DOI: 10.18522/2073-6606-2016-14-1-48-60

TOWARDS THE THEORY OF MONETARY DEGRADATION, OR POST KEYNESIAN ANALYSIS OF MONETARY PROBLEMS OF THE RUSSIAN TRANSITIONAL ECONOMY IN 1991–1998

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The paper develops Post Keynesian theory of endogenous money and applies it to analysis of changes in monetary circulation in the Russian transitional economy in 1991–1998. These changes were characterized by displacement of bank deposits by cash, barter and inter-firm arrears as special means of payment. Author treats this process as «monetary degradation» because it created additional barriers to financing investment, made for criminalization and contributed to cost-push inflation. All this could be ruinous for creation of monetary capitalist economy in Russia. The main cause of monetary degradation is associated with inability of the government to enforce effectively contracts due to sharp institutional changes generated by shock therapy policy. The paper also focuses on the «legacies» of monetary degradation which matter at the present time. These are low coefficient of monetization, large M0/M2 ratio and absence of such monetary aggregates as M3 and M4. All these phenomena are the barriers to rapid and steady economic growth not based on rising oil prices. So, money structure can be considered as both institutional feature and macroeconomic variable.

Keywords: *Post Keynesian economics; monetary degradation; economy of Russia; money; barter; endogenous money; economy in transition; shock therapy*

JEL classifications: *E12, E40, E42, P20, P21*

К ТЕОРИИ ДЕНЕЖНОЙ ДЕГРАДАЦИИ, ИЛИ ПОСТКЕЙНСИАНСКИЙ АНАЛИЗ МОНЕТАРНЫХ ПРОБЛЕМ РОССИЙСКОЙ ПЕРЕХОДНОЙ ЭКОНОМИКИ В 1991–1998 ГОДАХ

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Статья посвящена развитию посткейнсианской теории эндогенной денежной массы и её применению к анализу изменений в денежном обращении в российской переходной экономике в 1991–1998 гг. Эти изменения характеризовались замещением банковских денег наличностью, бартером и неплатежами. Автор рассматривает данный процесс как «денежную деградацию», создавшую дополнительные препятствия для финансирования инвестиций, способствовавшую криминализации экономики и подстегнувшую инфляцию издержек. Все перечисленное могло стать разрушительным (и отчасти стало таковым) для создания «нормальной» капиталистической экономики в России. Представляется, что основная причина денежной деградации связана с неспособностью правительства эффективно обеспечивать выполнение контрактов в условиях резких институциональных изменений, порожденных политикой шоковой терапии. К другим причинам следует отнести падение ВВП и ограничительную макроэкономическую политику тогдашнего правительства. В то же время, денежная деградация сама вносила вклад в снижение ВВП и создавала стимулы для дальнейшего ужесточения фискальной и денежной политики, будучи также фактором, негативно влиявшим на институциональную среду. В статье также обсуждаются актуальные для сегодняшнего дня последствия денежной деградации. К этим последствиям относятся низкий коэффициент монетизации, высокое соотношение M0/M2, а также отсутствие таких денежных агрегатов, как M3 и M4. Все это – препятствия для быстрого и устойчивого экономического роста, который не основывался бы на повышении цен на нефть. Так, структура денежной массы и прочие характеристики денежного обращения могут рассматриваться и как институциональная характеристика, и как макроэкономическая переменная.

Ключевые слова: *посткейнсианская экономическая теория; денежная деградация; российская экономика; деньги; бартер; эндогенная денежная масса; переходная экономика; шоковая терапия*

Introduction

During the 1990s some economies in transition, in particular, Russia, faced with strange phenomenon concerned with sharp changes of its money structure. Cash, barter and mutual arrears displaced bank money. We christen this process *monetary degradation* and treat it as phenomenon opposed to monetary (or financial) evolution occurred in the second half of the twentieth century and later in the most developed and industrializing countries. We analyze these processes by means of Post Keynesian Economics, which considers money as both a durable asset and means of contractual settlement. Furthermore, Post Keynesian theory shows that bank money can be used in order to finance fixed capital investment, and expansion of such money accompanies increased investment activity. At the same time, monetary degradation can be both means of financing criminalization of the economy and process accompanying investment collapse and fall in the GDP. So, money structure can be considered as both institutional feature and macroeconomic variable. We start with empirics and then on the base of Post Keynesian Economics will try to explain causes and role of monetary degradation in Russia (and some other countries with transitional economies in the 1990s). Furthermore, we will discuss |legacy of this degradation which is important at the present moment. This legacy has been incarnated in low coefficient of monetization, high M0/M2 ratio, and absence of such monetary aggregates as M3 and M4. All these aspects are obstacles to rapid and steady economic growth in Russia in the 2010s.

