

## Referee Report on “Welfare, employment, and hours of work”

The paper deals with a long-standing and fascinating puzzle: What explains the rise of European leisure and unemployment? Many addressed this issue, but a final satisfying answer, either theoretical nor empirically, has not been identified. Some point at differences in tax systems, elasticities of labor supply, early retirement regimes, mandated holidays, geographical differences in tastes for leisure. And all of these have been criticized.

Axel Hall and Gyfli Zoega incorporate many of these aspect in their model going back to Gary Becker’s observation that consumption may take time, e.g. going on a holiday. From their model they derive a reduced two-equation system, i.e. (11) and (26), that theoretically explains the rise of European leisure. The authors also add a rudimentary empirical analysis supporting their claims.

The analysis and derivations are correct. Only the assumptions may be criticized, such as linear utility function in (3) assumes substitution and income effects cancel which appears to be restrictive. The equilibrium analysis seems to implicitly assume that all markets are flexible enough to adjust prices and quantities, but unemployment is also a manifestation of rationing as investigated by Malinvaud and Dreze. In the paper, it leads to the statement following (28) “unemployed enjoy public consumption more because they have the time to stroll in public parks!”, which ignores reality that many unemployed are rationed and also suffer from depression and other negative psychological effects. How would rationing and psychological effects affect the results?

The style of the paper can be improved. It is written in the old-school tradition in which the analysis, results and intuition are all part of the main text. Through eye-balling it is not clear what paragraphs contain the important (partial) results, their intuition, and what the technical details are that are only of interest to those who want to dig deeper.

To summarize, the paper is a laudable attempt to explain the rise of European leisure and provides some novel perspectives that are an addition to existing explanations. This paper contributes to the debate and is worthwhile to be published in this journal. The exposition can be improved.

### *Detailed comments*

The labour market tightness parameter  $\theta$  is undefined and unclear what it means.

Equations (6) and (7) form a linear system that is used to derive (11), but the phrase “; i.e.,  $V > 0$  due to free entry condition  $V = 0$ ” is rather confusing.  $J$  in (11) is derived after imposing  $V = 0$  to the solution of this linear system, which is awkward.

The paper contains many equations, it is important to be clear when references are made that the wage curve is (23), the labor demand curve is (11) and the contract curve is (21). The abbreviations LD and WC are introduced rather late in the paper.

How are missing data (Canada and Japan) treated in the empirical analysis of Section 8?

p. 8, bottom: should reference to (19) be (18)?