Chapter 7
The Money as the Necessary Link Between Micro and Macro Levels

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ABSTRACT

The aim of the chapter is to introduce money as the necessary link between micro and macro levels. The author starts with a critical appraisal of the neoclassical monetary theory paradigm. The opening argument is that it is not possible to separate the relative prices and price level formation. The interdependence between the price of money and the prices of all the other goods leads to the conclusion of the gross complementarity of money what violates the gross substitutability principle. Further, it is argued that the function of money as medium of exchange in a decentralized monetary economy is only possible under cyclic sequencing of bilateral exchanges. The latter means that new macroeconomic constraint is added to the conventional micro equilibrium requirements. The macro constraint makes possible to derive the individual utility functions from macro variables such as the income velocity of money and the price level. The macro constraint allows also for optimal solutions under the second-best conditions.

INTRODUCTION

The neoclassical economics is based on just two main concepts- the principle of the methodological individualism and the idea of the general equilibrium (see for critique Colander 2000). The proof that the decentralized exchange between self-interested economic agents converges to simultaneous equilibrium on all markets is the core objective and the main result of the neoclassical research program. This reductionist approach regards the macro level (the economic system as a whole) as a simple consequence of the micro foundations (endowments and objectives of the economic agents) without any feedback from macro to micro level. In other words, there are no parameters, reflecting the functional state of the system, that affect in turn the individual players. The prices balance the supply and demand on inter-

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dependent markets, but this interdependence does not reflect the additional conditions and constraints, guarantying the wholeness of the economic system. These additional conditions are related to money.

Without competitive equilibrium, derived straightforwardly from the bottom up, the whole structure of the neoclassical economics would change. In fact, the justification of the general equilibrium comes at a high price. The competitive equilibrium is still a kind of multilateral barter exchange, excluding any meaningful role for money. In addition, the mathematical proof that general equilibrium exists in some mathematical sense does not mean that it's actually feasible in our finite world (see Boylan and O'Gorman 2018).

The famous micro foundations of the neoclassical models are introduced without elucidation of how so many unrelated activities are coordinated in order to form a single rational representative individual (Bergh and Gowdy, 2003). Furthermore, the exchange of composite goods between two or three archetypal players does not really require monetary intermediation. In contrast, the synchronization of actions, allowing big number of participants to behave in a coordinated way can ultimately be carried out only via the circulation of money, as it is demonstrated in this chapter.

The main problem of the neoclassical general equilibrium approach is the money market and the connection between money market equilibrium and the rest of the economy. Not only the money market is ill defined, but the price of money is presumed to be equal to unity and the equilibrium is derived not constructively, via money market behavior itself, but implicitly, by bringing into play the so called Walras Law.

Without explicit introduction of all functions of money, namely medium of exchange, numéraire (unit of account), standard of differed payments and store of value, it is not possible to create credible theory of contemporary decentralized money intermediated economies (Ganchev 2015). The objective of the present study is twofold. On the one hand, we intend to prove, that in an economy with money, purely decentralized equilibrium convergence is not possible, money market does not obey the gross substitutability rule. On the other hand, it will be demonstrated, that macro parameters affect micro behavior, so the neoclassical reductionism is not relevant.

The actual decentralized economic systems, not converging to equilibrium, but subject to periodic boom and bust cycles, are quite different, contrasted to neoclassical equilibrium oriented economies. In the genuine neoclassical world, the decentralized capitalist economies are stable; the external shocks are absorbed by markets. In the non-so neoclassical setting, the markets themselves generate instability; the stabilization is brought about externally, via macroeconomic policy. This explains why the empirical DSGE models need so many artificial external shocks in order to fit the data (see for details Romer 2016). From the point of view of the political economics, there are just two ways to deal with economic instability. The first is the radical transformation of capitalist societies in the sense of Marx and the second, suggested by Keynes, consists of reforming and regulating capitalism. In the modern context, only the second alternative seems feasible.

The concrete results of the present chapter can be summarized as follows.

The value (price) of money must be determined in a system of simultaneous equations together with the prices of all the other goods, so the general equilibrium models should not be normalized. Deriving relative prices and the price level are the two sides of the same coin. Inflation (deflation) is viewed as macro disequilibrium indicator. Therefore, it is deduced, that decentralized monetary economies are self-regulating via inflation-deflation cycles, but not converging to equilibrium.

Stabilization monetary and fiscal policies are necessary, though not sufficient, for general equilibrium convergence and optimal resource allocation. The income velocity of money is introduced not as datum,