits must be cyclical in nature, policies against structural deficits must be structural in nature. While the actual cause of a structural deficit can vary, the common denominator is a permanent mismatch between spending and taxation. Technically, the spending obligations expressed in tax-funded entitlement programs exceed the tax revenues that the economy is able to produce, or the macroeconomic tax base.

There is only one route to the elimination of a structural deficit: to permanently change the balance between expressed spending obligations and the macroeconomic tax base. In theory that change can consist of permanent spending reductions, permanent tax increases or a combination

of both. However, as predicted by the Laffer curve and corroborated by both American and global experience, permanent tax increases erode the tax base and therefore take a toll on tax revenue. In a nutshell, they defeat their own purpose.

As Wyoming faces a multi-year deficit starting in the near future, it is critical that the first step toward deficit elimination consists of a determination of what type of deficit the state is facing. This determination process, again, consists of two parts: an analysis of the structure of both state spending and the tax base; and a determination where on the business cycle Wyoming will be at the time the deficit opens up in the budget.

### *Wyoming's big government*

History indicates that the size of government affects the distribution of a deficit between the cyclical and the structural category. The emergence of structural deficits in both the United States and Europe came soon after a long period of government expansion. It is reasonable to assume that a large government, with entitlements-based spending commitments, is more prone to structural deficits than small government with few entitlement programs.

For this reason, it matters to note that Wyoming is not a small-government state. Taxes are far from as low as is sometimes suggested. The Tax Foundation's 2014 State Business Tax Climate Index ranked Wyoming number one in the country.<sup>1</sup> That report also ranks New York, New Jersey and California as having the worst business tax climates of all 50 states.

Since federal taxes are the same in all states, it is reasonable to assume that business taxes should make a noticeable difference in state private-sector economic growth. If state business taxes matter, then Wyoming should handily outperform the states at the bottom of the tax ranking.

That, however, has not happened. In the depth of the Great Recession, the years 2009-2012, the private sector of the Wyoming economy did not grow at all. In fact, according to the Bureau of Economic Analysis state and regional GDP data the private sector of our state economy contracted by an average of 1.2 percent per year (in 2009 prices).

Only Nevada did worse.

The truth about Wyoming taxes is that only some really crafty calculation methods can save the image of the Cowboy State as a low-tax jurisdiction.<sup>2</sup>

Government spending does not improve the big-government image of Wyoming. The state has the highest government employment ratio in the country,<sup>3</sup> and the welfare state is alive and well in government spending. According to the Census Bureau, of the total \$8.7 billion that Wyoming state and local governments spent in 2012, \$5.4 billion was directly related to entitlements and income redistribution:

- \$2.5 billion on elementary and higher education;
- \$2.2 billion on social services, including public welfare and health care;
- \$700 million in income insurance, including retirement and unemployment.

Welfare-state spending is 62 percent of state and local government spending, almost identical to the national average. In other words, the welfare state is as big in Wyoming as in the United States as a whole.

The welfare state is as present in the state budget as it is in local government budgets. By having a welfare state as big and as elaborate as the national average, the Wyoming state government is *a priori* at the same risk of running a structural budget deficit as the federal government.

The next section will establish whether or not there actually is a risk for a structural deficit in Wyoming.

### *Measuring structural economic performance*

It would be a simple matter to measure the structural deficit if the conventionally accepted method was as easy to use in practice as it is in theory. The quantitative meaning of full capacity utilization has changed over the years, in part because of the expansion of entitlement programs. Over the past half century work-free income has been the fastest growing source of income for working-age Americans.<sup>4</sup> Workers have been able to permanently reduce their labor supply, making it difficult to compare full-employment concepts over time. As a consequence it is complicated to apply a realistic, time-independent definition of the structural deficit.

A more realistic definition of the structural deficit focuses on the ability of government to pay for its spending promises regardless of how the economy performs. A fiscally sound government is able to pay for its promises regardless of whether the economy is at full employment or in a deep recession; its ability to fund its outlays depends not on how strong the tax base is, but on the nature of its spending obligations.

In this context a structural deficit occurs when government, over a period of time longer than a business cycle, has spending promises that exceed revenue. In other words, the definition of the structural deficit is based on actual economic performance, as opposed to potential economic performance under the full-employment definition.

