COORDINATION FAILURE IN AN INDUSTRIAL SOCIETY

BY

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1 INTRODUCTION

Broadly speaking there are two different schools of thought in macroeconomics. Keynesian macroeconomics is based on some form of wage rigidity and sometimes also on price rigidity. Consequently, at least some markets clear through quantity adjustment. In the last decade a lot of work has been done to explore the implications of this fundamental assumption. In what is sometimes called disequilibrium theory rationing schemes and spillover effects from one market to another market have been given proper attention in static optimizing models (e.g., Malinvaud, 1977) as well as in dynamic optimizing models (e.g., Van de Klundert and Peters, 1986). The problem with this approach is that the theory is incomplete or at least partial if no justification is presented for wage or price rigidity.

Sticky money wages have been explained by different forms of wage contracts. In the theory of overlapping wage contracts (e.g., Taylor, 1979) nominal wages depend on wage changes that have occurred amongst other groups in the period since the previous wage contract and on expected prices and wages over the interval of the new contract. Once contracts are made they have to be fulfilled. To explain nominal price stickiness on the other hand one has re-orted to costs of price adjustment, which may be administrative (e.g., Blanchard and Kiyotaki, 1985) or speed-dependent (e.g., Van de Klundert and Peters, 1987).

The second school in macroeconomics, i.e. New Classical macroeconomic theory, assumes that wages and prices are fully flexible. Therefore general market clearing is its central analytical device. However, there may be some friction in the system, because people have incomplete information about all prices. If the general price level increases people may mistakenly think that the price of their output has increased relative to other prices and consequently increase their production. Misperceptions can still have quantity effects after agents discover their mistake, because there may be changes in investment too. This line of thought can of course be associated with the names of Lucas (1973) and Sargent (1979).

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In classical and neoclassical equilibrium models with perfect competition market clearing prices cannot be realized without the costless coordination of a Walrasian auctioneer. But this is not the way things work. Actual prices are realized through bargaining or set unilaterally on a take-it-or-leave-it basis. A more realistic approach towards the problem of price setting paves the way for an analysis of coordination problems in trade and production. This is indeed the central topic of this article. Discussing some recent work on this issue, it will be shown that coordination failure may arise in models with externalities connected with imperfect competition. The theory of coordination failure is not intended as a third way in macroeconomics between Keynesianism and New Classical Macroeconomics. On the contrary, its real aim is to provide a sound microfoundation for Keynesian macroeconomics. And according to Hahn (1983) it is even the most promising one from a theoretical point of view.

The article is organized as follows. In section 2 search theory as conceived by Diamond (1982, 1984) is given proper attention. Coordination failure may arise in these models as a result of trade externalities. However, the world according to Diamond gives no proper reflection of modern industry with its large-scale production. The economic consequences of industrialisation are therefore worked out in section 3. Building upon the results of this section coordination failure connected with increasing returns and imperfect competition is analysed in section 4. In this section the seminal work of Weitzman (1982) occupies an important place. Section 5 discusses a study by Drazen (1986) which focusses on the interactions between the labour market and the product market through job matching. This work may be considered supplementary to theories of coordination failure based on demand externalities. The article closes with some conclusions.

2 SEARCH AND COORDINATION

The search process has been modelled in different ways to serve different purposes. Here we shall focus on the approach chosen by Diamond (1982, 1984) because his work has inspired others to consider the problem of coordination failure in more conventional models. Diamond analyses search and trade in markets for commodities. Search problems in the labour market will be given some attention in section 5, discussing recent work by Drazen (1986) which deals also with demand externalities in the market for commodities.

Modelling the trading process is a way to eliminate the Walrasian auctioneer. In a Walrasian setting all trade is at the equilibrium price level. All contracting comes first, trade follows. In Diamond's economy there is a single good which individuals produce but must trade before they can consume. Commodity production is for inventory in the hope of a quick sale. The greater the stocks of inventories of others the greater the chance of finding a trading partner (trading externality) and thus the greater the expected probability of producing for inventory (positive feedback). This combination of a positive