The dynamics of money structure in some developed and industrializing economies: the role of monetary evolution

Post Keynesian Economics rejects the idea of neutrality of money (*Monvoisin and Roshon, 2009*). It shows that quantity of money affects real GDP and other real variables. The lack of money can stop investment activity and depress real output. External financing – creation of credit money by banks and non-bank financial intermediaries – is very important for rapid economic growth. Post Keynesian economists believe that "the banks hold the key position in the transition from a lower to a higher scale of activity" (*Keynes, 1937. P. 668*), and hence, "in the process of growth" (*Studart, 1995. P. 51; see also Carvalho, 1997; Charles, 2008*). That is why "the growth of real capital and output in the economy depends on… the behavior of the banking system, financial institutions and the liquidity decisions of households" (*Davidson, 1972. P. 181*). Therefore the endogeneity of money matters: it means that investment can be financed even in spite of lack of savings or the attempts of the central bank to limit the quantity of money in the economy.

The degree of endogenity of money, in turn, depends upon the maturity of financial – in particular, banking – system[1]. The more developed financial system gives to financial institutions more rich possibilities to escape from the central bank control and to create more new kinds of money (*Chick, 1992; Chick and Dow, 1988, P. 230–234; Dow et al., 2008; Niggle, 1990; 1991*). So the structure of money stock reflects the maturity of financial system and the ability of the economy to finance investment and economic growth. That is why money in the "financial capitalism" inextricably linked with banking (and, in general, financial) evolution. (*Minsky, 1986a*) And that is why *monetary evolution* – that is to say, decrease of relative role of cash money and emergence/growth of new endogenous kinds of credit money/monetary aggregates, – increases potential possibilities of economic growth[2].

It leads to the important conclusion: *not only money is not neutral, but also the structure of money is not neutral*! The "progressive" money structure, i. e. money structure with decreasing share of M0 and M1, on the one hand, and increasing role of new monetary aggregates, on the other hand, should positively correlate with rising real output. This conclusion can be supported empirically, as Table 1 shows.

Table 1

Monetary evolution and economic growth in selected developed industrial and newly industrializing countries, 1970–1994

Country	COB/QM ratio (in percent) 1970 and 1994	COB/QM ratio in 1994 as a percentage of 1970 ratio	Real GDP in 1994 as a percentage of 1970 level
Korea	22.71 and 13.04	57.42	698.24
Singapore	32.79 and 13.35	40.71	649.06
Thailand	53.36 and 9.75	18.27	565.15
Iceland	11.19 and 3.49	31.19	253.60
Norway	24.68 and 25.42	102.30	234.39
Philippines	43.98 and 15.60	35.47	226.87
Australia	12.97 and 9.28	71.55	210.71
Spain	21.72 and 20.51	94.33	197.63
U. S.	12.11 and 13.05	107.76	185.82
France	76.79 and 8.48	11.04	180.74
Netherlands	21.94 and 10.77	90.11	176.44

[1] This opinion is common view shared by those Post Keynesians who are adherents of so-called *structural endogeneity*, see *Pollin* (*1994*). More general view is described in: *Monvoisin and Roshon* (*2009*); discussions between Post Keynesian Structuralists and their opponents see in: *Lucarelli* (*2013*).

[2] Although such evolution makes also economy more liable to financial fragility and financial crises (*Minsky, 1986b; Charles, 2008; Wray, 2009; 2011*); see also mention in the next Section.

Source: Calculations by author on the base of data provided by *International Financial Statistics*, IMF.

According to Table 1, selected – on the basis of the principle of data availability – developed industrial and newly industrializing countries with long high economic growth were characterized by both long monetary evolution as measured by decrease in the "currency outside banks/quasi-money" (COB/QM) ratio and low level of this ratio. The exceptions – in respect of monetary evolution – are only U. S. and Norway. Table 1 shows also that newly industrializing countries which in the 1970–1994 were usually characterized by more rapid growth than developed industrial ones, exhibited more fast monetary evolution. These countries – Korea, Singapore, Thailand, Philippines – have remained behind in this respect only France (and, partially, Iceland). All these stylized facts conform to Post Keynesian Economics.

The dynamics of money structure in some transition economies in the 1990s and concept of monetary degradation

The some transitional economies had confronted in the 1990s with the opposed tendency: displacement of bank money from monetary circulation. What media of exchange became to replace credit money?

First of all, such role was played by cash money, as Table 2 shows.

