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TRANSITION TO ADVANCED MARKET ECONOMIES

Abstracts

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SESSION 4

LABOUR, PRICES AND EQUILIBRIA

ON INCENTIVE STRUCTURES. A COMPARATIVE LONGITUDINAL ANALYSIS OF EDUCATION AND WAGES IN POLAND AND WEST GERMANY

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Comparative research on labor market issues has relied extensively on analyses attempting to explain events across countries at one single point in time. We want to demonstrate that historically incorporated comparisons using longitudinal micro-data and applying a dynamic perspective yield a number of interesting insights into the historical and/or worldwide process of wage attainment as a potential source for mass migration. We apply the same differentiation of processes and methods as Hannan, Schoemann, and Blossfeld (1990) and reproduce some of their results using the German Life History Study to enhance the interpretation through the comparison with results obtained from the Polish Study of Social Mobility.

Labor market policies of full employment and policies to achieve a more egalitarian distribution of wages in Poland have reduced return to education on first jobs to half the size of those found for West Germany. In both societies the rapid expansion of education systems led to a sharp reduction in individual return to education supporting the view of credentialism in societies with different organizing principles and different levels of economic development.

Combining views of segmented labor markets with the post-war history of industrial development we identify key industries in each country paying significantly higher wages at labor market entry or at job changes within or between employers. Substantial differences in vintage effects of first wages between Poland and West Germany over several decades have enlarged the country differences in first wages to 2 or 3 times the value of the immediate post-war years, which might explain much of the across-border migration.

Our analysis attempts to quantify and explain the differences in wages between West Germany and Poland during the post-war period. On the basis of this evidence we are able to determine one possible economic incentive for mass migration in Europe and enlighten the process of wage attainment in order to better focus labor market policy on the sources of mass migration.

REMARKS ON MATHEMATICAL MICROECONOMIC MODELS OF THE SHORTAGE ECONOMY

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We compare two approachs to microeconomic mathematical models of the shortage economy . First approach is based on the Kornai-Weibull model, second on Stahl-Alexeev's model. Kornai introduced ("Anti-equilibrium", 1971) a concept of a theory related to the theory of general eguilibrium. We use this concept to compare both approaches. We claim that these approaches are different. Approach based on the Stahl-Alexeev model is connected with the theory related to the theory of general equilibrium. The Kornai-Weibull model is specific for the theory of shortage. Our opinion is motivated by analysis of mathematical properties of both models. The models are descibed by systems of differential equations. Stationary solutions are stable in both systems. To obtain stability in the approach based on the Stahl-Alexeev model we use a version of stability theorem known in the thery of general equilibrium. The theorem used in Kornai-Weibull model has quite a different character. Prices are dynamic parameters in the approach based on the Stahl-Alexee model. The Kornai-Weibull model is not price controllable. We can get price controllability in some extention of this model, but some attributes of shortage are then lacking.

THE CONSUMER MARKET STABILIZATION MODELLING

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The problem of consumer market stabilization in conditions of transition from the centralized to the market economy and the liberalization of prices is examined in this paper. The mathematical model of the macro-economy with humanfactor consideration has been constructed. The humanfactor is comprehended as the influence of economic situation over the individual labour productivity. Various versions of stabilization quality are analyzed on the basis of this model. The experiences of USSR and of other countries are taken into account.

NON PARETIAN EQUILIBRIAE ON EXCHANGE NETWORKS

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The following question motivates the present work: Is the general competitive equilibrium theory well-fitted to represent what happens when goods move from initial producers to final consumers through various intermediate traders who used to induvidually fix their prices in order to maximize their profit?

Though it may at first seem sufficient to discriminate every product according to the trader who sells it and to cast the problem into the usual core theory, one notices that the prices which come from this approach are trader independent (thus do not explicity reward the intermediate traders). Incomplete market or transaction cost models do not either fully answer the question. So we introduce a model which involes, for any good m in M, a network Hm=(X,Em) (X=trader set) which summarizes the way an elementary transaction on m can be preformed. By splitting any vertex x of X according to the fact the x is at the same time consumer and trader, we define an equilibrium as being a pair (p,f), where p is a price system indexed on M and X,f is a flow function on the networks Hm, which clears the market, allows any agent to maximize its consumption and makes no agent participate in a transaction if his profit margin is too low.

We see then that such an equilibrium usually exists and is (usually) neither unique nor Paretian. As a matter of fact, equilibriae may exist which correspond to various levels of economic activity. Since one may ask then how to organize the transition from a low to a higher activity level, we propose a dynamic temporal model, involving a bank (freely fixing its interest rates) and a money market, and extend the previous theory and results to this dynamic context.

ABOUT ONE MULTIPRODUCT PRINCIPAL-AGENT PROBLEM AND APPLICATIONS OF ITS OPTIMAL DECISIONS TO MARKET REFORM POLICY

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It is shown that the second best optimal decisions of one original multiproduct principal agent problem locally coincide with the full responsible contracts for agents. This result was obtained by the convexity assumption of production sets, preferences and the risk neutrality of agents. Optimality of private property can serve the interpretation of this result in conditions of developed credit and financial system, convex technologies and minimum of hired labor. This implies that essential attention in reforms must be paid to development of the banking system and as the starting step by the privatization of the convex fields of production net must be realized. These actions can be carried out by the rent form of property for the transition reform time. The agricultural production field satisfies those conditions and the family farming form of the organization realizes minimality of the hired labor.

DYNAMIC EQUILIBRIUM MODELS OF CAPITAL ACCUMULATION

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In our report we develop and investigate a kind of dynamic equilibrium deterministic model for capital accumulation. Within the framework of this model we determine the equilibrium prices as functions of the current state of the system consisting of a finite number economic agents (firms). Each agent is assumed to use optimally its production capacities and to invest all the net income in further development.

This general outline is made concrete in several cases. One of them corresponds to pure competition, with all the agents producing the same product. We analyze the steady states of the dynamic system thus obtained and investigate their stability. Another case corresponds to a technology described by Leontief-type data. There are numerical experiments based on certain more or less realistic data, which demonstrate some peculiar features of such an economy during the transition period.

A ROBUST PROCEDURE FOR COMPUTING COMPETITIVE PRICES

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This paper presents a procedure for computing competitive prices in the economic systems of Eastern Europe and the Soviet Union as a support device during their transition to market economies. The procedure is motivated by the consideration that markets in these formerly planned economies are poorly organised from the competitive standpoint and are therefore not able to find reasonably competitive prices. The procedure's claim to computing competitive prices lies in its interpretation as the competitive price adjustment process, where any profits in excess of the minimum average cost of production are eliminated through forces of competition. A special feature of the procedure is its institutional robustness. It can specifically be used under different institutional arrangements of varying degree of decentralization: ranging from a completely contralized one with a single price-computing-agency for all industries (cf.the setup obtained in the hay days of planning in these economies) to a completely decentralized one where there is a separate independent price-computing-agency for each industry (cf.market economy). Finally, the procedure involves simple computations, possesses a fast monotone convergence and affords the possibility of establishing a stop criterion for achieving a prescribed accuracy.