Equation 1 suggests a performance-based definition, using the unemployment rate as a representative for entitlement-based government spending obligations:

$$(1) \quad B_{\sigma} = \left( d_{\sigma}^* - \frac{\sum_{-10}^0 y / 10}{\sum_{-10}^0 u / 10} \right) \frac{\sum_{-10}^0 B}{10}$$

$B_{\sigma}$  the structural budget deficit in any given year;

$d_{\sigma}^*$  the maximum share of the actual deficit that can be structural;

$y$  the current real GDP growth rate;

$u$  the current total unemployment rate;

$B$  the actual current budget deficit.



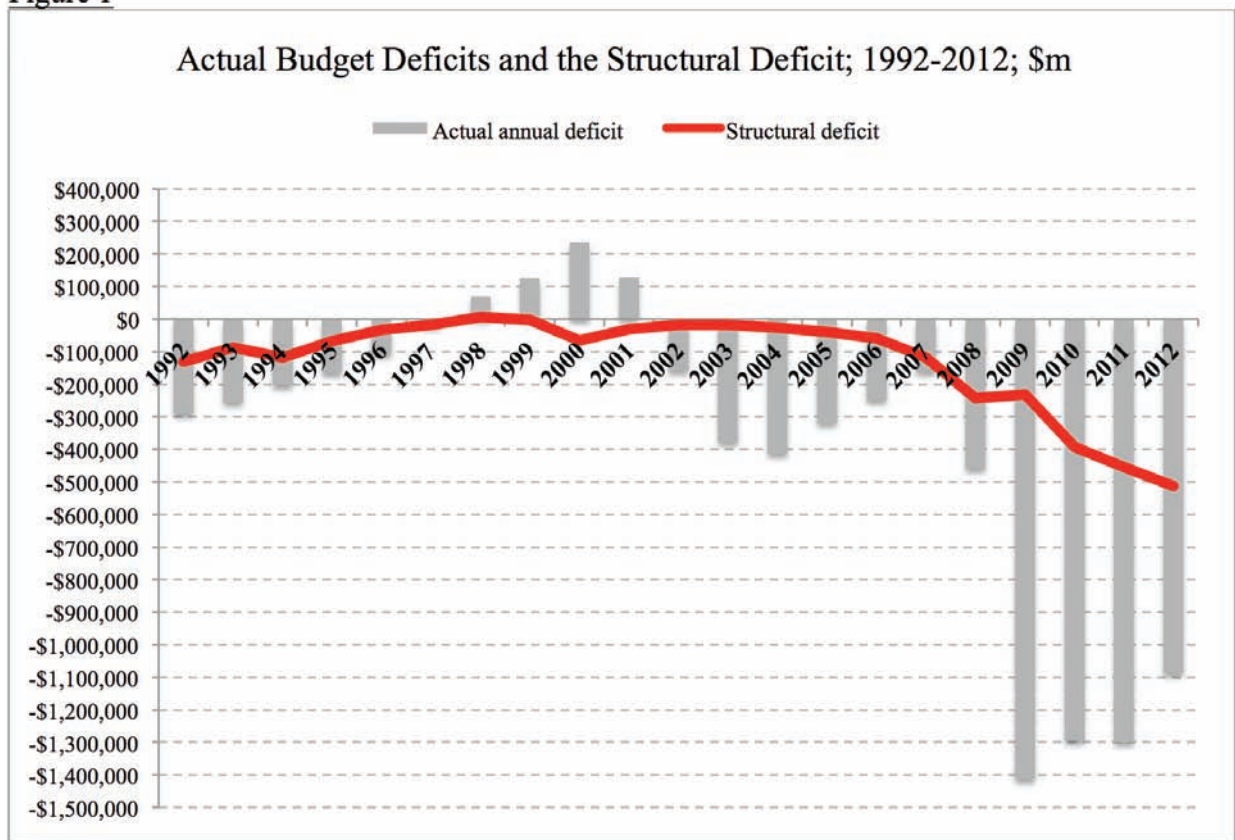
Equation 1 determines the share of a current budget deficit that is structural as opposed to cyclical. The key to determining the share is in the relation between  $d_{\sigma}^*$  the maximum structural share of the budget deficit, and the structural performance ratio.

