THEORETICAL FUNDAMENTALS OF INFLATION TARGETING

UDC 336.748.12  338.23:336.74

Dragoslav Kitanović, Milena Antić
Faculty of Economics, University of Niš, Serbia

Abstract. The fact that by the year 2012, as many as 27 countries adopted the regime of target inflation (Serbia has been one of them since 2009) points to an increasing interest and growing popularity in the application of this monetary politics regime. As the number of countries adopting the regime of inflation targeting is growing, there is a strong need for it to be theoretically grounded. In this work we consider the bond between the appliance of the regime of inflation targeting and new keynesian dynamical models of general equilibrium - DSGE models with a leading economic mainstream (known as "new neoclassical synthesis"), and there are a few points of dispute that imply limited possibilities of the practical appliance of the above mentioned regime of monetary politics and models. When the creators of the monetary politics make decisions, it is necessary for them to take into account the understanding of initial principles, important characteristics and limits of applying this regime as well as all the accompanying instruments.

Key Words: inflation targeting, DSGE model, new neoclassical synthesis, monetary politics.

INTRODUCTION

The term inflation was used for the first time in the science of economics during the Civil War in America in 1864. The person who used it for the first time was Alexander del Mar in his book "The Great Paper Bubble or the Coming Financial Explosion" in order to describe "intumescence" of monetary flow and a high rise of prices. [20] Not only does inflation represent general rise of prices, but it also decreases efficiency of the economy, depreciates savings, encourages the capital outflow, worsens the conditions for income generation, precludes economic planning, and in extreme cases, it can lead to a complete social and political chaos.

Economic theory has reached the consensus: the stability of prices has to be one of the main objectives of the monetary politics of each country. In order to find a cure for a dis-
ease we need to find its cause. Despite the consensus on the objective, economic theorists were unable to reach an agreement about identifying the causes, transfer processes, self-preservation and inflation spread. Some of them explained inflation through demand, the others explained it through expenses, and in some circles it was explained as a structural non-compliance. John Maynard Keynes explains inflation in his book "A Treatise on Money" as a consequence of an increase of effective demand under conditions of full employment. The essence of Keynes inflation theory is in the emphasized growth of the aggregate demand level above the level of aggregate offer, under the conditions of full employment. The most important objective of the monetary politics becomes an optimal deal between inflation and unemployment decrease.

The social phenomenon of stagflation (simultaneous growth of prices and unemployment) questions the Keynesian concept of the Phillips curve, which describes the inverted relation between unemployment and inflation. Phillips curve illustrates combinations of unemployment and inflation which occur as a result of shifting of an aggregate demand curve along an aggregate supply curve for a short period. Milton Friedman and Edmund Phelps, separately from each other, concluded that inflation and unemployment have no connections in the long run. When addressing The American Economic Association in 1967, Friedman said that "there is always some temporary trade-off between inflation and unemployment, but the permanent trade-off simply does not exist. Temporary trade-off does not come out of inflation per se, but from the growing inflation rate. Inflation is always and everywhere a monetary phenomenon because it is created by the growth of money quantity which is faster than the production rate [10, p.361].

Contrary to the Keynesian attitude, monetarists pointed out that the only instrument of economic politics to control the inflation was the money offer. Milton Friedman points out that inflation is not necessarily a negative occurrence. Voluntary "releasing" of inflation is one of the ways to increase the economic growth and avoid the crisis. Economics will not be too damaged if it functions under the conditions of high but predictable inflation rate. People will simply include it into their transactions and it is possible only if the inflation is predictable. On the other hand, economics will experience a great damage if its interest rates change often and unexpectedly. As we can see, it is not inflation that causes the problem but its unpredictable state, which leads to disorder in the price system as well as to disturbance in the basic information sources that direct individual incentives.

