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## The Published Work of S. Rao Aiyagari

### In the *Federal Reserve Bank of Minneapolis Quarterly Review*

- 1994 Macroeconomics with frictions.  
18 (Summer): 24–40.
- On the contribution of technology shocks to business cycles.  
18 (Winter): 22–34.
- 1993 Explaining financial market facts:  
The importance of incomplete markets and transaction costs.  
17 (Winter): 17–31.
- 1991 Response to a defense of zero inflation.  
15 (Spring): 21–24.
- 1990 Deflating the case for zero inflation.  
14 (Summer): 2–11.
- 1989 How should taxes be set?  
13 (Winter): 22–32.
- 1988 Economic fluctuations without shocks to fundamentals;  
or, does the stock market dance to its own music?  
12 (Winter): 8–24.
- 1987 Intergenerational linkages and government budget policies.  
11 (Spring): 14–23.
- 1985 Deficits, interest rates, and the tax distribution.  
9 (Winter): 5–14.

### In Other Journals

Forthcoming

Transaction services, inflation, and welfare.  
With R. Anton Braun and Zvi Eckstein.  
*Journal of Political Economy*.

1997 Government transaction policy, the medium of exchange, and welfare.  
With Neil Wallace.  
*Journal of Economic Theory* 74 (May): 1–18.

1996 Coexistence of money and interest-bearing securities.  
With Neil Wallace and Randall Wright.  
*Journal of Monetary Economics* 37 (June): 397–419.

1995 The econometrics of indeterminacy: An applied study: A comment.  
*Carnegie-Rochester Conference Series on Public Policy*  
43 (December): 273–84.

Optimal capital income taxation with incomplete markets,  
borrowing constraints, and constant discounting.  
*Journal of Political Economy* 103 (December): 1158–75.

Social insurance and taxation under sequential majority voting  
and utilitarian regimes.  
With Dan Peled.  
*Journal of Economic Dynamics and Control* 19 (November): 1511–28.

1994 Uninsured idiosyncratic risk and aggregate saving.  
*Quarterly Journal of Economics* 109 (August): 659–84.

Frictions in asset pricing and macroeconomics.  
*European Economic Review* 38 (April): 932–39.

1992 Fiat money in the Kiyotaki-Wright model.  
With Neil Wallace.  
*Economic Theory* 2 (October): 447–64.

The output, employment, and interest rate effects  
of government consumption.  
With Lawrence J. Christiano and Martin S. Eichenbaum.  
*Journal of Monetary Economics* 30 (October): 73–86.

Co-existence of a representative agent type equilibrium  
with a non-representative agent type equilibrium.  
*Journal of Economic Theory* 57 (June): 230–36.

Walras' law and nonoptimal equilibria  
in overlapping generations models.  
*Journal of Mathematical Economics* 21: 343–61.

- 1991 Existence of steady states with positive consumption in the Kiyotaki-Wright model.  
With Neil Wallace.  
*Review of Economic Studies* 58 (October): 901–16.
- Asset returns with transactions costs and uninsured individual risk.  
With Mark Gertler.  
*Journal of Monetary Economics* 27 (June): 311–31.
- Dominant root characterization of Pareto optimality and the existence of optimal equilibria in stochastic overlapping generations models.  
With Dan Peled.  
*Journal of Economic Theory* 54 (June): 69–83.
- 1989 Gresham's law in a lemons market for assets.  
*Canadian Journal of Economics* 22 (August): 686–97.
- Can there be short-period deterministic cycles when people are long lived?  
*Quarterly Journal of Economics* 104 (February): 163–85.
- Equilibrium existence in an overlapping generations model with altruistic preferences.  
*Journal of Economic Theory* 47 (February): 130–52.
- 1988 Nonmonetary steady states in stationary overlapping generations models with long lived agents and discounting: Multiplicity, optimality, and consumption smoothing.  
*Journal of Economic Theory* 45 (June): 102–27.
- 1987 Optimality and monetary equilibria in stationary overlapping generations models with long-lived agents: Growth versus discounting.  
*Journal of Economic Theory* 43 (December): 292–313.
- 1985 The backing of government bonds and monetarism.  
With Mark Gertler.  
*Journal of Monetary Economics* 16 (July): 19–44.
- Observational equivalence of the overlapping generations and the discounted dynamic programming frameworks for one-sector growth.  
*Journal of Economic Theory* 35 (April): 201–21.
- 1975 On the equivalence of the Einstein-Mayer and Einstein-Cartan theories for describing a spinning medium.  
With M. N. Mahanta.  
*Journal of Mathematical Physics* 16: 381–83.

## In Books

- 1996 **Interpreting monetary stabilization in a growth model with credit goods production.**  
With Zvi Eckstein.  
In *Financial factors in economic stabilization and growth*,  
ed. Mario I. Blejer, Zvi Eckstein, Zvi Hercowitz,  
and Leonardo Leiderman, pp. 197–219.  
New York: Cambridge University Press.
- 1994 **Economic fluctuations without shocks to fundamentals;  
or, does the stock market dance to its own music?**  
In *The rational expectations revolution: Readings from the front line*,  
ed. Preston J. Miller, pp. 355–86. Cambridge, Mass.: MIT Press.  
Reprinted from *Federal Reserve Bank of Minneapolis  
Quarterly Review* 12 (Winter 1988): 8–24.
- Intergenerational linkages and government budget policies.**  
In *The rational expectations revolution: Readings from the front line*,  
ed. Preston J. Miller, pp. 151–68. Cambridge, Mass.: MIT Press.  
Reprinted from *Federal Reserve Bank of Minneapolis  
Quarterly Review* 11 (Spring 1987): 14–23.
- 1991 **Observational equivalence of the overlapping generations  
and the discounted dynamic programming frameworks  
for one-sector growth.**  
In *Growth theory*,  
ed. R. Becker and E. Burmeister, pp. 59–79. Brookfield, Vt.: Elgar.  
Reprinted from *Journal of Economic Theory* 35 (April 1985): 201–21.
- 1989 **Inventories and price fluctuations  
under perfect competition and monopoly.**  
With Zvi Eckstein and Martin Eichenbaum.  
In *The rational expectations equilibrium inventory model:  
Theory and applications*,  
ed. Tryphon Kollintzas, pp. 34–68. New York: Springer-Verlag.
- 1985 **Embargoes and supply shocks in a market with a dominant seller.**  
With Raymond G. Riezman.  
In *Energy, foresight, and strategy*,  
ed. Thomas J. Sargent, pp. 14–40.  
Washington, D.C.: Resources for the Future.