Table 2

Changes in money structure in selected transition economies

COB/QM ratio and its changes	China, 1990-1995	Romania, 1988-1994	Moldova, 1991-1996	Latvia, 1993-1996	Estonia, 1991-1996	Russia, 1991-1998[a]	Belarus, 1994-1996	Ukraine, 1992-1995
Percentage changes in COB/QM ratio	-34.83	1.32	806.21	47.32	852.14	132.78	208.15	10.21
COB/QM ratio (in percent) in the end of the "accounting period"	22.43	34.64	180.88	114.53	126.73	41.90	53.31	117.56

[a] COB/M2 ratio.

Source: Calculations by author on the base of data provided by *International Financial Statistics*; IMF, and Central Bank of the Russian Federation.

According to Table 2, in many transition economies – at most the matter concerns economies of countries-members of the former USSR – role of cash money obviously grew in the first half of the 1990s (see also *Dow et al, 2008, P. 11*). Furthermore, these economies in the transitional literature as a rule are treated as "unlucky": such countries were characterized by very severe "transformational recession", at least, during the appropriate "reporting period"[3].

But increase of role of cash money (currency outside banks) was by no means the only unexpected change in the structure of media of exchange in transition economies in the 1990s. In many such economies barter, inter-firm overdue arrears ("non-payments" in

[3] On the other hand, the most successful country with transition economy, China, where economic growth is very rapid, exhibits both evident monetary evolution and relatively low COB/QM ratio; I recommend to compare values of this ratio at countries with developed, industrializing and transition economies.

the narrow sense) and other inside liabilities of industrial sector (“non-payments” in the broad sense) also rapidly grew and displaced “full-fledged” bank credit money. In general, in the 1990s monetary “surrogates were of countless varieties. They were issued by government, and local authorities, banks, enterprises, and even individuals” (*Dzarasov, 2010. P. 34*). “The rise of… pure barter transactions, transactions in promissory notes, and mutual debt write-offs, was observed in almost all of the 20-plus transition economies in the 1990s. However, it was most severe in Russia and Ukraine…” (*Dow et al., 2008. P. 28*). In other words, just as cash money, barter and “non-payments” (particularly in the narrow sense, but also in the broad one) had rapidly diffused in Russia in the 1990s. According to *Makarov and Kleyner* (*1999*), the share of barter in the transactions with industrial products was equal in 1991–94 to 40%, in 1995–1996 to 75%, and in 1997–99 to 80–90%. According to *Dow et al* (*2008. P. 18*), “at its peak in 1998, nonmonetary transactions such as mutual write-offs, promissory notes, and pure barter transactions constituted more than 50 percent of industrial transactions in Russia”. Finally, according to the World Bank, the share of overdue bills payable (in the industrial, agriculture, construction and transport sectors) in GDP was equal in 1994 to 0.148, in 1996 to 0.234 and in 1998 to 0.393. At the same time, M0/M2 ratio had increased from approximately 18 per cent in 1992 to almost 40 per cent in 1998.

I call this process “monetary degradation” (*Rozmainsky, 2014*). In general, *monetary degradation* is the process of increase (in the sum of media of exchange) of share of monies and quasi-monies which generate higher transaction cost *and* impede financing of expensive and long-lasting investment projects. I think that spreading of cash, barter and “non-payments” leads to these consequences.

The statement about higher transaction costs does not need to be proved in detail. Money decreases transaction costs in comparison with barter. Bank money decreases these costs in comparison with cash money. Regarding “non-payments”: mutual arrears are nothing but “implicit barter”.

But the statement about financing of investments is even more important. The very important point is that it is very difficult by means of cash money – and all the more by means of barter and “non-payments” – to finance periodically repetitive outflows which does not generate during the long time financial inflows. Such structure of outflows and inflows is inherent to many expensive and long-lasting fixed capital investment projects. The time gap between outflows and inflows can be eliminated only by credit (bank) money (*Rozmainsky, 2014*).

Such elimination, of course, does not mean “absolute happiness”, especially if long-term projects are financed by short-term debts, as it often took place in the developed countries, at least after the Second World War, (see *Minsky, 1975*). Such financing creates prerequisites for financial fragilation and financial crises, which were brilliantly analyzed by Minsky and his followers (*Minsky, 1975, 1977, 1986b; Fazzari and Papadimitrou, 1992; Dymski and Pollin, 1994, Studart, 1995; Charles, 2008*). Moreover, such changes in financial practices are “responsible” for the Great Recession (*Wray, 2009; 2011*). But it matters that bank money *allows* actual realization of investment projects. Cash money, barter and “non-payments” do not allow it.

The very important point is that not only barter and “non-payments”, but also cash money impedes financing of investment and growth. Credit money system contributes to growth more than cash money one because the former allows to mobilize all financial potential of the economy and to join actions of many different agents for the sake of realization of large investment projects.