With his theory of rational expectations, Robert Lucas confirmed the importance of expectations and their influence on the effectiveness of macroeconomic politics. This theory immediately cleared the reason for impossibility of a long-term trade-off between unemployment and inflation, so attempting to decrease unemployment below the natural rate would only cause higher inflation and not progression in output or employment [10, p. 362]. Even though this theory is based on assumptions which are not very realistic (individuals are fully informed about all the necessary issues upon which they make rational decisions and form their expectations), the point of this theory was widely accepted and it brought significant innovations into economic theory. What was concluded, thanks to this theory, was the fact that economic politics must be based on rules. The government that is not ready for the time consistent politics must be restricted by the rules of the economic politics in order to be principled and transparent in its implementation and in that way create rational expectations of economic subjects.
The theoretical fundamentals of inflation targeting are highlighted in this passage. The last three decades of the 20th century were marked by dramatic transformations in running the monetary politics. At the beginning of the mentioned period there was already greater independence of central banks, worldwide. A difficult period followed by a high inflation rate during the "oil shock" period in 1973, made economists conclude that running the expansive monetary politics had to undergo some changes. When the price mechanism, as a source of information, is disturbed, the efficient functioning of the financial and labour markets is also disturbed. Contracts without clauses are then signed for a shorter period than the optimal, so the planning horizons are shorter. Inflation increases inequality in distribution of incomes, decreases economic competitiveness on the international market and disturbs its position on the international capital market [19, p.434]. This recognition created widely accepted attitude that low and stable inflation can increase the level of resources that are productively used in economics, and it can even help increase the rate of economic growth.

Growing recognition of "expensiveness" of inflation is followed by a greater awareness of economists about the importance of the existence of the monetary anchor as an important element for achieving the price stability, and that is the most important objective of monetary politics. The awareness about the necessity of the existence of a "strong" monetary anchor during the 70's, led to adoption of monetary targeting politics by many countries in order to control the rate of monetary aggregate growth. Central banks accepted the view that monetary mass is both the cause of the inflation changes and a reliable leading indicator about the future inflation movement. Politics like this successfully decreased inflation [7, p.243].

However, the success of monetary aggregate targeting did not last long. Analysing the failed attempts in Canada, United States of America and United Kingdom, we can conclude that the key problem was frivolity and inconsistency in appliance. The whole concept was taken more like a "game" rather than an instrument for achieving the aim. There was no transparency in implementing and multiple targets were defined with a possibility of changing the starting points upwards and downwards. All of these influenced the growth of distrust among the people who were not able to cope with such confusing "game rules". The failure in appliance of monetary aggregates targeting was also caused by non-existence of a strong and stable relation between the objective variable (whether we are speaking about inflation or income) and targeting aggregate. The weak relation points to the fact that hitting the target will not produce the wanted outcome when we speak about objective variable so the monetary aggregate will not provide an adequate signal on situation regarding the politics of the central bank [10, p.364]. After leaving the monetary targeting, the former Governor of the central bank in Canada (Bank of Canada) John Crow made a famous statement: "We did not leave the monetary aggregates, they left us" [8, p.5]. Under the conditions of a massive abandoning of the monetary targeting, a new regime was born in 1990 - inflation targeting.

1. INFLATION TARGETING - "TREND" OR EFFICIENT SOLUTION?

From the very introduction of the regime of inflation targeting by New Zealand in 1990, new monetary politics entered the world. Since its results were positive in practice, creators of monetary politics from all over the world started to pay special attention to it. Table 1.
shows 27 countries which adopted the regime of inflation targeting by 2012 and it shows their individual regime of implementation. Serbia has been among them since 2009.

