Taking Account...

Economist takes a fresh look at leisure economics

U.S. time use patterns have changed over the last century in ways that are difficult to model. As market hours have fallen in the last 100 years in the United States and other countries, some economists have found that income effects account for this trend. However, such analyses fail to account for increasing leisure inequality, with high-income household working relatively more since 1980.

In a recent paper, Benjamin Bridgman, an economist at the Bureau of Economic Analysis (BEA), shows that many of the inconsistencies found in the literature can be resolved by treating leisure as an economic activity, where consumption and leisure are nonseparable.

Such a model improves the labor supply predictions of macro models, the paper finds.

Broadly speaking, Bridgman's paper marks a key step toward fully accounting for the value of people's time. The value of market and home production time have each generated a large literature. Leisure, however, has generated much less research despite households allocating more time to it than home production.

In typical treatments, the value of leisure depends only on time.

Leisure production in Bridgman's model, however, relies on leisure capital and nonmarket time. Indeed, consumer durable recreational goods—such as radios, televisions, and video players—were adopted quickly after their introduction, suggesting that people value the entertainment that such goods provide. Bridgman's model also allows for preferences for leisure time to vary.

Bridgman's model predicts that higher income pushes leisure time up, leading to a long-term decline in market work. However, there are several forces that can blunt this decline. Since leisure can be produced by capital or labor (leisure time), changing relative input prices will cause a shift to the cheaper input.

Lower leisure capital prices will shift leisure production toward this capital, freeing time for market work. Therefore, the model can accommodate both the longer term increase in leisure time and the slow increase after World War II despite continuing wage growth.

Bridgman's analysis investigates these forces quantitatively by parameterizing the model for the post World War II U.S. economy.

The U.S. labor wedge—the implied labor tax required to generate observed hours—fell beginning in the 1980s. And measurable distortions, such as income tax rate changes, did not fall enough to explain the significant increase in labor supply. Including leisure capital in analyses eliminates a significant portion of the post-1980 decline in the U.S. labor wedge.

The labor wedge with leisure capital matches up with observable movements in taxes much better than models without it.

There has been a decline in the relative price of leisure capital, leading households to substitute from time to capital in the production of leisure. The model can also help explain the reversal in the nature of leisure inequality. Early in the 20th century, high-income households worked less than low-income households, but this pattern has reversed, with high-income households working relatively more since 1980.

The model predicts that high-wage households work relatively less if inequality is due to differences in capital holdings—and the reverse for wage inequality.

The reversal in leisure inequality coincides with a change in inequality from capital to wage differences. Leisure capital tends to reinforce the recent rise in inequality. While poorer households have more leisure hours, they have less access to leisure capital. Therefore, those hours do not produce as many leisure services. In the baseline case, doubling wages will mean that households will produce 6 percent more leisure per hour.

(This summary was prepared by the Survey of Current Business *staff in conjunction with the paper's author using the language of the original paper. It is available on the BEA Web site in Working Papers at no charge.)*