entER Discussion

for
omic Research **paper**

TILBURG UNIVERSITY

No. 9230

DOES INEQUALITY CAUSE INFLATION?
THE POLITICAL ECONOMY OF INFLATION,
TAXATION AND GOVERNMENT DEBT

by Roel M.W.J. Beetsma
and Frederick van der Ploeg

September 1992

DOES INEQUALITY CAUSE INFLATION?

The Political Economy of Inflation, Taxation and Government Debt

Roel M.W.J. Beetsma
CentER, Tilburg University

Frederick van der Ploeg
University of Amsterdam and CEPR

ABSTRACT

A democratic society in which the distribution of wealth is unequal elects political parties that are likely to represent the interests of poor people. It is in the interests of the clientele of the resulting governments to attempt to levy unanticipated inflation taxes in order to erode the real value of debt service and redistribute from the rich to the poor. Consequently, inequality and high levels of nominal government debt sow the seeds for inflation. Some cross-country evidence for this proposition is provided.

I. Introduction

Table I suggests that countries with an unequal distribution of income and assets are often characterised by higher rates of inflation. Although this is only a stylised fact, it seems worthwhile to give an explanation of why this might be the case. Such an explanation must be given within the context of an analysis that highlights the interactions between both economic and political processes. Given the need to finance a given amount of government revenues, the government has the option of financing these revenues either through (non-monetary) taxes or through seigniorage (e.g., Mankiw, 1987). The optimal revenue mix is tilted more towards seigniorage if the ruling political party has less of a dislike for inflation, if the costs of collecting taxes and the extent of tax evasion is widespread (cf., Canzoneri and Rogers, 1990), and if the financial system is relatively repressed (e.g., Roubini and Sala-i-Martin, 1992). Inflation will then be relatively high and income tax rates relatively low. If the central bank is not independent and the government cannot commit itself to the announced future monetary stance, discretion rather than rules is the relevant outcome so that seigniorage will be relatively more important than tax revenues (Barro and Gordon, 1983; Barro, 1983; van der Ploeg, 1991). Lack of monetary discipline and credibility thus induce higher inflation.

So far, these are just the standard economic linkages. To understand the political economy of inflation and taxation, one must allow for heterogeneous agents. Heterogeneity arises when different private agents have different labour productivities and thus build up different stocks of assets for their retirement. An unequal society means that a relatively large part of the government debt is in the hands of a relatively small group of individuals. When this society is democratic, it thus elects a political party that represents the interests of poor people. Such a party has more of an incentive to levy unanticipated inflation taxes and erode the real value of debt service, because this hurts the rich more than the poor. It follows that in a democracy inequality and nominal government debt sow the seeds of inflation.[1]

---

[1] This result is related to the idea that inequality is harmful for growth (Alesina and Rodrick, 1991; Persson and Tabellini, 1992). The point being that, for a society in which wealth is unequally distributed, the median voter is relatively poor and will levy high taxes on capital and income in order to provide for transfers from the rich to the poor. Such policies damage growth prospects.

Sections II and III establish, within the context of a public-finance model of tax and seigniorage smoothing with heterogeneous agents, the proposition that inflation is high in democratic countries with a lot of inequality and high nominal government debt. Section IV provides some cross-country evidence for this proposition. Section V concludes the paper.

II. Taxation, seigniorage, government debt and private consumption

For simplicity, attention is focussed on steady streams of primary government spending. In that case one can restrict the analysis to the steady state. The qualitative character of the results is unaffected if a transient analysis is conducted, because households want to smooth their consumption over time and the government wants to smooth tax and seigniorage revenues over time (cf., Barro, 1979; Mankiw 1987). This latter result only holds when the velocity of circulation of money is constant, because otherwise the government has an incentive to finance permanent increases in government spending by interest on government assets built up through temporary bouts of taxation and inflation (Obstfeld, 1991; van der Ploeg, 1991).