The spreading of cash, and especially barter and “non-payments”, was widely analyzed in the transitional literature (*Dow et al, 2008; Dzarasov, 2010; Makarov and Kleyner, 1997; 1999; Shmelyov, 1997*). But only this paper gives an integral analysis of this spreading. The expansions of cash, barter and “non-payments” were not separated phenomena. These

were "chain links". And this "chain" is monetary degradation, i. e. deterioration of the money structure. Such deterioration is not neutral. This process is both cause and effect in the interaction between institutional policy of the government, fall of GDP and investment collapse, cost inflation, decrease in tax revenue and increase in tax burden, tight money policy, expansion of shadow sector and criminalization of the economy. This topic needs to be analyzed in detail.

Initial causes of monetary degradation

The most fundamental reason for "monetary degradation" was emergence of reluctance or inability of the state to provide legal enforcement of forward contracts, which are the main mode of coping with uncertainty in monetary, i. e. normal market, economy, according to Post Keynesian Economics (*Davidson, 1972; Carvalho, 1992; Rousseas, 1998. P. 17–31; Lucarelli, 2013*)[4]. Such case took place during the transition from planned economy to the market one (or during other big systemic transformations), when rupture in institutional system had appeared ("institutional hiatus", see *Kozul-Wright and Rayment, 1997*) and/or "rules of game" which form actual market relations had still not transformed into some influential and settled. In general, the weakness of the state was endemic disease in transitional and any underdeveloped economies. Therefore, generally speaking, destructive decrease in the degree of legal "maintenance" of forward contracting can potentially occur always in any economy where traditions of the "strong state" – in sense of the state which provides total-lot protection and enforcement of contracts – are poor and weak. Transition is the most important impulse to such decrease, but it is not the only one (another impulse can be, for example, radical change of government or line of national policy).

The mentioned reluctance (or inability) means that incentives to forward contracting become very low, because contracting without state enforcement is unreliable, insecure and frail. But according to Post Keynesian Economics, genesis and use of "full-fledged" money is fundamentally linked with forward contracting: "… money and contracts intimately and inevitably related" (*Panagopoulos and Spiliotis, 1998. P. 650–651;* see also *Davidson, 1972; Carvalho, 1992*). Therefore incentives to use of such money become also low. Economic agents begin to refuse to use money as unique (liquidity) "time machine" (*Davidson, 1977. P. 542; 1996. P. 502*): absence of legal state protection of forward contracts eliminates needs in such "time machine". Then economic agents try to create alternative modes of coping with uncertainty and to use alternative media of exchange for application of these modes. And then structure of means of payment changes.

The practical example of loss of legal enforcement of forward contracts was the shock therapy policy of transition which has started in Russia in 1991 – 92 according to the principles of the IMF. The main idea behind shock therapy policy is *immediate* and *simultaneous* realization of all planned reforms. But some reforms – for example, price liberalization, – require short period for its completion, other reforms – for example, creation of clear legal framework for market economy – require a long one. So, strict shock therapy policy was transformed into the process treated by me as "reverse gradualism" (*Rozmainsky, 2014*). Those reforms that must be implemented later, take place more early (and vice versa). It is the definition of the "reverse gradualism". Such "bad" succession really complicates the transition to the market economy and also generates chaos and increases degree of uncertainty of the future. That is why according to Post Keynesian perspective, shock therapy policy is adverse mode of transition (see also *Tsang, 1996; Dow et al., 2008*).

At the same time, among Russian policy-makers Hayekian ideas about spontaneous genesis of market (together with the Washington consensus dogmas about privatization, liberalization and stabilization) were popular. According to it, the creation of the market economy must not be concerned with the government actions. The government should

[4] See also below the definition of monetary economy itself.

depart from the economy and open the way for the rising of the market institutions. The forming of such institutions is the effect of the chaotic interactions between many atomized individuals. The government must not disturb the "mystery" of spontaneous rising of the market economy (*Rozmainsky, 2014*).

These ideas had been learned more than well. The Russian government had refused from administration of state enterprises in 1991 and become to perform very badly functions of legal protection of forward contracts (moreover: it often violated its own contractual obligations). Thereby it had created great difficulties for mentioned forward contracting, and therefore the foundations for use of "full-fledged" credit money partially disappeared.

Economic agents had begun to strengthen old informal links and to create new ones in order to reduce extreme high level of uncertainty. As a rule, such links had constituted shadow, or illegal, economy, because agents wanted and very often were forced to circumvent the government. Such illegal economy took various shapes: tax evasion and all by-products of it, transactions with rights and licenses, production and selling of drugs etc.

According to *Shmelyov* (*1997*), in 1992 and 1993 the amount of illegal appropriation of wealth in Russia by private agents was equal to 75–80% of GDP; in 1996 (when law framework became already a little more clear) it was equal to 12–15% of GDP.

