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РОЗМАЇНСЬКИ І.В., Санкт-Петербурзький філіал Вищої школи економіки, м. Санкт-Петербург, Росія

Розмаїнськи І.В. – к.е.н., доцент Санкт-Петербурзького філіалу Вищої школи економіки

INSIDE MONEY, BUSINESS CYCLES AND STAGFLATION

У статті розглядаються відомі теорії стагфляції – монетаризм, нова класична, кейнсіанська, посткейнсіанська. Відповідно до них, стагфляція генерована екзогенними факторами: державною політикою або шоками пропозиції. Автор робить спробу в статті довести, що стагфляція може бути ендогенною, вбудованою в сучасну ринкову економіку.

The article deals with famous theories of stagflation – Monetarist, New Classical, Bastard Keynesian and Minskian. According to all these theories stagflation is generated by exogenous factors: the government policy or (adverse) supply shocks. The author tries to prove in this article that stagflation can be endogenously inherent to the modern advanced market economy.

I Introduction

Stagflation is a comparatively new (35-40 years) feature of the advanced market economy. All famous theories of stagflation – Monetarist, New Classical, Bastard Keynesian and Minskian ones – have one common point. According to all these theories stagflation is generated by exogenous factors: the government policy or (adverse) supply shocks. We shall try to prove in this article that stagflation can be endogenously inherent to the modern advanced market economy.

The modern advanced economy is the “inside money economy” (Dow and Earl, 1982: Ch. 9). A huge part of the money supply is the (private) credit money that is both asset and liability of the private sector. In other words, in the inside money economy money is simultaneously a debt. This fact complicates many relationships between macroeconomic variables. On the one hand, monetary aggregates are the only means of financing expenditures. The more is the money supply, the more are aggregate expenditures, and aggregate demand will be. On the other hand, money is a debt, and the liquidation of this debt can absorb a lot of financial resources. In other words, the more is stock of the outstanding debts (inside money) and the closer is maturity date, the less financial resources available for the expenditures will be. It turned out, that the relation between macroeconomic situation and the (inside) money stock is ambiguous.

This ambiguity appears in the phase of slump of the business cycle. As Minsky (1977, 1986) has proved, the slumps in the modern advanced economies are the causes and the consequences of the inability of the business sector to meet cash payments commitments that grow out of debts borrowed in the phases of expansion and boom. The goals and purposes of the majority of the households and the firms change during the slump. The immediate redemption of debts becomes the main purpose of many agents in this phase of the business cycle. Such change in the goals and purposes can alter relationships between the main macroeconomic variables in the output market.

II. The Output Market

a) The relationship between aggregate demand and the price level. The orthodox macroeconomic theory proves the presence of negative slope of aggregate demand curve by means of Pigou effect, Keynes effect and net export effect. But Keynes effect (the price level – the demand for money – the interest rate – investment – aggregate demand) can be negligible if investments are driven first of all by animal spirit and the state of confidence. When trade barriers are strong, then the net export effect (the influence of the price level on the export and the import) also does not matter. In the phase of slump Pigou effect (the price level – the real money supply – consumption – aggregate demand) is outweighed by Fisher effect. This effect consists in the increase in the real debt burden because of the fall in the price level. Such increase causes the wave of bankruptcies and economic collapse (Fisher, 1933, Minsky, 1986). It is clear, that it is in the phase of contraction that Fisher effect plays the enormous role. We believe that in this phase of business cycle Fisher effect becomes more than the sum of Pigou, Keynes and net export effects. The slope of aggregate demand curve can be a positive in the phase of slump. The idea of positive relationship between the price level and aggregate demand under the inside money was already put forward in “non-Neoclassical” economic literature (Fazzari and Minsky, 1984, Caskey and Fazzari, 1986). We stress the importance of the phase of slump for the emergence of this unusual relationship.

b) The relationship between aggregate supply and the price level. As we mentioned above, the business firms in the phase of contraction try to liquidate their debts immediately. We believe that the firms do not maximize (long-term) profit in that situation. Really, the business sector aspires quickly to earn revenue sufficient for the redemption of the debts. It means that the fall (rise) of the price level causes the firms to increase (decrease) output for the provision of this sufficient amount of revenue (Nozdran and Berezin, 1993). In other words, the relationship between aggregate supply and the price level can be a negative in the phase of slump. The reasons for this appear especially when households (first of all, workers) as input owners also desire first of all to redeem their debts. We shall explain this relationship in the end of this section.