Households consume their income, which consists of income from production plus interest income minus taxes and seigniorage. Household i thus faces the budget constraint

$$(1) \qquad C_i = Y_i + (r-n) \, D_i - T_i - S_i$$

where C_i, Y_i, D_i, T_i and S_i denote consumption, pre-tax income, holdings of government debt, taxes and seigniorage extracted by the government for household i, respectively, r denotes the ex-post real interest rate and n denotes the growth rate in output. To make the point of this paper as simple as possible, assume that all households receive the same income and pay the same amount of taxes and seigniorage. For those variables the subscript i can be dropped. The only source of heterogeneity among households is thus differences in holdings of assets: some households hold a lot of government debt, whereas other households hold little or no government debt. There are N households. The government must finance its primary level of spending plus interest payments on outstanding debt through extraction of tax and seigniorage revenues:

(2)
$$N G + (r-n) N D_A - N (T + S)$$

where $D_A \equiv (D_1 + .. + D_N)/N$ denotes the average level of government debt held by households and G denotes the exogeneous per-capita level of government spending. The condition for equilibrium in the goods market is

(3)
$$N C_A + N G - N Y$$

where $C_A \equiv (C_1 + .. + C_N)/N$ denotes the average level of private consumption.

Four behavioural assumptions are needed. First, the ex-ante real rate of interest is constant, denoted by ρ, and follows from preferences and technology. It is assumed that ρ exceeds the real growth rate n. Second, the Fisherian hypothesis is adopted so that the nominal interest rate is simply the sum of the ex-ante real interest rate and the expected rate of inflation. It follows that the ex-post real interest rate is given by

(4)
$$r - \rho + \pi^e - \pi$$

where π and π^e denote the actual and expected inflation rate, respectively. Third, the quantity theory of money is adopted so that the demand for real money balances is a constant proportion, say m, of output:

(5)
$$M/P - m Q$$

where M, P and Q denote per-capita nominal money balances, the price level and the non-distortionary per-capita level of output, respectively. It follows that the rate of inflation is equal to the excess of monetary growth over the real growth rate of the economy, that is $\pi \equiv \Delta P/P - \mu - n$ where $\mu \equiv \Delta M/M$, and that seigniorage extracted from an individual household is given by $S \equiv \mu(M/P) - (\pi+n)mQ$. Fourth, the growth rate of the economy, $n \equiv \Delta Q/Q$, is exogenous and there are output losses arising from taxation and inflation. More specifically, pre-tax income is assumed to be given by

(6)
$$Y - Q [1 - \tfrac{1}{2} \kappa_1 t^2 - \tfrac{1}{2} \kappa_2 (\pi+\rho)^2], \quad \kappa_1, \kappa_2 \geq 0$$

where $t \equiv T/Q$ denotes the (non-monetary) tax rate. The deadweight losses are quadratic in the tax and inflation rates. There is no cross term (π t),

which is not too unreasonable when the tax system is indexed to the price level. The non-distortionary tax rate is zero, whilst the non-distortionary inflation rate is minus the (ex-ante) real interest rate $(-\rho)$ as the full liquidity rule says that the nominal interest rate should be driven to zero. The non-distortionary level of monetary growth is $-(\rho-n)$.

III. Unequal distribution of government assets causes inflation

Households obtain utility from both private and public consumption. Utility of household i is thus given by C_i+G. The political party that is elected into office represents the interest of its clientele, that is the median voter. The government thus chooses monetary and fiscal policy (μ and t) to maximise the utility of the median voter (expressed as a fraction of the non-distortionary level of output),

(7)
$$[C_M + G]/Q = (C_M - C_A + Y)/Q =$$

$$1 - \tfrac{1}{2} \kappa_1 t^2 - \tfrac{1}{2} \kappa_2 (\mu+\rho-n)^2 + (\rho+\mu^e-\mu-n) (d_M - d_A),$$

subject to the government budget constraint,

(8)
$$g + (\rho+\mu^e-\mu-n) d_A = t + \mu m,$$

where $d\equiv D/Q$, $g\equiv G/Q$ and the subscript $_M$ denotes the median household as far as the dispersion of government assets and thus of private consumption is concerned.