Table 1. Individual countries' inflation targets

<table>
<thead>
<tr>
<th>Country</th>
<th>Target set by:</th>
<th>Target measure</th>
<th>Target 2012</th>
<th>Target type</th>
<th>Multiple targets?</th>
<th>Target horizon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>4%±1.5pp</td>
<td>P+T</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Australia</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>2%-3%</td>
<td>Range</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Brazil</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>4.5%±2pp</td>
<td>P+T</td>
<td>2012 and 2013</td>
<td>Yearly target</td>
</tr>
<tr>
<td>Canada</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>2%(1%-3%)</td>
<td>P+T</td>
<td>-</td>
<td>6-8 quarters</td>
</tr>
<tr>
<td>Chile</td>
<td>CB</td>
<td>H CPI</td>
<td>3% 3%±1pp</td>
<td>P+T</td>
<td>-</td>
<td>Around 2 y.</td>
</tr>
<tr>
<td>Colombia</td>
<td>CB</td>
<td>H CPI</td>
<td>2.3%-4%</td>
<td>Range</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>CB</td>
<td>H CPI</td>
<td>2%±1pp</td>
<td>P+T</td>
<td>MT, 12-18 m</td>
<td></td>
</tr>
<tr>
<td>Ghana</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>8.7%±2pp</td>
<td>P+T</td>
<td>End '12 and '13</td>
<td>18-24 months</td>
</tr>
<tr>
<td>Guatemala</td>
<td>CB</td>
<td>H CPI</td>
<td>4.5%±1pp</td>
<td>P+T</td>
<td>2012 and 2013</td>
<td>End of year</td>
</tr>
<tr>
<td>Hungary</td>
<td>CB</td>
<td>H CPI</td>
<td>3%</td>
<td>Point</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Iceland</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>2.5%</td>
<td>Point</td>
<td>-</td>
<td>On average</td>
</tr>
<tr>
<td>Indonesia</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>4.5%±1pp</td>
<td>P+T</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Israel</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>1%-3%</td>
<td>Range</td>
<td>-</td>
<td>Within 2 y.</td>
</tr>
<tr>
<td>Mexico</td>
<td>CB</td>
<td>H CPI</td>
<td>3%±1pp</td>
<td>P+T</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>New Zealand</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>1%-3%</td>
<td>Range</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Norway</td>
<td>G</td>
<td>H CPI</td>
<td>2.5%</td>
<td>Point</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>Peru</td>
<td>CB</td>
<td>H CPI</td>
<td>2%±1pp</td>
<td>P+T</td>
<td>-</td>
<td>At all times</td>
</tr>
<tr>
<td>Philippines</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>4.0%±1pp</td>
<td>P+T</td>
<td>-</td>
<td>MT (2012-14)</td>
</tr>
<tr>
<td>Poland</td>
<td>CB</td>
<td>H CPI</td>
<td>2.5%±1p</td>
<td>P+T</td>
<td>-</td>
<td>SR</td>
</tr>
<tr>
<td>Romania</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>3%±1pp</td>
<td>P+T</td>
<td>MT from '13</td>
<td></td>
</tr>
<tr>
<td>Serbia</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>4.0%±1.5p</td>
<td>P+T</td>
<td>-</td>
<td>MT</td>
</tr>
<tr>
<td>South Africa</td>
<td>G</td>
<td>H CPI</td>
<td>3%-6%</td>
<td>Range</td>
<td>-</td>
<td>Continually</td>
</tr>
<tr>
<td>South Korea</td>
<td>CB (G)</td>
<td>H CPI</td>
<td>3%-1.1pp</td>
<td>P+T</td>
<td>-</td>
<td>3 years</td>
</tr>
<tr>
<td>Sweden</td>
<td>CB</td>
<td>H CPI</td>
<td>2%</td>
<td>Point</td>
<td>-</td>
<td>Normally 2 y.</td>
</tr>
<tr>
<td>Thailand</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>3.0%±1.5p</td>
<td>P+T</td>
<td>Target set</td>
<td>8 quarters</td>
</tr>
<tr>
<td>Turkey</td>
<td>G &amp; CB</td>
<td>H CPI</td>
<td>5.0%±2pp</td>
<td>P+T</td>
<td>2012 and 2013</td>
<td>Multi year(3)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>G</td>
<td>H CPI</td>
<td>2%</td>
<td>Point</td>
<td>-</td>
<td>At all times</td>
</tr>
</tbody>
</table>