Such transformations of these chief macroeconomic relationships are the key to the explanation of the endogenous nature of stagflation in the inside money economy. The domination of inside money alters economic behaviour in the phase of contraction. In this situation any adverse demand shocks (caused by the collapse of investment or consumption confidence, the rise in the liquidity preference, the increase in the thriftiness, the share prices crash etc.) not only generate the decrease in output, but also become the reason for the price level rise. It means that the inevitable (during the slump) negative demand shocks automatically lead to stagflation. In this fashion the stagflation is inherent to the inside money economy. It takes place without both adverse exogenous supply shocks and the government stabilization policy.

We must, however, point out that these stagflationary processes are not long-lasting. After the liquidation of the debts and/or mass bankruptcies of the business firms the relationships both between the price level and aggregate demand and between the price level and aggregate supply become “normal”, “orthodox”. Under these “normal” relationships the endogenous sources of stagflation fade away because the necessity of the debts redemption is not already dominating factor in the behaviour of the firms and the households. If, however, the process of paying debts continues in the “post-depression” and recovery phases, some “unusual” macroeconomic relationships, possibly, matter. In this situation Fisher effect becomes less than other (Keynes, Pigou and net export) effects, but the negative relationship between aggeregate supply and the price level can persist. The business firms will decrease prices in order to induce the increase in demand, supposing that current level of that is low. The example is the US economy in the 1980s: stagflation of the 1980-82 was offset by “deflationary expansion” in the 1982-90.

In other words, the increase in aggregate demand in the "postcrash" phase removes the threat of the mass bankruptcies wave and weakens Fisher effect importance; but at the same time, the redemption of financial obligations, as before, is the big problem for many businesses. Firms try to decrease the prices and increase the output, because they aspire to provide not maximal profit but sufficient amount of revenue. When such measures are accompanied by the aggregate demand increase, deflationary (more exactly, “disinflationary”) expansion takes place. The necessary conditions for it are rooted in the use of roll over credit and other means to avoid the bankruptcy without the final redemption of the debts. The application of such instruments is a consequence of the financial evolution (creation of new monetary aggregates, new banking “practices” etc). It is in the inside money economy that financial evolution is developing and accelerating (Simons, 1936, Minsky, 1957, Chick and Dow, 1988, Niggle, 1991, Arestis and Howells, 1992, Nozdran and Berezin, 1993). Broadly speaking, we believe, that the speed of the final redemption of debts negatively depends upon (a) the aggregate inside money stock in the economy, (b) the ratio of long-term debts to short-term debts. At the same time, the frequency of the appearance of the “debt banktuptcies” threat positively depends upon the former factor and negatively upon the latter factor. Caskey and Fazzari (1986) have brilliantly described the importance of the latter factor.

We must take into account, however, that if “deflationary expansion” is not accompanied by the final liquidation of debts or even is tied up with the additional inside money creation, new financial crisis becomes inevitable. As Wolfson (1995) has proved, economic recession in the USA in the 1990-92 was generated first of all by the enormous amount of the credit market outstanding debt.

These reasonings may change the character of some other theories and hypotheses. Consider Minskian theory of stagflation (Minsky, 1985, 1986). According to this theory, stagflation appears because of the attempts of the government to smooth out “a debt deflation”. “Stagflation is a substitute for a big depression” (Minsky, 1985: 52). We think that this statement is absolutely true only combined with recognition of it as being endogenously inherent feature of the inside money economy (in comparison with the outside money economy). Broadly speaking, it can also be true in relation to the effects of the expansionary macroeconomic policy, if the problem of the redemption of debts is important but not dominating factor in the behaviour firms, and at the same time the firms try to solve their problems by means of decreasing output and rising prices, for example, in order to maintain an appropriate level of the mark-up.