The maximum share of actual deficit that can be structural is always 1; if  $d_{\sigma}^* < 1$ , then the cyclical deficit does not fully go away over one business cycle. Therefore, the structural share of the budget deficit is determined by the structural performance ratio. When the average real GDP growth rate over the past ten years is equal to the average unemployment rate over that period of time, the ratio equals 1. Since the maximum structural deficit share is assumed to be one, according to equation (1) there is no structural deficit.

The practical meaning of this is that the economy is able to produce enough tax revenues to pay for current government entitlement promises. If the average growth rate were half of the average unemployment rate over the ten-year period, then technically half the deficit would be structural.

Figure 1 applies Equation 1 to the federal deficit:

Figure 1



The rise in the structural deficit from 2000 and on illustrates a structural shift in the U.S. economy, a shift that many European welfare states underwent in the 1980s. Through 2008 unemployment remains largely at the same levels as during the 1980s and 1990s; growth, on the other hand, slows down markedly. Over time this lower growth rate, and thus weaker performance ratio, works its

way through Equation 1. The structural deficit increases.

A combination of high, persistent levels of entitlement spending and weak GDP growth is the driving factor behind long-term growth in the structural deficit.

As the Great Recession begins, the structural-deficit problem is exacerbated. High and persistent unemployment, like the lower growth rates before it, creeps into Equation 1 as a further weakening of the structural performance ratio. In fact, 2012 marks the fourth consecutive year with unemployment above eight percent, contributing strongly to a growth trend in the structural deficit.

### *A state-based adaptation*

For two reasons, Equation 1 is not applicable in its full form to the state level. First, the federal budget runs an almost chronic deficit, making it a simple matter to incorporate deficit data. States, however, typically do not run deficits, in part because they operate under balanced-budget requirements and in part because they cannot monetize deficits.

Secondly, policy decisions at the state level, aimed at addressing a deficit, need to be more specific than at the federal level. While the federal government can use fiscal policy and structural measures on a broad front, states need to be more direct, and specific, in their application of antideficit policies. Therefore, the measurement method used to distinguish a cyclical deficit from a structural deficit must be based on variables more specific to the state budget than what is needed at the federal level.

A state-adapted measurement method maintains the methodological foundation of Equation 1, namely actual economic performance. The main change will be in excluding the deficit variables (it is pointless to include a potential deficit) and concentrate on the performance ratio. To further highlight the state application, though, the ratio is adjusted to directly reflect state conditions:

- The spending variable is total welfare-state spending by the state of Wyoming and by local governments together;
- The revenue variable is the state Gross Domestic Product (GDP).

There are two reasons why welfare-state spending should represent outlays. First, they are permanent in nature, and therefore represent structural spending commitments. If there is a structural budget deficit, then any reform to eliminate that deficit will have to include welfare-state spending programs.

Secondly, welfare-state spending is not part of the essential functions of government. A state that is limited to the protection of the lives, liberty and property of its citizens cannot redistribute any income, wealth or consumption between individual citizens. Tax-funded entitlements redistribute by definition and should therefore be the target of government-limiting reforms. If the state government is facing a structural budget deficit, entitlement programs constitute a logical starting point for structural reforms to government spending.

Local government welfare-state spending is included because of the close fiscal ties between the state and local jurisdictions. While theoretically a state-government budget deficit is the matter

of the state government and no other jurisdiction, in practice the state's finances greatly influence spending decisions at the local level.

Local jurisdictions receive more than a third of their total spending from the state. Most of the state funds go to school districts, but this only reinforces the point that entitlement spending at the local level is tied both directly and indirectly to the fiscal health of the state government. If the state were to reduce its spending on education (disregarding fiscal interpretations of court rulings) local governments could be pressured to compensate by reprioritizing their spending.

However unlikely state spending cuts may seem, if legislators are faced with a deficit that will probably last for several years and if they have no coherent plan for addressing it, they may take to panic-driven cuts that would otherwise be unthinkable. At the edge of fiscal panic, state legislators will not consider the possible ramifications of their spending cuts for local jurisdictions.

There is yet one more reason to include local spending in the measurement method for a structural budget deficit. Welfare-state spending has the same nature regardless of what level of government is responsible for it. A city or a school district with spending responsibilities within the realm of entitlements will find itself facing similar structural problems as the state. At that point it may be tempting for elected officials at both the state level and locally to reorganize the fiscal responsibility for existing spending programs. The purpose would be to circumvent a deficit, and thus to eliminate it based on book-keeping procedures rather than real fiscal reforms. By bundling together state and local entitlement spending, this measurement method demonstrates that such accounting-based shell games are useless against a structural budget deficit.