When we speak about inflation targeting we must understand that it is not a mere instrument of the central bank related to announcing some figures they should stick to in the future. The key importance of inflation targeting is the higher level of trust in the leading monetary politics. Setting the target, i.e. the target level of inflation for a certain period, central bank focuses on things they can do and not on things they cannot do. To be more explicit, a big advantage of inflation targeting over monetary one is the possibility of the

---

1 G – Government; CB – Central Bank; H CPI - Headline CPI (Consumer price index); P+T – Point with tolerance band; pp – percentage point(s); MT – Medium term.
central bank to focus better on the things they can do the best way and which will be long-term. If the target is defined the central bank can "boast" about doing a good job and achieving the aim. That way they raise the credibility that has been harmed by a long lasting inflation rate in some countries. In addition, the public will understand more easily inflation than monetary target, because prices and their changes are everyday concern for people, unlike monetary targets, which are not possible to be directly experienced. This fact provides better transparency of monetary politics because the aims are clearer to the public and also the responsibility of the central bank is bigger because its work can be measured now by comparing obvious results with set objectives.

Global economic crisis during the year 2008 and the growth of debts in developed economies, primarily in the Eurozone, opened a new stage in the field of monetary politics. People started losing trust in leading world currencies and it led to losing the trust in monetary and fiscal policy carried out by the world's biggest economies. These facts point to serious problems that appeared in the system of state economics regulation in the developed countries. There was an increased interest in the practice of macroeconomic regulation and the theory representing its basis. The more popular the inflation targeting was becoming, according to the number of countries adopting it, the bigger the need was for its theoretical foundation. According to Lars Svensson [13, p.1], monetary politics of inflation targeting was implemented without concrete academic researches, so it was a very brave move of the governors of central banks then. Supported by practical experience, economists should prepare an elaborate paperwork on this subject.

2. INFLATION TARGETING AND CONTEMPORARY ECONOMIC MAINSTREAM

Economics does not question the widely accepted opinion about the efficiency of the monetary politics, especially as the means for inflation control. In the last two decades it has been considered that its most efficient form is inflation targeting that is completely focused on maintaining the stability of prices.

Contemporary theories of monetary politics and appearance of new keynesian model of dynamic stochastic general equilibrium – DSGE model are parts of basic streams creating the contemporary economic mainstream. Many contemporary economists define the mainstream as "new neoclassical", "new keynesian" or "post keynesian" synthesis (further in the text-new neoclassical synthesis). Inflation targeting is the result of the successful, mutual activity of mainstream academic science and the practice of monetary politics during the last three to four decades. This regime of monetary politics has the following key characteristics: firstly, the central bank is fully independent and responsible for creating and running monetary politics and the main objective is the maintenance of price stability; secondly, when we speak about inflation, the objective which is in accordance with price stability, is most often quantitatively set on medium term; thirdly, interest politics is used for achieving the aim; fourthly, intervent measures are defined based on predicted (mid-term) inflation deviation from the aimed parameter, and finally, when implementing the politics, the key role belongs to expectations from economic subjects, which requires high transparency and information openness by the central bank in order to maintain the credibility and the public trust.
The listed characteristics of inflation targeting are based on postulates of the neoclassical synthesis. The thesis on possibility of achieving the aimed parameter relies on the postulate of the existence and uniqueness of general equilibrium. The emphasis is on a long-term verticality of Phillips curve and on long-term independence of a balanced level of unemployment compared to inflation. In the practice of macroeconomic regulation, the considered characteristic of equilibrium means that it is not possible to achieve the low level of unemployment during the implementation of expansive monetary politics followed by high inflation. According to that, in the system of a state macroeconomic regulation, the politics on the labour market and the politics directed to inflation control are not mutually connected. Since the inflation is the monetary phenomenon, according to the ideas of monetarism, the body that should control it, will obviously be the one which has the monopoly over money printing.

