

MEMORANDUM

July 6, 2015

To: Sound Transit Expert Review Panel members
From: Billy Charlton, Director of Data, PSRC 
Subject: Response to land use forecast questions

This memo responds to a set of questions posed by Dr. Soot of the Sound Transit Expert Review Panel regarding current and future year forecasted population and employment in the Sound Transit planning area. Dr. Soot advanced the following observations for further analysis and discussion:

- Given the year 2010 estimates of population and employment, an extrapolation of the percent of the service area population working would be 54%, which would be at high end for U.S. urban areas. That extrapolated figure rises to 67.6% based on 2040 projections.
- Even with caveats about the definition of a job and the Sound Transit service area not functioning as an island, assuming 54% of 2040 jobs are filled by in-district residents would imply 500,000 workers commuting into the service area.
- Under this scenario, are the future year projections reasonable? And if they are, does it raise funding equity questions?

In response, PSRC staff further analyzed the data, and would like to offer the following clarifications regarding the current and future year population and employment estimates.

Regional Population and Employment ratios

PSRC estimates a Total Employment figure for the base and horizon years of its sub-regional forecast products, which is likely the number cited in Sound Transit's planning documents.¹ Total Employment incorporates jobs not reported to BLS via the quarterly Unemployment Insurance (UI) requirements, and is typically about 5 to 10 percent higher than the UI-based Wage & Salary figures. In addition, the PSRC regional econometric forecasting model includes Kitsap County, and the model development and forecasting results therefore are informed by the larger regional ratios.

¹ Note that the PSRC Macroeconomic model and corresponding forecasts, however, does use Wage & Salary employment, the additional factoring to Total Employment takes place only when allocating regional projections among the four counties.

Figure 1 examines the recent ratios of Wage & Salary employment to Total Population, for the four-county Puget Sound region. In 2010 and 2013 the ratios were 47-49%, which puts the region in line with other U.S. urban areas (rather than at the upper end, assuming that the employment data cited by Dr. Soot relies on W&S estimates). Figure 1 also displays the impact of using the Total Employment figure instead of Wage & Salary employment, increasing the regional ratios to 50-52%.

Figure 1 – Regional Jobs / Population trends

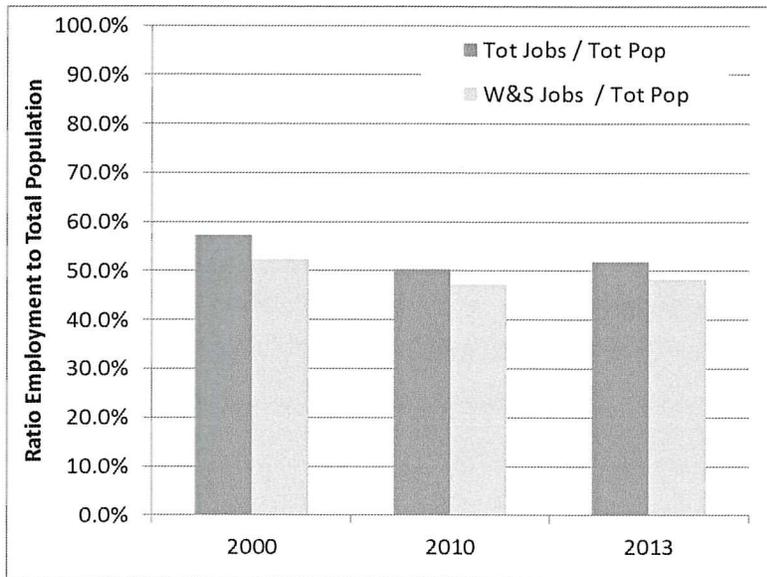
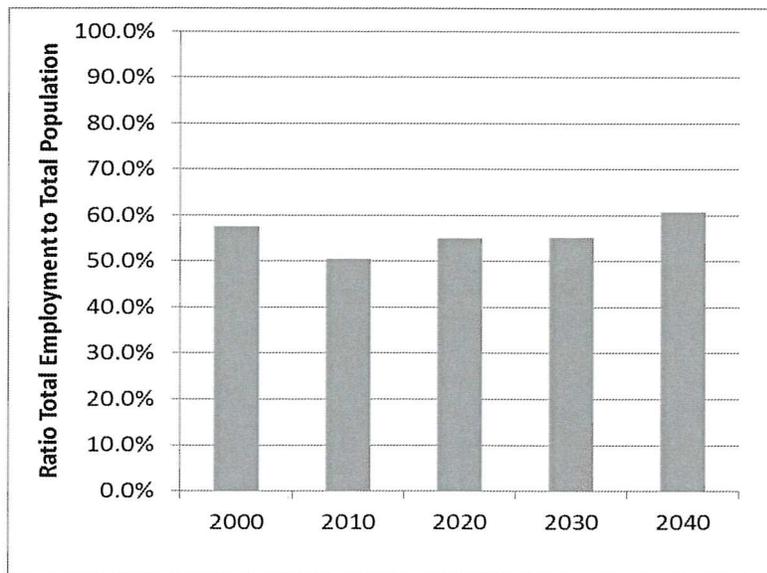