III.1 Rules

Two outcomes should be distinguished: rules and discretion (denoted by superscripts ^{R} and ^{D}, respectively). Rules presumes that the government is able to commit itself or, alternatively, has sufficient reputation for the private sector to firmly believe its announcements about future policy. Under rules the government can influence the expectations of private agents and can thus take $\pi^e=\pi$ or $\mu^e=\mu$ as given when determining its optimal monetary and fiscal policies. It follows that:

(9)
$$t^R = (\kappa_1 m^2+\kappa_2)^{-1} \kappa_2 [k + (\rho-n) m]$$

$$(10) \qquad \mu^R = (\kappa_1 m^2 + \kappa_2)^{-1} [\kappa_1 m \ k - \kappa_2 \ (\rho-n)]$$

where $k \equiv g+(\rho-n)d_A$ denotes (the flow value of) government commitments. As government commitments increase, it is optimal to raise both the tax and monetary growth rate (cf., Mankiw, 1987). As a consequence, the inflation rate and seigniorage revenues increase whilst private consumption falls. An increase in the output costs of taxation arising from a less efficient tax system or a fall in the output costs of inflation boost the optimal rates of monetary growth and inflation and reduce the optimal tax rate. A fall in the growth-corrected real interest rate $(\rho-n)$ has similar effects, because it raises the non-distortionary level of monetary growth as given by the full liquidity rule. A more repressed financial system implies that households need more money balances (higher m) and thus increases the base for raising seigniorage revenues. This induces a shift in the optimal government revenue mix away from tax towards seigniorage revenues. Due to the fact that the non-distortionary level of inflation is minus the ex-ante real interest rate, there is an opposite effect leading to a bias in favour of non-monetary tax revenues. Finally, note that the rules outcome for the optimal tax and inflation rate is independent of the manner in which assets are distributed throughout the population.

III.2 The political economy of discretion

The rules outcome is time inconsistent in the sense that once the private sector is fooled into believing that monetary growth and inflation will be low, the government has an incentive to levy a surprise inflation tax. By doing this the government erodes the real value of its debt service and can thus reduce the output costs of taxation. In rational expectations equilibrium the private sector anticipates that the government has such an incentive and thus inflation will be higher. Discretion may be more relevant in practice, since it is relevant when the government cannot commit itself to its announced intentions about future policies. Discretion implies that the government must take π^e and μ^e as given when determining its optimal policies. It follows that:

$$(11) \qquad t^D = [\kappa_1 m(m+d_A)+\kappa_2]^{-1} \ \{\kappa_2 \ k + [\kappa_2 \ (\rho-n) - (d_A - d_M)] \ m] < t^R$$

$$(12) \qquad \mu^D = [\kappa_1 m(m+d_A)+\kappa_2]^{-1} \ [\kappa_1 \ (m+d_A) \ k - \kappa_2 \ (\rho-n) + (d_A - d_M)] > \mu^R.$$

Because the government has no reputation and cannot commit itself, the private sector does not believe announcements about low monetary growth. It follows that under discretion the welfare of the median voter is lower than under rules and the government revenue mix is sub-optimal in the sense that the tax rate is too low and the inflation rate is too high. Basically, the presence of government debt provides an open invitation to wipe it out with surprise inflation and thus lowers the cost of seigniorage.

The distribution of assets matters for the optimal tax and monetary growth rates. The more unequal wealth is distributed throughout the population, i.e. the more the mean exceeds the median of the distribution of assets throughout the population, the higher monetary growth and inflation and the lower the tax rate. The idea is that when assets are very unfairly distributed throughout the population the median voter is more likely to be poor so that in a democracy the political party in office will represent the interests of the poorer segments of the population. Such a party will find it in the interests of its clientele to levy unanticipated inflation taxes in an attempt to take from the rich in order to lower (non-monetary) taxes for all. Hence, an unfair distribution of wealth carries the seeds of high inflation.