The condition of a long-term equilibrium, as it has already been said, is followed by the price stability. Now it is practical for the central banks to take over the responsibility for maintaining the inflation within the reasoned frames. In accordance with the thesis of neoclassicists, accepted within the DSGE model, the expectations of economic subjects influence their decision making. Monetary politics emphasises inflation expectations as they are a part of a mechanism for earnings and price determining. They have a key role in estimation the level of a real interest rate as well as in making decisions concerning investments, consumption and savings. In order to increase the efficiency of monetary politics, central banks must influence the forming of expectations. They do that through the rules of the accepted monetary politics the central bank strictly obeys and which are known to economic agents. In other words, efficient monetary politics relies on "mutual understanding between the market and central banks whose aim is connected to the level of inflation and which supports the political rule through which the central bank will change short-term rates, as a response to macroeconomic new changes, in order to achieve that aim" [6, p.64].

3. THEORETICAL FUNDAMENTALS OF THE INFLATION TARGETING MODEL- DSGE MODEL

The area of a new neoclassical synthesis which is directly related to the theory of inflation targeting and creation of new keynesian DSGE models is known as "DGE macroeconomics", which can be translated as the approach to studying of macroeconomics from the position of the dynamic theory of general equilibrium. Michael Wickens deals with this subject in the work "Macroeconomic Theory: A Dynamic General Equilibrium Approach". This approach is defined as a long searched "connection of neoclassical macroeconomic science and the theory of real business cycles, keynesianism and new keynesianism, with an accent of the latter on macroeconomic fundamentals in macroeconomics and on the role of monopolistic competitiveness. The last two elements are crucial in contemporary theories of inflation targeting" [17, preface, xiii].

New neoclassical synthesis is formally expressed in the new keynesian DSGE model. A complete compatibility of the principle of its creation and above considered theoretical fundamentals was the reason for the Wickens to claim that the contemporary monetary theory is "based on a dynamic macroeconomic model of general equilibrium with imperfect competition which is usually called new keynesian" [17, p.258]. It can be noticed that
there is compatibility between the attitudes of a new neoclassical synthesis, the theory of inflation targeting and theoretical fundamentals of a new keynesian DSGE model.

The key characteristic of the considered models is that they belong to general equilibrium model class. Since the Walras's model of general equilibrium up to the present day, there was a significant improvement in evolution of these models during the 70's of the 20th century, thanks to contributions of the representatives of the school of the real business cycle. The model of the real business cycle, which represents dynamic model of general equilibrium, is the basis of a new keynesian DSGE model. The key assumptions of the neoclassical synthesis accepted within the DSGE model are: that economic subjects have preferences connected to results, subjects independently optimise aims with regard to limitations, the choice is done on interdependent markets, subjects have all the relevant knowledge, economic results that are obvious are coordinated that way that they have to be observed in relation to equilibrium states [16, p.109, and 1, p.156-157]. Rational expectations of subjects and their rational behaviour found their place within the research programme of new keynesians. They have definitely left keynesian insisting on the lack of aggregate demand, which is responsible for recession pressures in growing economies which lead to cyclic falls of economic activities. The lack of aggregate demand and suboptimal equilibrium in models of new keynsians were replaced by economic rigidities, especially of real wages [11, p.143].

The models of general equilibrium consist of a sequence of equations for prices and quantity on different markets that stem out of the functions of the agents preferences as the primary condition for their optimization. That way, they are based on microeconomic fundamentals.

In applied models of general equilibrium, which are used in practice, the behaviour of "representative agents" is described. A representative agent is a market subject whose behaviour reflects the behaviour of individual agents who have one function on that market (a seller or a buyer). Their mistakes are accidental and on average they equal zero.

