

## Summary of articles

### *Demand Uncertainty and Labour Input in a Bivariate ARCH-M Model,* by Gebhard Flaig

This paper analyses the impact of input uncertainty on labour demand. An ARCH-M model is incorporated into an error-correction framework which allows to model both short- and long-run labour demand. The conditional variance of unexpected output changes serves as a proxy for demand uncertainty. The output and employment equations are estimated simultaneously for the West-German manufacturing sector.

*Journal of Economic Literature* classification numbers : 824, 211.

### *Income, Uncertainty and the Probability of Self-Employment,* by Friedhelm Pfeiffer and Winfried Pohlmeier

This paper aims at investigating the determinants of self-employment within a structural model of discrete choice under uncertainty. The basic idea of our approach centres around Knight's (1921) famous view of entrepreneurs receiving risk-adjusted income that has to exceed the income of employees because of the greater variance of the income stream. Unlike previous econometric approaches, which use reduced form specifications that are more or less based on ad-hoc reasoning, we derive a choice equation of which the parameters have a clear interpretation in terms of the parameters of the underlying von Neumann-Morgenstern utility function. The specification allows to identify how the difference in income risk between wage-employment and self-employment enters the choice equation without approximating the risk difference via a reduced form specification. The model is estimated using a random effects panel probit estimator with unrestricted autocorrelation structure. Estimates are based on a balanced panel of 1,926 working men selected from the West German Socio-Economic Panel 1984 to 1989.

*Journal of Economic Literature* classification numbers : C33, C35, J24.

*The Demographics of Labour Turnover: A Comparison of Ordinal Probit and Censored Count Data Models,*

by Lucie Merkle and Klaus F. Zimmermann

As has been found in previous studies, the labor market performance of individuals is often affected by demographic determinants like cohort size, age, marriage status and family size. While most of this analysis was studied for earnings, the paper investigates the issue for labor mobility. Mobility is measured here by the number of new employers and the frequency of unemployment of an individual in a particular period. Given the discrete nature of the data, the ordinal probit model and the censored Poisson as the censored negative binomial model was estimated. Since the choice of the statistical model is not clear a priori, various model comparisons are carried out and some new pseudo- $R^2$  measures are proposed and used in the analysis. Results indicate that demographic determinants matter for labor mobility.

*Journal of Economic Literature* classification numbers : C25, J60.

*The "Public Capital Hypothesis": The Case of Germany,*

by Klaus Conrad and Helmut Seitz

According to the "public capital hypothesis" public investment crowds in private investment by increasing the rate of return to private capital. The present paper uses an extended cost function with public capital included as an unpaid fixed factor of production to examine the impact public capital has on the private economy. Using a panel of four highly aggregated sectors of the West German Economy, it is shown, that the provision of public capital raises the demand for private capital, as suggested by the public capital hypothesis. In addition, it is shown that public infrastructure capital contributes to the productivity of the private economy.

*Journal of Economic Literature* classification numbers : E6, H3, H4.

*Semi-Nonparametric Estimation of Binary Choice Models Using Panel Data: An Application to the Innovative Activity of German Firms,*

by François Laisney, Michael Lechner and Winfried Pohlmeier

This paper presents an extension of Chamberlain's approach to modelling correlated random effects in a dichotomous model estimated on panel data. The extension consists in relaxing the arbitrary normality assumption made on all error terms and on specifying instead a SNP distribution for the composite error term resulting in each wave from Chamberlain's treatment of correlated random effects. An appli-

cation to a panel of 1325 German firms illustrates the feasibility of the approach.

*Journal of Economic Literature* classification numbers : C14, C23, C25.

*The Importance of Rationing in International Trade: An Econometric Analysis for Germany,*

by Wolfgang Franz and Gustav Heidbrink

Within the context of a macroeconometric rationing model the importance of rationing for international trade flows is investigated. The model describes rationing barriers on domestic and foreign markets which lead to spillover effects on domestic imports and exports. The novelties of this study are the more detailed analysis of the dynamics of international trade flows and the use of business survey data as proxies for rationing barriers. The model is estimated for Germany. As a result rationing does influence trade flows to a non-negligible extent. Moreover, business survey data are a useful indicator for rationing but they do not outperform other proxies such as the degree of capacity utilization.

*Journal of Economic Literature* classification numbers : C32, E32, F31.