The government is ex post unable to redistribute from the rich to the poor, given that all contracts are indexed to the price level, so that both rich and poor are worse off when the government cannot commit. Utility of household i can be written as

$$(13) \qquad c_i + g = 1 - \tfrac{1}{2} \kappa_1 t^2 - \tfrac{1}{2} \kappa_2 (\mu+\rho-n)^2 + (\rho-n) (d_i - d_A),$$

so that rich households have higher utility than poor households. Also, households with identical holdings of assets experience a higher level of utility under rules than under discretion and their utility under discretion is higher when assets are more equally distributed in society.

IV. Cross-country evidence on inflation, inequality and government debt

To see whether there is any evidence for the proposition developed in sections III and IV, some cross-country evidence on the relationship between inflation and inequality is presented in Tables I. M60 and M80 are measures of inequality around 1960 and 1980, respectively. Since data on the distribution of wealth are not available for a wide cross-section of

countries, the inequality measures in Table I are based on data for the distribution of income per head, taken from Alesina and Rodrick (1991). Table I uses the following measure of inequality: $M \equiv 1 - (\text{median/mean})$.[2] In a society with an unequal distribution of incomes mean income exceeds median income, so the measure of inequality M lies between zero and one. Table I restricts attention to democratic countries[3].

Casual inspection of Table I suggests for all countries, except Israel, a strong link between inflation and inequality. For example, countries such as Columbia and Costa Rica and, to a lesser extent, Jamaica combine a high degree of inequality with high inflation rates. However, it is clear that Israel, being a remarkably egalitarian society with very high inflation rates, is an outlier. Hence, excluding Israel, Table II presents some cross-country regressions of inflation in producer and consumer prices on a constant and two measures of inequality. In all four regressions there is, at the 5 per cent level, a significant positive effect of inequality on inflation.

It is useful to mention that no empirical evidence for a link between inflation and inequality could be found for various samples and sub-samples of upto 43 *non-democratic* countries. Perhaps, this is not surprising as the model put forward in sections II and III applies to democratic countries. Non-democratic countries such as South Africa (M60=0.490; PPI6085=0.0904), Honduras (M60=0.525; PPI6085=0.0578) and El Salvador (M60=0.560; PPI6085=0.0648) are capitalist dictatorships which seem to protect the interests of rentiers and combine high degrees of inequality with low inflation.

The theory put forward in sections II and III to explain the link between inequality and inflation is based on the idea that the presence of an outstanding stock of nominal government debt provides an open invitation for the government to wipe out the real value of its debt through unanticipated inflation. To test whether there is empirical evidence for the proposition that in a democracy both inequality and government debt raise

---

[2] If the quintile in which the median income falls earns a percentage x of total income and one makes the assumption that all members of a quintile earn the same income, this measure of inequality can be proxied by $M = 1 - (x/20)$.

[3] Unfortunately, no distribution data were available on a comparative basis for the democratic countries Belgium, Greece and Switzerland.

inflation[4] and to see whether the experience of Israel can be explained, Table II also presents the relevant cross-country regressions for the democratic countries with Israel included. It is remarkable that the explanatory power of the regressions is much increased, that the effect of inequality on inflation is almost the same order of magnitude as before, and that the ratio of government debt to GDP exerts a strong and significant additional influence on inflation. The very high inflation rate of Israel is thus primarily a consequence of its very high ratio of government debt to GDP (2.36), so that the negative effect on inflation caused by the egalitarian nature of Israel's society is not sufficient to off-set the positive effect of government debt. Conversely, fairly inegalitarian societies such as Germany or Japan have nevertheless fairly low inflation due to their modest ratio's of government debt to GDP.

The cross-country regressions for the democratic countries suggest that the difference in the inflation rates of an egalitarian society for which M is close to zero and an inegalitarian society for which M is around 0.5 is about eight percentage points. The regressions also suggest that a rise in the ratio of government debt to GDP by about six percentage points raises inflation by one percentage point. These stylised empirical facts provide some motivation for the analysis of sections II and III.