Figure 1 illustrates another important point: not so long ago, the region's jobs/population ratio was quite a bit higher than it is now. In 2000, the four-county region ratio of Jobs / Population ranged from 52% to 57%, depending on whether one uses W&S jobs or Total Employment as the numerator. Granted, the year 2000 data point represents a high-water mark in terms of the local job market prior to the dual recessions of the past decade, but it does highlight that the region has already experienced ratios higher than today's.

Figure 2 compares the Total Employment to Total Population ratio from 2000 & 2010 with the most recent forecasts, PSRC's just-released 2015 Macroeconomic Forecasts. While the regional forecasts are projecting higher ratios of employment to population, they do not appear unreasonable given prior observations, coupled with emerging demographic trends such as increasing proportions of part-time jobs, workers remaining in the labor force beyond the traditional definition of the retirement age, and possible additional participation of women in the labor force.²

² Lower projected number of households with children may allow for further increase in the labor force participation rate of women.

**Figure 2 – Employment / Population ratios, 2015 PSRC
Macroeconomic Forecasts**



Sound Transit Service Area and Land Use Targets (LUT) projections

The Panel Member cites data from page S-3 and S-4 from the Regional Transit Long-Range Plan:

From a base of more than 2.8 million to today, the Region’s population is expected to grow by over 30 percent to more than 3.7 million in 2040. During the same period, employment is expected to grow even faster, from approximately 1.5 million jobs to over 2.5 million, an increase of 62 percent.

These figures most likely refer to only the portion of the three-county area that is explicitly served by Sound Transit, and reflect forecasts based on PSRC’s Land Use Targets (LUT) product³. The LUT assumes successful achievement of adopted local growth targets that align with regional policy directing a majority of growth to cities with designated Regional Growth Centers. Many of these cities are within the Sound Transit service area.

Approximating the Sound Transit service area, the LUT shows Total Employment to Total Population ratios of 58-62%. These are higher numbers than the overall regional projections, but not surprising given the policy emphasis on focusing growth in Regional Centers. Also of significance was the Year 2000 ‘high-water’ mark figure for the subarea. The commenter refers to a 67% ratio of Total Employment to Total Population in 2040 in the service area; but by comparison, the year 2000 ratio was 66%. Similarly to the data examined at the regional level, the ratios projected in the Sound Transit service subarea are not out of line with prior estimates.

³ While the LUT was the basis for the Sound Transit growth projections, the LUT was extended beyond its 2035 horizon year by ST staff to 2040 – this additional analysis refers to only the PSRC published LUT data.

Summary

The commenter raises valid issues regarding the consistency between population and employment, and the implied or explicit labor force participation rate. Given the range of recent regional experiences and potential emerging demographic trends, we consider the current regional forecasts reasonable.