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WYOMING EDUCATION FINANCE

Regional Price Adjustment

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Prepared for MAP by

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Regional Price Adjustment

Background

The Wyoming Court's 1995 ruling (Campbell County v. State of Wyoming) that educational funding differences be cost based required that school finance funding in Wyoming account for regional cost differences. The 1997 MAP proposal, adapted by the Legislature, made use of a modified version of the Wyoming Cost of Living Index (WCLI) to adjust funding allocations. The WCLI was modified by removing the housing rental cost component and the medical cost component from the price index and the resulting index was used to adjust the funding level calculated by the model. This methodology was challenged by plaintiff school districts who argued that the modified WCLI failed to make cost based adjustments to the MAP model. After hearing testimony on this issue, the trial court declared the modified index to be unconstitutional, despite the State's contention that inclusion of the medical component was already largely accounted for by the fringe benefit component of the MAP model, and that the shelter cost component reflected amenity values which should be excluded from consideration. The Wyoming Supreme Court upheld the lower court's ruling requiring that "statewide average salaries must be adjusted for the full cost-of-living differences using either the entire WCLI or another reasonable formula which includes a full housing component, including the rental of shelter costs, and a medical component to cover costs not included in the benefits portion of the salary component." Such changes must be implemented on or before July 1, 2002. In this paper we assess what options are available to meet the Court's mandate.

Assessment

The Wyoming Supreme Court ruling allows the State little discretion to create an alternative to what was granted imprimatur by the court, despite the fact that the WCLI is a flawed index for adjusting wages. A potential alternative was created when the Court endorsed the WCLI despite the fact that the WCLI fails to collect market basket data for each and every one of the school districts in the state.[1] The WCLI collects price data from 27 different communities, but assigns values by interpolation to those communities where no price data are collected. The Court, perhaps recognizing this imprecision, ruled that any index used need not be perfect "but must be a reasonable measure of these (cost) differences." Clearly, the Court does not require full geographic representation in any index developed. But can an alternative index provide "a reasonable measure" of differences across school districts?

Second, and more serious from the State's perspective, is the Court's ruling that the WCLI be kept intact or that any alternative index recognizes medical price and shelter rental costs. As a consequence, the full WCLI will replace MAP's modified WCLI resulting in a different distribution of regional cost adjustments and along with it a different flow of funds.

[1] Ironically, the Supreme Court pointed out that that MAP never "went shopping" to establish the cost adjustment. Of course, that is precisely what the WCLI does by collecting price data on a market basket of goods. But even so, because of the rural nature of many Wyoming school districts, insufficient price data exists at all locations.

School districts having relatively higher housing costs will score relatively higher on the Court's preferred index.[2] The Wyoming LSO calculates that the Teton school district will receive an additional $2 million, and Laramie #1 an additional $70,000 as a result of using the full WCLI rather than the modified WCLI. All other school districts will share in a loss of state funding of over $20 million.[3]

Requiring that the regional cost adjustment index include specific components disregards the fact that the WCLI was incorporated in the funding formula as a proxy for labor costs, rather than as a direct price index itself. A preferable strategy for identifying differences in school districts personnel costs would be to observe directly differences in labor costs. But, because teacher hiring is conducted by the school districts themselves, and without the cost discipline imposed by a competitive labor market, there is no independent information on what it costs to hire a teacher in different districts. As an alternative, MAP reasoned that labor costs would be higher where it costs teachers more to live, but that adjustments to teacher wages should not compensate teachers for benefits they already received (health insurance) or for commodities in the market basket that differed in quality (housing). This was an imperfect solution in that labor costs are only partially determined by the cost of living in any location. Of greater importance are the economic forces determining the supply and demand for labor. Furthermore, since the WCLI is not a cost-of-living index (although improperly named), but a price index, the price level reflects quality differences in the market basket across geographic locations. These so called amenity values make cross-sectional comparisons of the index problematic, as recognized by the United States Bureau of the Census. Nevertheless, defendant's inability to precisely specify the economic value of the amenity lead the Court to reject the State's decision to exclude amenity commodities from the index. Thus, the Court's ruling as it now stands requires that these considerations be part of any cost-based adjustments.