V. Conclusion

Cross-country evidence on a positive link between inflation and inequality for democratic countries has been presented. The regressions suggest that the difference in inflation rates of a country in which all individuals earn the same and a country in which the median income is half of average income is about eight percentage points. The regressions also suggest that a rise in the ratio of government debt to GDP by about six percentage points raises inflation by one percentage point. These results are explained by a model in which an unequal dispersion of wealth sets the political conditions for high inflation and low tax rates. When there is more inequality in society and when there is a large outstanding stock of nominal government debt, the government is more likely to represent the

---

[4] Of course, there is also a public finance argument for this proposition which says that a high level of government commitments requires more government revenues (including seigniorage) and thus a higher inflation rate (e.g., Mankiw, 1987).

interests of the poor and thus finds it harder to commit itself to a policy of low inflation. When the analysis is extended to allow for overlapping generations one can show that a society dominated by young people will elect political parties that are in favour of taxing the elderly by eroding the real value of their return on accumulated savings and lowering taxes for the population at large.[5] However, many countries of the OECD are experiencing a greying of the population so that one might expect lower inflation and higher tax rates in years to come.

The ideas put forward in this paper apply to democracies, but it is not difficult to extend the argument to non-democratic countries. Populist dictatorships are likely to serve the interests of the working classes and to induce high inflation rates whilst capitalist dictatorships are more likely to protect the interests of rentiers and ensure low inflation rates despite having high degrees of inequality.

This paper has focussed on the political economy of *unanticipated* inflation. However, *anticipated* inflation also has real effects when wages, pensions and benefits are not fully or not immediately indexed to the price level and inflation is high. In such circumstances inflation may well hurt the poor more than the rich in which case more inequality induces less inflation in democratic countries. Conversely, given that indexation is not perfect, more equality induces more inflation.

References

Alesina, Alberto and Daniel Rodrick (1991). "Distributive Politics and Economic Growth", Working Paper No. 3668, NBER, Cambridge, Ma.

Barro, Robert J. (1979). "On the Determination of the Public Debt", *Journal of Political Economy*, 87, 5, 940-971.

Barro, Robert J. (1983). "Inflationary Finance under Rules and Discretion", *Canadian Journal of Economics*, 41, 1-16.

Barro, Robert J. and David B. Gordon (1983). "Rules, Discretion and Reputation in a Model of Monetary Policy", *Journal of Monetary Economics*,

---

[5] Population and output grow at the rate n. The currently alive (the "old") are alike in all respects and hold assets. Newly born (the "young") have no assets. Average assets are $D_A=D/(1+n)$. If the "old" are in the majority, $n<1$ and $D_M=D>D_A$, but if the "young" are in the majority, $n>1$ and $D_A>D_M=0$. If the "old" are in the majority, there is an incentive to shift the burden of government commitment on the minority by raising taxes and lowering inflation.

12, 101-121.

Canzoneri, Matthew B. and Carol A. Rogers (1990). "Is the European Community an Optimal Currency Area? Tax Smoothing Versus the Costs of Multiple Currencies", *American Economic Review*, 80, 3, 419-433.

Mankiw, N. Gregory (1987). "The Optimal Collection of Seignorage: Theory and Evidence", *Journal of Monetary Economics*, 20, 327-341.

Obstfeld, Maurice (1991). "Dynamic Seigniorage Theory: An Exploration", Discussion Paper No. 519, CEPR, London.

Persson, Torsten and Guido Tabellini (1992). "Growth, Distribution and Politics", in A. Cukierman, Z. Hercowitz and L. Leiderman (eds.), *The Political Economy of Business Cycles and Growth*, MIT Press, Cambridge, Ma.

Ploeg, Frederick van der (1991). "Unanticipated Inflation and Government Finance: A Case for an Independent Common Central Bank", Discussion Paper No. 562, CEPR, London.