Theoretically, stationary condition, in which an economic system can stay as long as it wants and without stresses, suits a model of a long-term general equilibrium. This condition is described with a help of egzogenousy given parametres and the aimed value of the regime for inflation targeting is the most important.

Since the meantime preferences of agents and their mutual activity take an important place in contemporary macroeconomic theories and concepts of monetary politics, the contemporary model of general equilibrium must be dynamic. Time difference relies on the concept of rational expectations: agents, whose behaviour is described with model equations, forecast on an endless horizon, not allowing systemic mistakes. According to that, their expectations are compliant with forecasts for model equations and in that sense they become expectations that are compliant with the model.

---

2 It is worth mentioning that the model of competitive equilibrium was developed in the works of K. J. Arrow and G. Debreu during the 50's of the 20th century. Essentially, we are speaking about Walras's ideas that received contemporary mathematic form and processing, and then created fundamentals of contemporary mathematic models of general equilibrium.

3 It means that for the modeling of market "mistakes", macroeconomic variables get characteristic not to react immediately but within the longer period-they become rigid.
Extreme monetarists believe that the earnings and prices are almost perfectly flexible. Only the fact that at the moment of negotiations about the earnings it is not possible to predict all the changes in aggregate demand lead to a possible equilibrium deviation, but the new circle of negotiation quickly returns them to the balanced level. On the other hand, keynesians believe that earnings and prices are quite rigid and that the process of adjustment to new conditions can be pretty long and during that time the economy is not in equilibrium. New neoclassical synthesis represents a kind of a compromise of these two views.

Some economists emphasise limited rationality of economic agents which is actually an obstacle for achieving the equilibrium on the markets, among the others on the labour market. Incomplete rationality can be connected to different information imperfections (agents do not have a complete approach to information necessary for decision making; different approach to information of agents of different types), which can be complemented with incapability or lack of the wish of agents themselves to analyse the given information (the conceptions of imperfect or asymmetric information).

In order to point out the role of a state, new economic subjects are introduced to the model - monetary and fiscal bodies. They run anticyclic politics directed to limitations of swaging of the key macro-variables (they are usually production and inflation) occurring due to exogenous stresses. They minimise the functions of the social losses from the volatility of the mentioned variables. The solution of this problem is equation that describes the mechanism of changes of the variable model, which is considered the instrument of the state politics, as a response to forecast deviation from stationary condition of one or several variables that are considered as the aims of the politics.

In applied DSGE models, simpler *ad hoc* given and accepted "rule of the politics" with the same sense is often applied instead of the function of loss. The rule of the fiscal politics usually predicts control of the level of the budget deficit or sovereign debt in relation to gross national product. The rules of the monetary-credit politics reflect the hypothesis about the fact that monetary authorities try to achieve the targeted level of inflation, pace of production growth and sometimes other macroeconomic variables.

The existence of reaction function or the rules of the monetary politics make the new keynesian DSGE model an important instrument for forming the practical recommendations. Taking into consideration the possible character of economic processes represents an important demand placed to applied economic-mathematic models. In stochastic models of general equilibrium the remained members of the equation are not taken only as a "gap" which reflects the influence of unpredicted accidental factors, like in econometric models, but they become "shocks" - exogenous obstacles that temporarily dislocate the economic system from the stationary position. Studying the shocks, which are, within the models, considered in retrospective, represent inseparable part of the standard analysis of economic dynamics and politics, and for causing shocks on a forecast horizon it represents an instrument for creation of macroeconomic scenario.

In the models of real business cycles technological shocks are considered the main factor for swaging of the business activity. In new keynesian models this role is taken by shocks coming from a demand side.

New keynesian DSGE models have theoretical and practical values and they took the main place in forecasting and analytical systems of central banks which target the inflation. They are formed on the basis of contemporary theoretical terms about macroeconomics and economic politics, they have microeconomic fundamentals, they are dynamic,
take into consideration probable character of economic processes, enable economic analysis and making predictions, give recommendations related to running the monetary politics. Contemporary information technologies and specially worked out programme security give the possibility for the considered models to be operatively applied, which is not to be underestimated for the practice of macroeconomic regulation.