Given these constraints, how else might school district expenditures be adjusted? Full reimbursement for personnel spending is one possibility. But, expenditures are not the same as costs. The purpose of the modified WCLI index was to avoid the problems of providing school districts full reimbursement for the personnel expenditures they choose. We see no reason to alter that decision today. Full reimbursement of the employer wage bill creates a severe principal-agent problem. While it is surely in the State's interest to provide the constitutionally mandated education bundle in the most efficient means possible, school districts themselves do not necessarily share in this interest, particularly if they bear none of the budget costs.

A second alternative would be to build an index that relates more directly to the cost of hiring labor. The conceptual idea is to compare wage levels for those jobs where wages are set competitively. If workers are paid 5% more in jurisdiction A than B, the wage index would reflect such differentials and school funding would be adjusted accordingly. As described above, an independent wage index cannot be calculated for teachers because school districts themselves determine teacher wages.

[2] The same is true for medical costs. The funding impact from including medical costs is much smaller than the impact of including shelter costs because the dispersion in medical costs is much smaller than the dispersion in rental costs and medical costs have a much smaller weight in the market basket.

[3] These calculations are based on keeping Albany-Laramie as the comparison value for the WCLI index. We recommend this comparison point be changed in our conclusions, below.

Constructing a wage index for Wyoming presents a number of problems. Wyoming's low population density and variegated economic structure greatly limits the applicability of any index constructed. U.S. government confidentiality requirements greatly restrict the reporting of data from jurisdictions with few employees. Consequently, wage data in Wyoming are reported for geographic districts that are larger than school districts. The best available data for constructing an index comes from the annual Occupational Employment Statistics Wage Survey (OES), conducted in every state in the United States. This survey provides wage data by occupational category and geographic location. In Wyoming, data are reported for the two Metropolitan Statistical Areas, Casper and Cheyenne, and for four regional areas (Table 1).

As can be seen in Table 1 the geographic dispersion of school districts within the OES regions is considerable. For example, the Northwest region accounts for 5 different counties and 18 different school districts. An index based on data at this level of aggregation would assign the same labor market wages to all school districts within a region, even though the geographic areas are in some cases, extremely large. Conversely, the index could assign different wage levels to school districts that are adjacent, if they sit on either side of the regional border. In contrast, the WCLI collects data on 27 different communities from which it projects living costs onto 48 different school districts. So, even though the coverage of the WCLI is incomplete, it is much more extensive than an index constructed from the OES data.

Table 1: Geographic Distribution of OES Data

Region	Counties	School Districts
Northwest	Big Horn, Freemont, Hot Springs, Park, Washakie	Big Horn #1, Big Horn #2, Big Horn #3, Big Horn #4, Fremont #1, Fremont #2, Fremont #6, Fremont #14, Fremont #21, Fremont #24, Fremont #25, Fremont #38, Hot Springs #1, Park #1, Park #6, Park #16, Washakie #1, Washakie #2
Northeast	Campbell, Crook, Johnson, Sheridan, Weston	Campbell #1, Crook #1, Johnson #1, Sheridan #1, Sheridan #2, Sheridan #3, Weston #1, Weston #7
Southwest	Lincoln, Sublette, Sweetwater, Teton, Uinta	Lincoln #1, Lincoln #2, Sublette #1, Sublette #9, Sweetwater #1, Sweetwater #2, Teton #1, Uinta #1, Uinta #4, Uinta #6
Central-Southeast	Albany, Carbon, Converse, Goshen, Niobrara, Platte	Albany #1, Carbon #1, Carbon #2, Converse #1, Converse #2, Goshen #1, Niobrara #1, Platte #1, Platte #2
Cheyenne	Laramie	Laramie #1, Laramie #2
Casper	Natrona	Natrona #1

See: http://lmi.state.wy.us/99oespub/intro.htm#SectionV

A more serious problem with the OES data is that the low employment densities in Wyoming, interacting with OES confidentiality requirements, result in an incomplete wage

index. As explained above, lack of a competitive market for teachers makes inappropriate an index based on observed teacher salaries. An alternative strategy is to construct an index of jobs that teachers might consider as substitutes. As a start, we consider jobs that are filled by college-educated workers.

In constructing a wage index it is important that the index reflect compensation for comparable jobs. If one were to compare the average wage of one region to another it may differ because wages differ and/or because the job mix differs. Unfortunately, the available data does not distinguish between part-time and full-time positions, thereby possibly contaminating regional wage comparisons because of different mixes of part-time and full-time employment. Similarly, we would not want to pay teachers in one district more because computer engineers (common in that district) are paid more than waiters (common in the second district). Building an index of jobs that college educated workers might choose helps to reduce this sort of disparity. However, there is also a good deal of variation in wages within the college educated worker job category.