But in the opposite case, if the firms do not pursue the profit-maximizing goal at all, and aspire only to get a sufficient amount of revenue for the sake of the liquidation of indebtedness, expansionary government policy in the phase of slump generates not stagflation but the "deflationary expansion". Why? As we have aleady pointed out, the decreasing demand can force firms to raise prices to escape from financial crash. We suppose that the situation is possible when the increase in the demand (caused by the government) can remove the incentives to raise prices. If the firms simultaneusly try to stimulate the demand expansion by the prices decrease, the emergence of "deflationary expansion" becomes beyond doubt. In the case of the US economy huge federal budget deficit was, possibly, one of the factors contributed to the deflationary economic recovery in the 1980s. This conclusion can be used in the discussion against the Monetarists and New Classical economists arguing that any expansionary government policy is either completely ineffective or stagflationary. Actually the government can not only eliminate stagflation in the inside money economy but also transform it into non-inflationary prosperity. In such a "non-standard" situation supply side policies can be... inflationary)! The improvement of the production possibilities causes not only the increase in output, but also inflation. The point is that such event generates the increase in the output, and this increase can be purchased by spenders only at higher prices, because Fisher effect matters! Inflation can decrease the real burden of debts and allow the businesses to dissave for the sake of the purchase of the increased output produced by means of the improved production possibilities.

We must repeat that these "miracles" can end up very quickly, after the majority of the firms and households will meet their huge financial obligations. If a slump is very severe and before the business firms were able to redeem the debts, they had gone bankrupt, the above events do not occur in reality and the "traditional" macroeconomic relationships hold.

Moreover, the complicated macroeconomic relationships of the real world inside money economy cannot be fully described by the AS-AD model. The point is that this model – as any supply-demand model – is usually based on the assumption that producers and spenders are price-takers. As we will prove below, the modern inside money economy is oligopolistic and the business firms possess the price control. This fact makes the application of the AS-AD model in some degree senseless. Therefore, the economists are forced to make such special assumptions, as "ratchet effect" (the price level downward rigidity when aggregate demand falls in the conditions of mass unemployment, that is to say, aggregate supply curve is horizontal), in order to retain realistic elements of this model under imperfect competition.

We believe, however, that the above reasonongs – using the language of AS and Ad relationships – properly describe the phase of recession as it really takes place in the inside money economy. The decreases in the demand cause the business firms to raise their prices in order to provide themselves with the revenue sufficient for the redemption of financial obligations. At the same time, firms may obtain funds not by the price rise but by the means of the output expansion at the decreasing prices. We suppose, however, that the former strategy takes place when the demand is falling: and the latter strategy takes place when the demand is low or is rising and/ or Fisher effect become negligible. If the firms follow the latter strategy and Fisher effect is dominating, the debt-deflation is possible. But, it seems to us, that this possibility is very unlikely to be occur. Fisher effect matters when the threat of financial collapse and credit crunches is very likely to occur, and the firms try first to raise their prices. The increase of output at the lower prices is carried out by the firms when the above-mentioned threat become little less dangerous and Fisher effect is weaker than other (Pigou, Keynes and net export) ones, but the redemption problem is still important. These conclusions can be explained by means of the fact of the demand inelasticity in the short run and the one elasticity in the long run (Eichner, 1973). When the demand is falling, and "a debt-depression is all around", firms are forced to obtain funds very quickly in order to survive to liquidate their debts. They are ready to get the immediate revenue gain (caused by the rise in the prices) at the expense of the following decreasing revenue flow. When the redemption problem is important but not crucial, firms can bring down prices in order to stimulate demand and increase revenue in the "medium run".

III. The Money Market

There is another reason for stagflation to take place in the phase of contraction in the inside money economy. The desire to redeem financial obligations in the recession means the increase in the demand for money and, in the absence of infinitely elastic supply of money, the rise in the market interest rate. Interest rates become higher. As Eichner (1973) has pointed out, the market interest rate is one of the fundamental determinants of the markup under oligopoly (we shall consider below the close relationship between the domination of oligopolistic structures and the domination of inside money). The higher is the rate of interest, the higher is the mark-up and, naturally, the higher prices will be. The point is that the price in the conditions of "oligopolistic competition" is a means of financing discretionary expenditures (Eichner and Kregel, 1975). The price rise provides additional finances for oligopolistic firm. As Eichner (1973) has believed, the interest rate is a something like "a floor" for the mark-up increase by oligopolistic company. The interest rate rise makes external finance expensive. Such increase in the cost of external finance may force oligopolistic firm to increase prices in order to get additional cash inflow. Needless to say, that the interest rates rise usually before and in the beginning of recession. The cyclical phase of slump is the period of the rising and higher interest rates. In the inside money economy (as we shall prove below, such economy cannot be "perfectly competitive") the rising and higher interest rates generate inflation. In the phase of contraction any inflation becomes stagflation. The process of creating new credit money can become self-fulfilling in the inside money economy. This tendency intensifies in the recession because the increase in the inside money stock in the phases of recovery and boom inevitably leads to the huge payments of principal and interest in the contraction. In this situation some firms go bankrupt anyway, simply because these firms are worse than the "average" companies. Such bankruptcies mean the emergence of bad loans for some commercial banks and other financial institutions. Needless to say, that these events cause the increase in the lender risk (Keynes, 1936: 145, Minsky, 1986: 193). It is the important factor of the rise of the "new inside money" price, that is to say, the rise of the rate of interest. Banks, of course, can provide new finances for the corporate sector by means of managed liabilities. But the use of such instruments is very expensive (Wolfson, 1995) and inevitably forces banks to raise the "retail" interest rates. As we have pointed out above, the increase in the "price of money" in a oligopolistic economy leads to the increase in the prices of goods and services. The severe slumps in the 1974-75, 1980-82 in the USA and other advanced countries with the inside money economy were characterized by the decreasing output and the rising interest rates and price level. The slump of the 1990-91 is the only exception with its low inflation and interest rates (Wolfson, 1995).