But shadow economy as system of illegal, informal, mainly non-market or pseudo-market, links, coping with uncertainty, requires adequate means of payment, i. e. assets which allow to conceal outcomes of informal transactions and/or these transactions itself and impede most calculations and accountings.

Credit money is irrelevant for it. The point is that such money implies "transparency" of payments (and, hence, transactions) for any "outside" agents. This statement is applied not only to "usual" checkable deposits, but also to new, "advanced" kinds of money and quasi-money (certificates on deposit, repurchase agreements etc), which are created by banks or nonbank financial institutions (and were described in the papers devoted to causes of money supply endogeneity: *Chick, 1992; Niggle, 1990, 1991; Dow et al., 2008*). Therefore monetary (or financial) evolution disturbs shadow activity, because it makes all transactions "transparent" for the statistical services and tax authorities.

It does not mean that bank money finances always legal transactions. Illegal activity can be financed by such money; but violators of law are forced to resort to various tricks, in order to gain their ends.

The above kinds of "media of exchange" indeed can help "shadow" groups to hide its actions. We imply cash money, barter and "non-payments". All these assets are anonymous. Use of it does not imply disclosure of information about the name(s) of transactor(s).

In this respect, cash is ideal mode of financing illegal activity in comparison with bank money[5]. But barter (and mutual arrears) has even more advantages. Firstly, barter allows to conceal genuine (monetary) value of goods. Secondly, accounting of material things flows is more difficult than accounting of monetary flows. These advantages frequently more than offset disadvantages of barter which are concerned with its "awkwardness". Therefore, barter and mutual arrears are also often used in order to finance illegal activity.

This reasoning is applied to dynamics: any expansion of shadow, "informal", economy generates displacement of bank money by cash, barter and "non-payments". In other words, such expansion leads to monetary degradation. As I have shown above, expansion of shadow economy was the reaction on extreme version of shock therapy policy. That is why such policy was fundamentally responsible for monetary degradation.

Another reason for deterioration of money structure is purely macroeconomic one. The fall of both real GDP and investment (in 1998 the former indicator was equal to 57%, and the latter one was equal to only 21% of pre-reform 1990 values, see *Dzarasov, 2011*.

[5] In Russia people use very popular term "black cash" ("chjornyy nal") in order to characterize cash money flows which are not reflected in "official" enterprises accounting).

P. 199) discouraged monetary evolution: banks and other financial institutions had no incentives to invent new kinds of monies and quasi-monies. So due to investment collapse "advanced" monetary aggregates like M3 had not been created in Russia, as *Nozdran and Berezin* (*1993*) wrote (these aggregates were absent formerly because the planned economy did not need sophisticated private credit assets and relations, see *Dow et al., 2008*). In the economy, characterized by long decline, financial fragilation concerned with new kinds of bank money – described by Minsky (1986b) – is impossible.

Economic agents forgot about investment and concentrate on purely production and (even more) exchange aspects. But working capital turnover – unlike additions to fixed capital stock – can take place by means of using cash money, barter and "non-payments". Furthermore, barter and arrears provided survival of insolvent firms, especially when bankruptcy law really did not work (as in Russia in the 1990s; later bankruptcy law was used by corporate raiders). So, monetary degradation is the reaction on macroeconomic slump; and such reaction softens negative social effects of this slump, but at the cost of survival of potential bankrupts.

Third reason is concerned with fiscal and monetary measures of the government. More exactly, monetary degradation can be an effect of restrictive policy. Both expansion of barter and emergence of new monetary substitutes invented by enterprises were reaction on both increases in tax rates (which were executed in Russia for the sake of attainment of IMF target of balanced budget) and enormous decreases in monetary growth (which were executed in Russia for the sake of attainment of targeted – again by IMF – rate of inflation). In particular, in the 1990s "Russian authorities started what, probably, was the most consistent experiment of the restrictive monetary policy in recent history" (*Dzarasov, 2010. P. 33*).

Post Keynesians for a long time had described phenomenon of emergence of quasi-monies in response to tightening in money policy in market capitalist economy (Minsky, 1957). But they wrote about new *bank* quasi-monies. As I have mentioned above, such monies allow to finance new investment projects; it means that the monetary system changes progressively. In transition economy the matter concerns monetary degradation. Firstly, in order to get over the lack of liquidity owing to tight money policy, economic agents invented substitutes of "normal" monies and use both barter and "non-payments". "Thus, the macroeconomic policy geared toward fighting inflation has largely destroyed money as an institution in Russia" (*Sapir, 1999. P. 3; see also Dzarasov, 2010*). For example, coefficient of monetization had fallen from 19.9 per cent in 1993 to 14. 8 per cent in 1999, while in the UK, USA, Germany, France this ratio is between 50 and 100 per cent; in Eurozone between 1995 and 2005 it had increased from 72.5 per cent to 89.2 per cent (*Rozmainsky, 2010. P. 77*). Secondly, in order to hide the outcomes of their economic activity and evade taxes, agents used the same assets.