On the revenue side, the use of GDP as the revenue base serves a similarly systemic purpose. Gross Domestic Product is the widest possible tax base in the economy. Its growth caps the growth in tax revenue over time, thus rendering it pointless to transfer taxation from one economic activity to another. The use of GDP also preempts arguments about introducing new taxes.

As mentioned earlier, the measurement method does not directly evaluate an existing budget deficit. Instead, it determines whether or not there is a predisposition for a structural budget deficit in the economy. The long-term growth rate in welfare-state spending is compared to the long-term growth in the tax base, such that:

- A higher growth rate in spending than in the tax base indicates a structural deficit;
- A higher growth rate in the tax base than in spending indicates a structural surplus.

Thus, the state-adapted version of Equation 1 reads, simply:

$$(2) \quad \sigma = \frac{\sum_{-10}^0 y / 10}{\sum_{-10}^0 g / 10} * 100$$

$\sigma$  the structural deficit ratio;

$y$  the growth rate of GDP, either in current prices or adjusted for inflation;

$g$  the current-price growth rate in welfare-state spending.

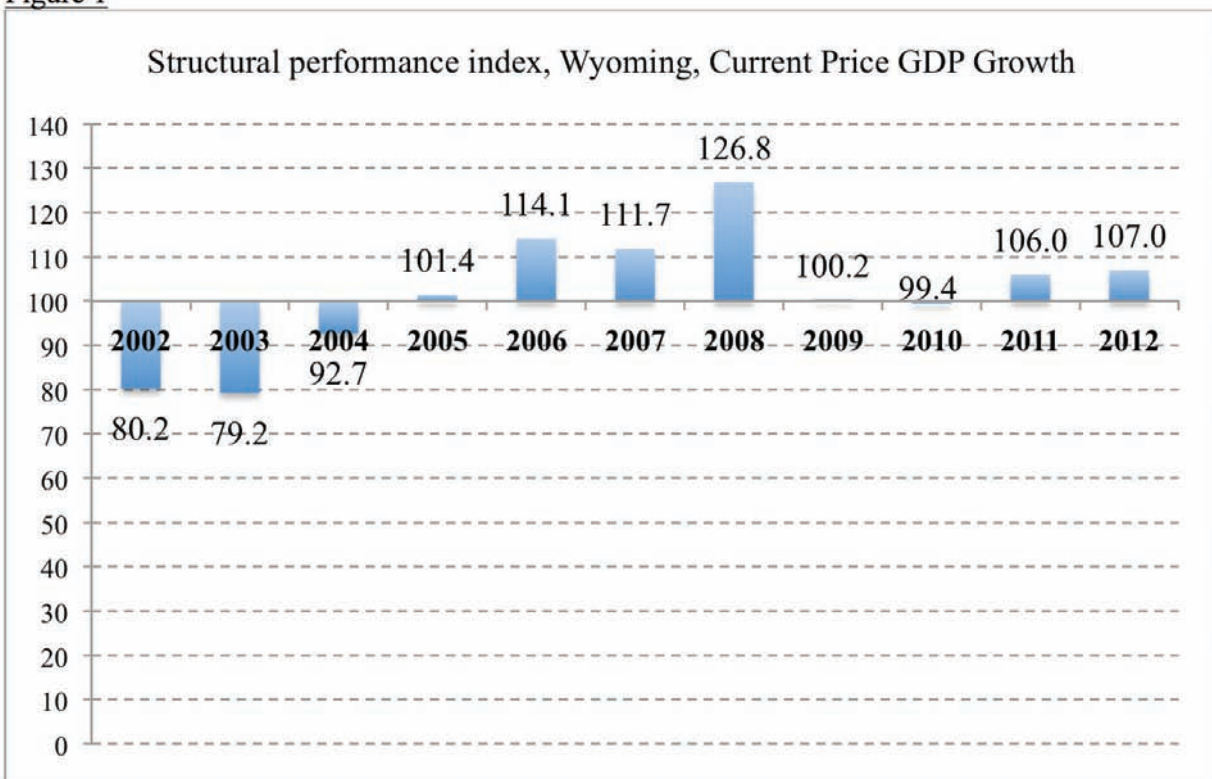
Both variables are averaged over the past ten years, the time period being chosen to bridge over any regular business cycle.