4. CRITICISM OF THEORETICAL CONCEPT OF INFLATION TARGETING

Theoretical concept of inflation targeting and of the new keynesian DSGE model is in good position looking from the aspect of a new neoclassical synthesis. However, in recent years, the ruling economic mainstream has often been brought into question by the prominent names of economic science and is becoming more and more subjected to criticism. That is why, a large number of economists criticize the regime of inflation targeting itself, not only its theoretical groundlessness, but the disparity of results which has been achieved in different countries as well.

The initial assumption of the general equilibrium existence is most often criticized. A series of authors believe that the existence of a unique and sustainable solution to the system of general equilibrium has not been proven. This indicates a lack of knowledge of essential characteristics of the macroeconomic system and can serve as a serious conceptual argument, in extreme cases, against the use of new neoclassical synthesis in arguing practical recommendations.

A serious lack of this theory and hence the model of general equilibrium, relying on microeconomic analysis market, is the ignorance of a problem of cyclical nature of economic development – the most important issue for macroeconomic system. Sources of economic vacillation, even in the real business cycle models, are considered exogenous shocks. However, after the crisis, the issues of cycles nature, internal forces that drive economic development and define its cyclical nature, once again became essential. Therefore theories and models that adequately reflect the economic dynamics in the current manner of production must also include endogenous factors of cycle.

Criticism of New Keynesian DSGE model is emphasized by Professor Ricardo Caballero, calling DSGE model an "irresistible viper" [3, p.86]. The ruling mainstream is seriously brought into question precisely because this model is its core, which shows mathematically beautiful, but artificial, virtual world, which has almost no connections with reality. Economic science has, as a consequence, burdened with apriorism, theoretical abstractions and mathematical formalization, experienced its "ontological dislocation" and has walked away from economic reality [9, p.127].

What is often, in the field of new neoclassical synthesis procedures, subjected to criticism is the notion of "rational agent." The whole national economy has been reduced to "him" and "his expectations". Rational agent has all the information and he is "incredibly predictable". Individual agents are often identified with rational agents, forgetting that it is just a representative example which is used as an instrument in scientific analysis, nothing more than a theoretical abstraction. Characteristics of individual agents are inductively being attributed to the entire market, without taking into account those who are newly created from the mutual interactions, and that could be of crucial importance. Rational postulate of neoclassical theory is linked to the individual
and his set of incentives. On the other hand, it is indisputable that economic theory should penetrate into the behavior of all economic participants, including different market conditions. That brings us to the key question: is the rationality universal guideline for all economic participants, i.e. equal characteristic for all economic activities?

Through this problem neoclassical mainstream exceeds "tacitly", assuming that all individuals are alike in their efforts to maximize their own utility function. This means that the neoclassical theory starts from the assumption of "representative individual" or "representative firm" and then, in the process of aggregation, comes to the elements and information which are necessary for research of individuals and their decision-making procedure [12, p.41]. However, behavioral theory questions the above mentioned assumptions of neoclassicists. It is sufficient to take into account the fact that individuals are not similar either in terms of preferences, or in terms of features, and out of it should be concluded that the explanation of economic behavior needs something more than the very postulate of rationality [2, p.232]. That means that the notion of rationality cannot be viewed separately from the others, rather abstract assumptions, such as those on homogeneity of market participants, total awareness, the general market equilibrium, the existence of perfect competition and the like. The question is whether it is logically sustainable concurrent use of these numerous assumptions, all in order to promote rational behavior model. As a typical example of a logical unsustainability, authors singled out two groups of incompatible assumptions. The first group concerns the relationship between the assumption about naturally determined individual preferences and, accordingly, consistent respect of the rules, on one hand, and freedom of economic choice, on the other hand. The second logical inconsistency could be noticed when the assumption about limited resources confront the assumption of unlimited computational and analytical abilities in processing complex information [14, p.11-24, and 15, p.25-38].