Roubini, Nouriel and Xavier Sala-i-Martin (1992). "A Growth Model of Inflation, Tax Evasion and Financial Repression", Working Paper No. 4062, NBER, Cambridge, Ma.

Summers, Robert and Alan Heston (1988). "A New Set of International Comparisons of Real Product and Price Levels: Estimates for 130 Countries", *Review of Income and Wealth*, 34, 1-25.

Table I: Measures of inequality, inflation and government debt

Country	M60	M80	PPI6085	CPI6085	D6085
Australia	0.110	0.125	0.0726	0.0765	0.2749
Canada	0.130	0.115	0.0604	0.0612	0.3165
Columbia	0.550	0.325	0.1703	0.1690	0.1154
Costa Rica	0.440	0.340	0.1309	0.1309	0.2422
Denmark	0.060	0.080	0.0790	0.0843	0.1492
Finland	0.230	0.080	0.0839	0.0875	0.0911
France	0.300	0.140	0.0717	0.0759	0.1641
Germany	0.315	0.110	0.0379	0.0416	0.1126
India	0.200	0.185	0.0776	0.0830	0.4535
Israel	0.070	0.110	0.4565	0.4662	2.3599
Italy	0.270	0.165	0.0995	0.1025	0.4685
Jamaica	0.460	0.280	0.1161	0.1252	0.4499
Japan	0.210	0.125	0.0562	0.0667	0.1030
Malaysia	0.215	0.305	0.0370	0.0444	0.4447
Netherlands	0.200	0.105	0.0543	0.0580	0.3249
New Zealand	0.160	0.190	0.0886	0.0914	0.5282
Norway	0.075	0.055	0.0661	0.0713	0.2720
Spain	0.240	0.135	0.1085	0.1136	0.1830
Sri Lanka	0.310	0.395	0.0954	0.0900	0.5926
Sweden	0.130	0.130	0.0712	0.0784	0.2526
U.K.	0.170	0.090	0.0807	0.0849	0.4938
U.S.A.	0.120	0.130	0.0484	0.0530	0.3284
Venezuela	0.200	0.300	0.0711	0.0829	0.0939

Note: M60 = measure of inequality for 1960
            M80 = measure of inequality for 1980
            PPI6085 =   geometric average of annual inflation rates in
                        producer prices during 1960-1985
            CPI6085 =   geometric average of annual inflation rates in
                        consumer prices during 1960-1985
            D6085   =   arithmetic average of government debt-GDP ratio's
                        during 1960-1985
Source: M60 and M80, Alesina and Rodrick (1991)
            PPI6085, CPI6085, Summers and Heston (1988) and OECD Main
            Economic Indicators
            D6085, IMF International Financial Statistics

Table II: Cross-country regressions of inflation on inequality and government debt

	constant	M60	M80	D6085	JB	R^2
PPI6085	0.041 (3.93)	0.173 (4.35)	-	-	2.69	0.49
PPI6085	0.053 (4.33)	-	0.155 (2.53)	-	0.63	0.24
PPI6085*	-0.006 (0.34)	0.165 (2.59)	-	0.173 (9.80)	0.61	0.83
CPI6085	0.047 (4.70)	0.164 (4.27)	-	-	3.25	0.48
CPI6085	0.060 (5.00)	-	0.144 (2.45)	-	0.26	0.23
CPI6085*	0.000 (0.01)	0.155 (2.39)	-	0.174 (9.66)	0.76	0.82

Note: t-ratios are given in brackets
JB - Jarque-Bera test for normality, which is chi-square distributed under the null hypothesis with two degrees of freedom
* these regressions are with Israel included

Discussion Paper Series, CentER, Tilburg University, The Netherlands:

(For previous papers please consult previous discussion papers.)