One more reason could be inflation. Inflation increases opportunity cost of money holding and creates incentives to substitute it for barter. The same influence is exerted by high interest rates (*Malakhov, 1997*) which are the effect of tight money policy. It is clearly that this and previous reasons did not touch such element of monetary degradation as displacement of bank money by cash.

The described causes are not independent from each other. Not only shock therapy policy but also tightening in monetary and fiscal policies could generate fall in real GDP and fixed capital investment (like recently in Greece, see *Papadimitiou et al., 2013*). High inflation could both create incentives to tightening in policies and increase level of uncertainty, thereby decreasing investment. As I already wrote, there is interaction between these phenomena in the economy where it turned out that policy of transition has failed.

Monetary degradation as the adverse spiral of "cumulative causation"

The above reasoning suggests an idea to spiral-like character of monetary degradation. The described process was not passive one. Monetary degradation was the powerful factor

of adverse economic and institutional changes. The above causes of monetary degradation could be at the same time effects of it.

So, monetary degradation created favorable "payment environment" for further expansion of shadow economy. This degradation allowed to improve technologies of financing transactions by cash, barter and "non-payments". It implied that there was improvement of technologies of concealment of outcomes of economic activity and/or this activity itself. Thus, the possibilities for expansion of shadow economy became wider.

Secondly, monetary degradation by definition generated higher costs and decreases investment. Therefore it led to both further fall of GDP and cost-push inflation. So monetary degradation could inject cost inflation irrespective of central bank policy. For example, in 1997, "the Severovejsk engineering plant paid by surrogates (which means on barter terms) for the delivery of cast iron 2 million roubles per ton. In cash, its cost at the time was only 0.7 million roubles" (*Dzarasov, 2010. P. 35*). At the same time, this degradation could lead to technical regress because long fall of investment decreases capital stock and, consequently, capital-labor ratio, which can be treated as the argument in the technical progress function together with level of investment itself (*Palley, 1996*).

Thirdly, monetary degradation could induce the government to restrict more its policy. For example, decrease in tax revenue owing to diffusion of barter and "non-payments" might lead to new increase in tax burden. This increase was directed to balance the government budget. Similarly, acceleration of inflation due to the same cause might lead to more restrictive monetary policy; such policy was directed to disinflation. However, described tightening was ineffective because it only intensified monetary degradation.

But the most dangerous effect of monetary degradation was concerned with disintegration, "fragmentization" of the economy. Indeed, this statement is applied at most to barter and "non-payments". The point is that "normal" money, as is well known, is *universal* means of payment, unlike just now mentioned media. "Non-payment" (or some commodity utilized in barter relations) of Firm A can be accepted by Firm B or Firm C; but Firm D and Firm E may refuse to make it and, therefore, will break economic links with the former three companies. That is why endogeneity of bank credit money and endogeneity of monetary obligations of enterprises are fundamentally different things: the latter is extremely far from "full-fledged" money, because it cannot be both "the means of contractual settlement" and "one-way time machine" (*Davidson, 1977. P. 542*).

I already mentioned about role of informal links between agents in shadow economy and role of "bad" means of payment for survival of insolvent firms. Barter and "non-payments" (and also a lesser degree cash money) allowed to strengthen above links and to provide more sharp divisions between "friends and foes". The economy broke into disconnected local groups of economic agents. Furthermore, inefficient (and therefore insolvent for conditions of normal market economy) companies continued to live and did not to try to improve own efficiency, productivity, level of its technology etc. The main consequence of all this was both absence of incentives to technical progress and impossibility of horizontal diffusion of innovations (*Makarov and Kleyner, 1997*). Such economy could maintain standards of living which are compatible with bare subsistence, but it had doomed on deepest technological stagnation and decline. And this doom took place irrespective of liberalized prices, privatized enterprises, low rate of money supply growth approved by IMF, etc.

Monetary degradation was stopped due to positive macroeconomic (including external) shocks and successful shift in the government regulations (by prime-minister of those days Primakov), and also emergence of more clear legal framework together with more effective legal enforcement of contracts, and attainment of bare subsistence level. Almost all this happened in 1999–2001: "Only after the restrictive monetary policy was violently stopped by the crisis, did economic recovery ensue in Russia" (*Dzarasov, 2010. P. 35*).