While current-price state GDP data stretches far back in time, consistent state and local spending data for Wyoming is available from the Bureau of the Census from 1992 through 2012. A first estimate of the structural performance index, for current-price GDP, will therefore yield a series of no more than eleven observations.

At an index value of 100, current-price GDP and welfare-state spending have grown at the same pace, on average, over the past ten years; an index value higher than 100 indicates that the tax base is outgrowing welfare-state spending; an index value lower than 100 indicates a structural deficit.

Figure 1 reports  $\sigma$  numbers that appear to refute the idea of a structural budget deficit in Wyoming:

Figure 1



Sources: *Bureau of Economic Analysis and Bureau of the Census.*

In other words, when state-specific inflation is included the Wyoming economy is structurally capable of paying for state and local welfare-state obligations.

The problem is the inclusion of inflation. The Wyoming current-price GDP is highly sensitive to changes in natural-resource prices. This was evident in the years 2003-2008 when the average annual inflation rate in the Wyoming economy was almost eight percent. Consumers did not see



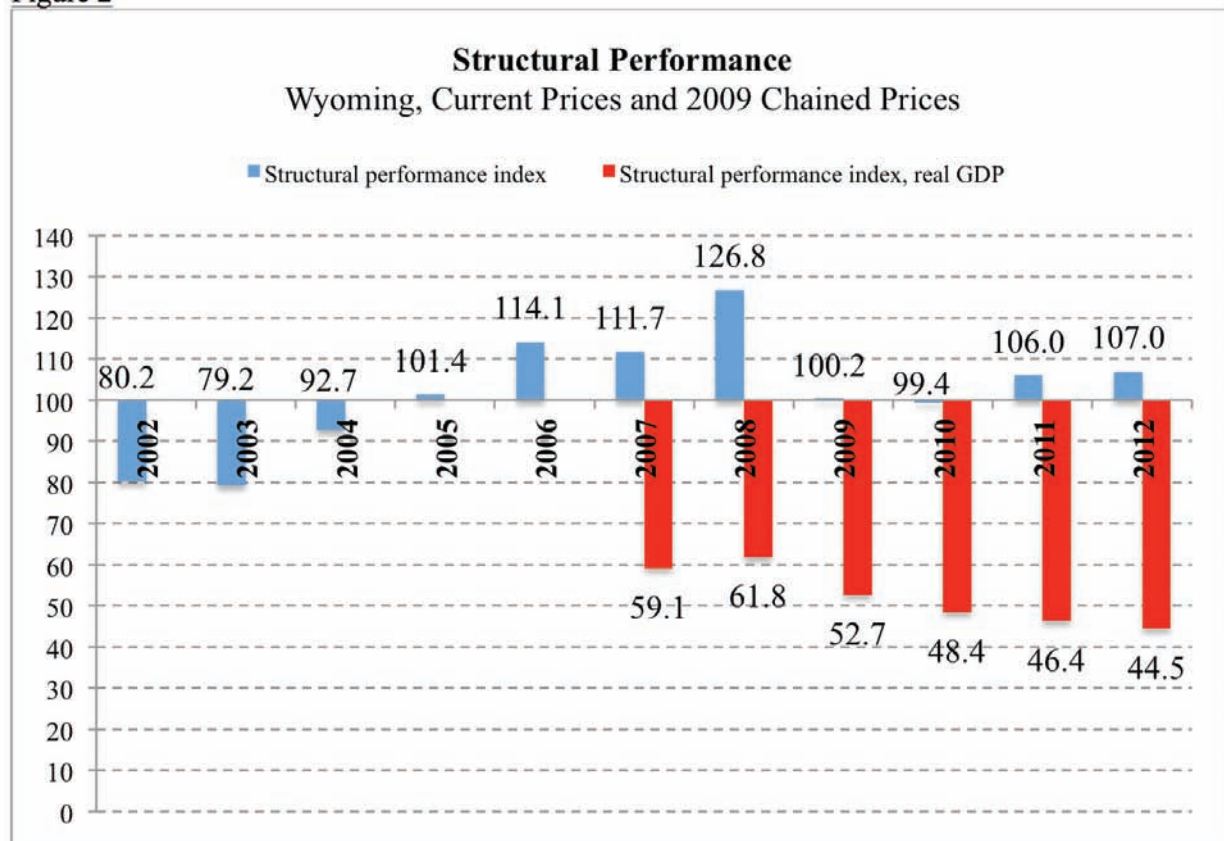
this inflation – it was almost entirely concentrated to natural resources.