No.	Author(s)	Title
9161	A.M. Lejour and H.A.A. Verbon	Centralized and Decentralized Decision Making on Social Insurance in an Integrated Market Multilateral Institutions
9162	S. Bhattacharya	Sovereign Debt, Creditor-Country Governments, and
9163	H. Bester, A. de Palma, W. Leininger, E.-L. von Thadden and J. Thomas	The Missing Equilibria in Hotelling's Location Game
9164	J. Greenberg	The Stable Value
9165	Q.H. Vuong and W. Wang	Selecting Estimated Models Using Chi-Square Statistics
9166	D.O. Stahl II	Evolution of Smart$_n$ Players
9167	D.O. Stahl II	Strategic Advertising and Pricing with Sequential Buyer Search
9168	T.E. Nijman and F.C. Palm	Recent Developments in Modeling Volatility in Financial Data
9169	G. Asheim	Individual and Collective Time Consistency
9170	H. Carlsson and E. van Damme	Equilibrium Selection in Stag Hunt Games
9201	M. Verbeek and Th. Nijman	Minimum MSE Estimation of a Regression Model with Fixed Effects from a Series of Cross Sections
9202	E. Bomhoff	Monetary Policy and Inflation
9203	J. Quiggin and P. Wakker	The Axiomatic Basis of Anticipated Utility; A Clarification
9204	Th. van de Klundert and S. Smulders	Strategies for Growth in a Macroeconomic Setting
9205	E. Siandra	Money and Specialization in Production
9206	W. Härdle	Applied Nonparametric Models
9207	M. Verbeek and Th. Nijman	Incomplete Panels and Selection Bias: A Survey
9208	W. Härdle and A.B. Tsybakov	How Sensitive Are Average Derivatives?
9209	S. Albæk and P.B. Overgaard	Upstream Pricing and Advertising Signal Downstream Demand
9210	M. Cripps and J. Thomas	Reputation and Commitment in Two-Person Repeated Games
9211	S. Albæk	Endogenous Timing in a Game with Incomplete Information

No.	Author(s)	Title
9212	T.J.A. Storcken and P.H.M. Ruys	Extensions of Choice Behaviour
9213	R.M.W.J. Beetsma and F. van der Ploeg	Exchange Rate Bands and Optimal Monetary Accommodation under a Dirty Float
9214	A. van Soest	Discrete Choice Models of Family Labour Supply
9215	W. Güth and K. Ritzberger	On Durable Goods Monopolies and the (Anti-) Coase-Conjecture
9216	A. Simonovits	Indexation of Pensions in Hungary: A Simple Cohort Model
9217	J.-L. Ferreira, I. Gilboa and M. Maschler	Credible Equilibria in Games with Utilities Changing during the Play
9218	P. Borm, H. Keiding, R. Mclean, S. Oortwijn and S. Tijs	The Compromise Value for NTU-Games
9219	J.L. Horowitz and W. Härdle	Testing a Parametric Model against a Semiparametric Alternative
9220	A.L. Bovenberg	Investment-Promoting Policies in Open Economies: The Importance of Intergenerational and International Distributional Effects
9221	S. Smulders and Th. van de Klundert	Monopolistic Competition, Product Variety and Growth: Chamberlin vs. Schumpeter
9222	H. Bester and E. Petrakis	Price Competition and Advertising in Oligopoly
9223	A. van den Nouweland, M. Maschler and S. Tijs	Monotonic Games are Spanning Network Games
9224	H. Suehiro	A "Mistaken Theories" Refinement
9225	H. Suehiro	Robust Selection of Equilibria
9226	D. Friedman	Economically Applicable Evolutionary Games
9227	E. Bomhoff	Four Econometric Fashions and the Kalman Filter Alternative - A Simulation Study
9228	P. Borm, G.-J. Otten and Hans Peters	Core Implementation in Modified Strong and Coalition Proof Nash Equilibria
9229	H.G. Bloemen and A. Kapteyn	The Joint Estimation of a Non-Linear Labour Supply Function and a Wage Equation Using Simulated Response Probabilities
9230	R. Beetsma and F. van der Ploeg	Does Inequality Cause Inflation? - The Political Economy of Inflation, Taxation and Government Debt