"The steady rise of oil prices also contributed to macroeconomic stabilization. As a result, since 1999, the economy's reliance on cash money has steadily been declining and

the importance of banking has slowly been increasing" (*Dow et al., 2008. P. 18*). However, the economy with "degraded" structure of media of exchange cannot rapidly grow on the "internal base": local groups of informally linked agents are closed and self-contained structures which have no ability to develop and to innovate. In this respect, effects of monetary degradation are quite opposite to ones of expansion of credit money which (as I mentioned above) allows to take part in the activity of many different agents and increases quantity of economic interrelations between them.

Conclusions

Theory of monetary degradation is – based on the Post Keynesian methodology – theory explaining dynamics of monetary circulation in the transition economies like Russia in the 1990s. According to this theory, structure of monetary circulation (media of exchange) or "payment environment" is both reflection and catalyst of important macroeconomic and institutional changes.

One the one hand, the money structure with large share of cash (and also with big role of barter and "non-payments") is the reflection of inefficient institutions, mainly in the form of poor protection of forward contracting, and also non-investment character of the economy (about the role of Russian corporations here and its short-term orientation see *Dzarasov, 2011*). On the other hand, it is a growth restraint like low "animal spirits", underdeveloped infrastructure, heavy tax burden and other problems of the transitional economies. Furthermore, media of exchange structure with big share of barter and non-liquid obligations of enterprises impedes horizontal diffusion of innovations. Therefore structure of monetary circulation matters.

Since the most fundamental reason for monetary degradation is bad performance of the government as a "producer" of legal enforcement of forward contracting, it is clearly that strategic mistakes of the Russian government in the course of transition in the 1990s were more than costly. In particular, the very serious mistake was a lack of understanding of the fact that normal market economy cannot be created without active participation of the government. The shock therapy policy failed to accept it and extremely underestimated the importance of gradual institutional evolution. "… the shock therapy–type of policies…

in the early 1990s resulted in hyperinflation, macroeconomic chaos, and the general public's loss of trust in money and banks, which had clear implications for credit creation, and thus for production and output. As a result, transition economies had to start the institution-building process… " (*Dow et al., 2008. P. 30–31*).

The very important point is that long monetary degradation can lead to loss by "monetary economy" its "monetariness". According to Post Keynesian Economics, "money plays unique role in relation to the existence of future contracts, which are normally denominated in nominal terms" (*Lucarelli, 2013. P. 349*). Monetary economy is "an economy based on a system of forward contracts" (*Carvalho, 1992. P. 102*), and "money is at the very foundation of a market economy" (*Dequech, 2013–2014. P. 269*). Furthermore, "money is… endogenous and is tied to bank credit" (*Monvoisin and Roshon, 2009. P. 48*). In other words, monetary economy is characterized by presence of credit money which provides "temporality" of economic activity (see also *Carvalho, 1992. P. 46*). Monetary degradation decreases the role of such monies. So described degradation can change the fundamental features of economic system in which it takes place. More exactly, monetary degradation may not allow planned economy to transform into monetary production one. The former can become – due to monetary degradation – economic system characterized by domination of closed local groups of informally linked agents and eroded dividing lines between legal and illegal activities. Such system – which can be christened as "criminal pseudocapitalism" – is the reality of many African countries and could become reality of Russia.

As we already said, in 1999–2001 due to both the actions of Primakov's government and macroeconomic expansion – induced by mainly rising oil prices – the most aspects of monetary degradation in Russia were eliminated (*Rozmainsky, 2010*). However, some legacies of monetary degradation of the 1990s remain now. These ones are low coefficient of monetization, large M0/M2 ratio and absence of such monetary aggregates as M3 and M4. We already wrote that in 1999 coefficient of monetization was equal to 14.8 per cent (*Rozmainsky, 2010*). It did steady increase until 2013 when it was equal to 47.1 per cent which is very low value according to the international standards. During 2000 – 2014 M0/M2 ratio has fallen from 0.37 to 0, 22. This was a good tendency, but, however, 22 per cent of M0 relatively to M2 is very large size, according to the standards of the developed countries (in Eurozone and USA this ratio is less than 10 per cent, see *Rozmainsky, 2010*).

In general, monetary degradation and retarded money structure are adverse institutional and macroeconomic phenomena which are ignored by mainstream economics but should be analyzed in the framework of Post Keynesian Economics. It is clearly also that such analysis has practical implications.

ЛИТЕРАТУРА/REFERENCES

Makarov V. and *Kleyner G.* (1997). Barter in the Transitional Economy: Features and Tendencies // *Ekonomika i matematicheskie metodi*, vol. 33 (2), pp. 25–41. (In Russian.)