IV. Imperfect Competition and the Inside Money Economy

Why is the inside money economy oligopolistic? We think that the emergence and the spreading of inside money are the response to the increase in the capital-intensity of the economy. The expensive investment with long gestation period cannot be implemented without more or less stable external finances. It is possible only when the bank deposits are money and banks can finance their activity not only by excess reserves, but also by purchased funds (managed liabilities), in other words, in the endogenous inside money economy. Endogenous inside money is a inevitable ingredient of the economy in which an expensive and long period gestation investment "rules the roost". But the large-scale and long-term investment cannot be performed by "perfectly competitive", "polypolistic" firms. Such small "polypolistic" firms cannot control their prices and have no market power at all, and also possess too small own ("entrepreneurial") capital (Kalecki, 1956: 91-95). In such conditions these firms cannot obtain funds, sufficient for the expensive and long-term investments. The atomistic competition economy is first of all a consumption-oriented economy. It can be often very unstable, but the problems of long-term investment, mergers and acquisitions, leveraged buyouts and financial evolution are not central to this type of the economy. Capital-intensification and corresponding changes in the banking sector occur under oligopolistic and other "imperfect" structures. The idea of close relationship between the imperfect competition, high capital-intensity and inside money was put forward by H.P. Minsky (1977, 1985, 1986). For example, he wrote:

Oligopoly and monopolistic competition are the natural market structures for capital-intense industries. Since investors and bankers demand some guarantee that price competition will not occur, the paper-oriented world of Wall Street anathematizes price competition among producers (1986: 167).

In a capitalist economy money is tied up with the process of creating and controlling capital assets… the creation of money is part of the mechanism by which a surplus is in a capitalist economy money is tied up with the process forced and allocated to the production of particular investment goods. (1986: 223-224)

We cannot, however, agree that "money is tied up with the process of creating and controlling capital assets" in any "capitalist economy". In the capitalist economy of the XIX century money was outside and exogenous and determined not by the actions of corporations and financial institutions, but by the gold stock. Likewise, the money supply in the Germany in the 1920s was also outside and determined exclusivelly by the actions of the government. In both cases the money creation process was not tied up with the fixed and financial investment at all. We think that the statement of Minsky is true only for the inside money economy. This type of money indeed appears and spreads with the capital-intensification under imperfect competition. The inside money economy can function succesfully only when the business firms are capable of controlling their prices.

We do not believe that atomistic competition and the long period gestation investment are inconsistent at all. As Boyd and Blatt (1988) have demonstrated, in the economy with exogenous outside (metallic) money the investment activity is financed through the very unstable stock market. According to that model, the firms sell shares in order to finance their investment, and then issue new shares in order to pay dividends on old shares (it is a something like Ponzi finance!). The decrease in the willingness of financial investors to buy shares generates rapid and heavy crisis. In this model the financial investors sector loses all money invested in the shares in the phase of slump. In other words, "financial investments are irreversible" (Boyd and Blatt, 1988: 74). We suppose that this irreversibility cannot be long-run feature of the market monetary economy. And we believe that the case, described by Boyd-Blatt model, was realistic, but not very typical for the atomistic monetary economy. The long "latency times" investments can be executed systematically and without enormous losses for some classes of the society only in the oligopolistic inside money economy.