Table 2 displays the incompleteness of the Wyoming wage data. Column 1 of Table 2 identifies 6 different Standard Occupational Code categories that typically employ college educated workers: Management Occupations (1100), Business and Financial Occupations (1300), Computer and Mathematical (1500), Architecture and Engineering (1700), Life and Social Science (1900), and Community and Social Services Occupations (2100).[4]

Table 2: Percent of 4-Digit Occupational Categories Appearing in OES Defined Districts Relative to State Totals

SOC Code	State-wide	Casper	Cheyenne	NW	SW	NE	CSE
1100	100%	65%	65%	83%	78%	70%	48%
1300	100%	38%	38%	50%	38%	50%	38%
1500	100%	13%	0%	38%	75%	50%	38%
1700	100%	25%	33%	33%	83%	33%	8%
1900	100%	6%	13%	0%	31%	6%	13%
2100	100%	11%	22%	22%	22%	33%	11%

*Author's tabulations from data contained in **http://lmi.state.wy.us/99oespub/toc.htm**

As can be seen from Table 2, the OES defined districts differ considerably as to the extent of wage data they report. For example, while the southwest district reports wage data for 75% of the Computer and Mathematical 4-digit occupational category, the Wyoming Department of Labor web site reports no OES wage data for Cheyenne in this occupational category. Similar dispersions exist for the other categories. The result is that a wage index constructed from even the narrower construct of occupational categories comprised of college educated workers, would still suffer from calculated differences reflecting employment mix rather than wage level.

[4] This is not a complete list of occupations that require a college degree nor does every job category within it have only college educated workers. Rather, it is meant to be illustrative of the issue at hand.

Finally, the wage data does not include a measure of fringe benefits which should be included when comparing total worker compensation.

Conclusions

In summary, the combination of geographic aggregation and non-comparable occupational mixes results in a wage index that is likely to be even less able to capture school district, cost-based differences than is the WCLI. Therefore, despite its flaws, and given the Court's instructions and the publicly available data, we see no other option to using the WCLI to make cost-based adjustments as ruled by the Court. We point out that implementation of the WCLI index will have major distributional consequences, with considerably increased funding provided to school districts with higher rental costs of housing and medical costs, and less funding to those Wyoming districts whose WCLI index value is below average.

Although we see no alternative to the Court's endorsement of the full WCLI index, we do recommend some changes in the way the regional cost adjustment is applied. The current system allocates funding for regional cost differences based on the modified WCLI index value averaged for Albany and Laramie counties. We recommend that future adjustments be based on the state average value of the WCLI, rather than the average value of Albany-Laramie. The choice of Albany-Laramie was tied to the decision to fund teacher compensation based on the state's most competitive labor markets.[5] Under our new recommendations funding for teacher compensation will be based on average, statewide, beginning teacher compensation. Consequently, the use of Albany-Laramie to establish the comparison point for the WCLI index is no longer appropriate. Rather, the state average WCLI should be used.

The Wyoming Legislative Service Office estimates that implementation of the non-modified WCLI, using Albany-Laramie as the comparison base, would result in the Teton school district receiving an additional $2 million, Laramie #1 an additional $70,000, and all other school districts sharing in a loss of state funding of over $20 million. Repositioning the WCLI comparison base to the average price level in the state would increase funding to all districts because over the most recent time period, Albany-Laramie prices are 2.9% higher than the state average.[6] As a result, school funding would be more than $11 million higher than what the LSO estimates it would be if the full WCLI index were used and Albany-Laramie served as the price comparison base.

Even though school funding would be higher in all school districts if the state average price level is used as the base, there are still many districts that will experience decreased funding from the level they would have received had the modified, WCLI index been allowed by the Court, and if the Albany-Laramie base is maintained. To circumvent this outcome, some legislators have proposed holding harmless those districts that would receive less funding under

[5] See the May 27, 1997 MAP report "A proposed cost-based block grant model for Wyoming school finance."
[6] If Albany-Laramie had lower prices than the state average this change would have resulted in less funding adjustments.

the new formulation.[7] Although this proposal would increase the total allocation of school funding it likely would violate the Court's ruling that the allocation of funds be cost based.

[7] Only 6 school districts will receive more funding under this proposal than they would have under the modified WCLI, Albany-Laramie base rules.