Another important observation, which could not pass without causing doubt, is that in general equilibrium models, the most important values - the steady-state parameters, are, in essence, set arbitrary. They are based on practitioners present about acceptable or desirable values of key indicators. Steady state of the economy, economic theory interprets as the internal stability of the market system, that is, its ability to block the effect of external factors in order to maintain the balance. It means that macroeconomic indicators of economic activity of independent economic subjects in long-term, objectively (legitimately) tend to equilibrium, even when such a movement is threatened by the effects of external factors.

The question of a methodological character is raised here: What is the role of exogenous factors? Do they limit movement towards equilibrium, that is, do they prevent the fluctuations that generate non-equilibrium conditions? Namely, the dynamics of macroeconomic aggregates can be interpreted as lawful movement of the whole economic system to an equilibrium state, but can be understood as well as a result of the action of external factors. With verification method and analysis of empirical fact, the theory of equilibrium cannot be defended but cannot be challenged as well.

In recent years, there are serious reserves when it comes to the theory of general equilibrium, and they are primarily associated with methodological individualism, and its particular assumptions. They are connected to the attitude of Mises "if a term or assertion is assumed a priori, any of its denial is nonsense". Given all this, the claim that the stability of the market system is actually maintained by cyclic shifts of exogenous factors cannot be dismisses as an absurd. For a while it seemed that the game theory is a possible
solution to the problems faced by the theory of general equilibrium. Hopes were placed in approach that was launched by this theory which deals with the strategic interactions between individuals. However, it seems that it is not enough as the game theory, equally as the theory of general economic equilibrium, is derived from the assumption of methodological individualism.

CONCLUDING REMARKS

The contemporary state of economic theory, and the constant challenges faced by macroeconomic policy makers indicate the necessity of re-scrutinizing the dominant theoretical starting points in the area of monetary policy, the active development of academic and applied research, including the modeling itself. In such circumstances, the decisions in the area of monetary policy must be made very cautiously, and during its decision-making process the theoretical recommendations must be taken into account. While using the mathematical apparatus and formalistic methods, it is appropriate to be initially guided by their practical side and efficiency rather than the criterion of compatibility with the postulates of the leading economic mainstream. All the more because the ruling mainstream in recent years has experienced a serious criticism (especially in terms of the inadequacy of the theory of general equilibrium apparatus) by alternative schools of economic thought. It seems that the inflation must be seen, primarily, as an objective phenomenon, and long-run calculation, that is, as a function of pace of economic growth of the economy.

REFERENCES

Činjenica da je do 2012. godine čak 27 zemalja širom sveta usvojilo režim targetirane inflacije (među kojima je i Srbija, sa stupanjem na snagu od 2009. godine) ukazuje na sve veće interesovanje i rastuću popularnost u primeni ovog režima monetarne politike. Kako režim targetiranja inflacije, po broju zemalja koje ga prihvataju, ide uzlazom putanjom, to se javlja jaka potreba za njegovim teorijskim utemeljenjem. U ovom radu se razmatra veza između primene režima targetiranja inflacije i novokjenzijanskih dinamičkih modela opšte ravnoteže - DSGE modela sa vodećim ekonomskim mejstrom (kojeg mnogi ekonomisti nazivaju "nova neoklasična sinteza") i izdvajaju se sporne tačke koje podrazumevaju ograničene mogućnosti praktične primene navedenog režima monetarne politike i modela. Razumevanje polaznih principa, bitnih karakteristika i granica primjenivosti ovog režima monetarne politike, kao i svih pratećih instrumenata, neophodno je prilikom donošenja valjanih odluka od strane samih kreatora monetarne politike.

Ključne reči: targetirana inflacija, DSGE model, nova neoklasična sinteza, monetarna politika.