V. Keynes's Theory of "Artificial Borrowers"

J.M.Keynes has described in the end of the second volumeof the Treatise on Money (1930) his theory of "artificial borrowers". According to the theory, in the phase of recession "genuine borrowers", who rely on the expected yield of new investment, are crowded out by "artificial" ones, who rely on the need to redeem old debts ("distress" borrowers), or on the aspire to gain from the (actual and expected) differences between short-term and long-term interest rates ("banking" borrowers) or on the desire to make money on the stock exchange ("speculative" borrowers). Keynes has believed that such "artificial borrowing", especially "speculative borrowing", can exacerbate economic instability.

Unfortunately, this theory has been overlooked or forgotten by many (may be even all) the Post Keynesians. By the way, by means of developing this theory, we can explain stagflation in the period of recession in the inside money economy. "Artificial borrowing" is by and large a feature of such an economy in the phase of slump. It is a consequence of the inside money supply growth in the expansion and it can be carried out only if money are created inside the economy. The actions of "artificial borrowers" generate the interest rates rise, and under imperfect competition such a rise is the reason for inflation in the recession, that is to say, for stagflation. Furthermore, as we mentioned above, "artificial" borrowers crowd out the "genuine" ones; it means the decrease in the degree of availibility of finances for the long-term investment. Aggregate demand falls, and if relationship between aggregate supply and the price level has a negative slope, stagflation takes place. In the outside (metallic or fiat) money economy such events are impossible, because the economic expansion is by and large not financed by private debts, and there are no incentives and conditions for the "artificial borrowing".

It is interesting that Keynes has assumed the exogeneity of money in his magnum opus (1936). The endogenous inside money were in his focus in the Treatise on Money and some articles published after the General Theory in the 1937 and 1939 (1937a, 1937b, 1939). The theory of "artificial borrowing" had disappeared in the works of Keynes after 1930. And the Post Keynesians have "lost" this theory. Even Paul Davidson, who often stressed (1972) the importance and the meaning of the Treatise on Money, never mentioned this theory in his brilliant works.

VI. Summary and Conclusions

We can point out that stagflation is endogenously inherent to the inside money economy. It is not always a consequence of adverse supply shocks (according to Bastard Keynesians) or of the expansionary government macroeconomic policy (according to Monetarists, New Classicals and Minsky). Stagflation can take place in the inside money economy without any exogenous shocks or "interventions". It can appear only in the cyclical phase of slump because of the intentions of "imperfectly competitive" firms to avoid immediately the "debt bankruptcies" in the conditions of a "debt crisis" and the decrease in demand. The domination of Fisher effect and the "burning" desire to redeem the debts are the reasons for the inflation after the demand contraction. Moreover, stagflation can also take place in the inside money economy under the rising and higher interest rates because in this situation the business firms raise prices with the same above-mentioned goals owing to the increase in the cost of external finance. At the same time, stagflation is not endogenously long run process in the inside money economy. The redemption of debts by some firms and the bankruptcies of other firms generate the "resurrection" of the "traditional", "orthodox" macroeconomic relations, behaviours and goals. In particular, Fisher effect does not always matter, in contrast with the point of view of some Post Keynesians (Caskey and Fazzari, 1986). Staglation ends up. If, however, the process of the debts redemption is slow and continues in the phases of "post-depression" and "recovery", the situation is not very impossible to be occur, when "deflationaty expansion" can take place. In any case inside money is the condition for stagflation to occur only in the "cyclical context".

The common point in the "non-Neoclassical", in particular, Post Keynesian, literature is the importance of the difference between the "monetary economy" and the "barter (or real exchange) economy" (Keynes, 1973: 408-411, Chick, 1983: 1-12, Carvalho, 1992: 1-53). We tried to show in this article that the difference between the "inside money economy" and the "outside money economy" is not less important. Involuntary unemployment is endogenously inherent to the monetary economy and is not endogenously inherent to the barter or real exchange economy. Likewise, stagflation is endogenously inherent to the inside money economy and is not endogenously inherent to the outsude money economy. It can appear in the latter type of the economy, but only due to the exogenous "shocks", "interventions" and "disturbances". We think that the picking out of the meaning of inside money can help to understand the causes of many important problems of the modern advanced economies, in particular, the causes of stagflation.

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