For the state government, high minerals-based inflation is a jackpot. Severance taxation is favorable to inflation; a sustained period of high inflation in coal, oil and other natural resource prices rapidly increases state tax revenue.

As is explained with chilling clarity in the October 2014 and January 2015 forecasts from the Consensus Revenue Estimating Group (CREG), very inflated prices can also become very deflated. In a manner of speaking, the pending deficit as projected by CREG is the hangover from the inflation-driven revenue increase from 7-12 years ago. In order to get an image of the real capacity of the Wyoming economy to sustain a welfare state, it is therefore desirable to do the same calculation as behind Figure 1, but with inflation-adjusted GDP.

There is one problem with state GDP as reported by the Bureau of Economic Analysis: its time series breaks index year in 1998. Gross Domestic Product numbers for years prior to that year have 1997 as the base year for their price index; from 1998 and on the base year is 2009. Under regular circumstances, such as for observations of annual GDP data, the shift in base year is largely unimportant. However, for the purposes of analyzing the structural performance of the Wyoming economy, the base-year shift is disruptive. Therefore, as reported in Figure 2 the index numbers based on constant prices do not start until 2007:

Figure 2



Sources: *Bureau of Economic Analysis and Bureau of the Census.*

The adjustment for inflation makes a remarkable difference. The message conveyed by the red columns and their attached index numbers can be understood as follows: for every \$100 growth in welfare-state spending in 2007, the tax base grew by \$59.10.

It is important to note that the real-GDP version of the structural performance index compares current-price spending to an inflation-adjusted tax base. This creates a slight bias in the index numbers. However, the question is what inflation index welfare-state spending should be adjusted to; it would not be reasonable to use the minerals-price based index that comes with GDP, as those entitled to receive benefits from the Wyoming welfare state do not live with the same inflation as the minerals industry does. Another option is to use federal inflation data, either in the form of consumer price index or the GDP deflator. But regardless of which, the adjustment would be small:

- The average annual growth in welfare-state spending in the years 2003-2008 (when minerals-price inflation had its strongest impact on state revenue) was 10.5 percent;
- Average consumer-price index inflation for those years was three percent; therefore
- Average growth in CPI-adjusted welfare-state spending in Wyoming was 7.5 percent.

This is almost one percentage point above inflation-adjusted average state GDP growth for 2003-2008.

It is worth pointing out that this was at the height of the growth period in the last business cycle. The macroeconomic circumstances were ideal for the state and local governments to keep the growth of welfare-state spending at or below growth in the revenue base.

### *The inevitable structural deficit*

There is an important message in Equation 2. On the revenue side, the use of GDP effectively rules out the addition of new taxes to close the deficit. Since the index shows the long-term growth rate of the revenue base vs. the long-term growth rate of spending, a new tax will not close the gap. It will bring a one-time addition of revenue, but over time the growth rate of the revenue from that new tax will at best stay on par with GDP. (A new tax is likely going to slow down GDP growth.) At a given growth rate in welfare-state spending this means a temporary solution for a permanent problem.

On the spending side, the inclusion of local-government entitlement spending preempts a solution to the structural deficit that includes the simple transfer of spending responsibilities from the state to local governments. The problem with welfare state spending is its very structure, which tends to drive spending regardless of where the economy is on its way through the business cycle. At the very least, welfare-state spending is designed to grow independently of the growth in tax revenue.

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## *Endnotes*

<sup>1</sup> See Drenkard and Henschman (2013).

<sup>2</sup> Larson, S: Another Wyoming Tax Myth, July 8, 2014; Republic Free Choice.

<sup>3</sup> Trends in state level employment: government vs. private; The Liberty Bullhorn Economic Newsletter, September 2, 2011. See also: Larson, S: The Biggest Government Counties in Wyoming, February 3, 2015; Republic Free Choice.

<sup>4</sup> See Eberstadt (2015).

*Notes:*