*Overtime Work, Lack of Labour, and Structural Mismatch: Some Extensions of the "European Unemployment Programme" Framework,*

by Horst Entorf

The paper extends the framework of the EUP to cover the effects of changes in the number of working hours. Beside this, a measure for the structural imbalances not only for the labour market (structural unemployment rate at equilibrium) but also for the goods market are presented. The empirical implementation introduces the concept of feasible working hours, which account for the maximal amount of overtime hours in the labour constraint. Simulation studies analyse the consequences of the present policy of German trade unions which bargain for a reduction of standard working hours. The main conclusions are: (i) The increasing mismatch on the goods market that is reported, basically results from an increasing mismatch on the labour market; (ii) reducing standard working hours might be a short-sighted policy; it may increase unemployment due to some induced substitution of workers by overtime work, and, moreover, due to the induced reduction of feasible working hours.

*Journal of Economic Literature* classification numbers : 021, 824, 211.

*International Business Cycles and Long-Run Growth: An Analysis with Markov-Switching and Cointegration Methods,*  
by Juergen Kähler and Volker Marnet

In this article, we concern ourselves with the modelling of macroeconomic time series within the unit-roots framework. We apply two approaches which seem to be well suited to model business cycles and long-run growth phenomena. First, we apply the Markov-switching model which is built around the idea that a variable may be associated with different regimes. We extend this approach to allow for asymmetries in business cycles and find that with this modification the model identifies regimes which cannot be associated with notions of the business cycle. Second, in a cointegration analysis we examine common stochastic trends and international transmission of macroeconomic shocks. The results show that transient shocks do not vanish, but have long persistent effects. Furthermore, we supplement the cointegration approach with an impulse response analysis and find that there exists a transmission of shocks between countries which indicates great international dependencies in economic activity.

*Journal of Economic Literature* classification numbers : 131, 423, 211.

*Persistence and Seasonality in Output and Employment of the Federal Republic of Germany,*  
by Jürgen Wolters

The purpose of this paper is to investigate whether shocks to output and employment had permanent or transitory effects during the period from 1961 to 1990 in the Federal Republic of Germany. There are a lot of parametric and non-parametric approaches which can be used for data generating processes which are difference-stationary or trend-stationary. But especially output and employment time series show very strong seasonal movements. Before employing usual persistence measures one has to test for seasonal integration. The application of seasonal adjustment procedures which are typically used in practice lead to different degrees of persistence, so one has to be very careful in interpreting the results.

*Journal of Economic Literature* classification numbers : E32,C22,C14.

*Illusive Persistence in German Unemployment*  
by Rolf Tschernig and Klaus F. Zimmermann

The non-stationarity of many macroeconomic time-series has lead to an increased demand for economic models that are able to generate

fragile equilibria. For instance, the natural unemployment rate is allowed to shift over time depending on past unemployment. Actually, many European unemployment series seem to exhibit a unit root or persistence. This view is questioned in the paper using German data on unemployment. A new class of time-series models, the fractionally integrated ARMA model, that allows the difference parameter to take real values, enables the researcher to separate long memory and short memory in the data. It is shown that using this approach the unit root hypothesis is rejected but unemployment exhibits long memory.

*Journal of Economic Literature* classification numbers : C22, E24, J64.

*On the Long-run Relationship Between Money, Output and Interest Rates: A Cointegration Analysis for West Germany,*

by Werner Gaab and Olaf Liedtke

The existence of a long-run equilibrium relationship between real money balances, real output and an interest rate plays an important role in economic theory and monetary policy. The main purpose of this paper is to look for such a long-run relationship in Germany in face of a changing monetary policy regime in mid-1970s. We use a test for cointegration developed by Johansen (1988). The empirical evidence is very fragile depending heavily on the time period analyzed.

*Journal of Economic Literature* classification numbers : 211, 311.

*Modelling Cyclical Asymmetry in a Production Series Using Threshold Autoregressive Models,*

by Horst Kräger

In recent years there is evidence in the literature that various time series like GNP or production may be nonlinear. In this paper the question is examined whether there are non-linearities in the net production index for the producing sector of the FRG. Three different non-linearity tests are applied on the stationary series and two exhibit clear nonlinearities. Therefore a SETAR-model was estimated and it was able to capture all the previous inherent non-linearities.

*Journal of Economic Literature* classification numbers : C22, E32.