Makarov V. and *Kleyner G.* (1999). The Development of Barter Relations in Russia. Institutional Stage. Moscow: TSEMI RAN Publ. (In Russian.)

Malakhov S. (1997) Transaction Cost in the Russian Economy // *Voprosy ekonomiki*, № 7, pp. 77–86. (In Russian.)

Nozdran N. and *Berezin I.* (1993). Monetary Aggregates: Theory and Practice // *Voprosi ekonomiki,* № 6, pp. 31–39. (In Russian.)

Rozmainsky I.V. (2010). About Debarterization and Other Aspects of the Payment System Dynamics in «Putin's Russia» // *Journal of Institutional Studies*, vol. 2 (3), pp. 75–85. (In Russian.)

Schmelyov N. (1997). Non-Payments are the Problem Number One in the Russian Economy // *Voprosy ekonomiki*, vol. 4, pp. 26–41. (In Russian.)

Carvalho F.J.C. (1992). Mr. Keynes and the Post Keynesians. Principles of Macroeconomics for a Monetary Production Economy. Aldershot: Edward Elgar.

Carvalho F.J.C. (1997). Financial Innovation and the Post Keynesian Approach to the «Process of Capital Formation» // *Journal of Post Keynesian Economics,* vol. 19 (3), pp. 461–487.

Charles S. (2008). Teaching Minsky's Financial Instability Hypothesis: a Manageable Suggestion // *Journal of Post Keynesian Economics*, vol. 31 (1), pp. 125–138.

Chick V. (1992). The Evolution of the Banking System and the Theory of Saving, Investment and Interest / In: *Arestis P.* and *Dow S. C. (eds.)* V. Chick on Money, Method and Keynes. Selected Essays. London: Macmillan, pp. 193–205.

Chick V. and Dow S.C. (1988). A Post-Keynesian Perspective on the Relation Between Banking and Regional Development / In: *Arestis P. (ed.)* Post-Keynesian Monetary Economics: New Approaches to Financial Modelling. Aldershot: Edward Elgar, pp. 219–250.

Davidson P. (1972). Money and the Real World. London: Macmillan.

Davidson P. (1977). Money and General Equilibrium // *Economie Appliquee*, vol. 30 (4), pp. 541–563.

Davidson P. (1996). Reality and Economic Theory // *Journal of Post Keynesian Economics*, vol. 18 (4), pp. 479–508.

Dequech D. (2013–2014). Is Money a Convention and/or Creature of the State? The Convention of Acceptability, the State, Contracts, and Taxes // *Journal of Post Keynesian Economics*, vol. 36 (2), pp. 251–273.

Dow S., Ghosh D. and *Ruziev G.* (2008). A Stages Approach to Banking Development in Transition Economies // *Journal of Post Keynesian Economics*, vol. 31 (1), pp. 3–33.

Dymski G. and *Pollin R.* (1994). New Perspectives in Monetary Macroeconomics: Explorations in the Traditions of Hyman P. Minsky. Ann Arbor: University of Michigan Press.

Dzarasov R.S. (2011). Eichnerian Megacorp and Investment Behaviour of Russian Corporations // *Cambridge Journal of Economics*, vol. 35, pp. 199–217.

Dzarasov S.S. (2010). The Post Keynesian Alternative for the Russian Economy // *Journal of Post Keynesian Economics*, vol. 33 (1), pp. 17–40.

Fazzari S. and *Papadimitrou D.* (1992). Finance Conditions and Macroeconomic Performance. Essays in Honor of Hyman P. Minsky. Armonk: M.E. Sharpe.

Keynes J.M. (1937). The "Ex-ante" Theory of the Rate of Interest // *Economic Journal*, vol. 47 (188), pp. 663–669.

Kozul-Wright R. and *Rayment P.* (1997). The Institutional Hiatus in Economies in Transition and its Policy Consequences // *Cambridge Journal of Economics*, vol. 21, pp. 641–661.

Lucarelli B. (2013). Endogenous Money: A Note on Some Post-Keynesian Controversies // *Review of Political Economy*, vol. 25 (2), pp. 348–359.

Minsky H.P. (1957). Central Banking and the Money Market Changes // *Quarterly Journal of Economics*, vol. 71 (2), pp. 171–187.

Minsky H.P. (1975). John Maynard Keynes. New-York: Columbia University Press.

Minsky H.P. (1977). The Financial Instability Hypothesis: An Interpretation of Keynes and An Alternative to "Standard" Theory // *Nebraska Journal of Economics and Business*, vol. 16, pp. 5–16.

Minsky H.P. (1986a). The Evolution of Financial Institutions and the Performance of the Economy // *Journal of Economic Issues*, vol. 20, pp. 345–353.

Minsky H.P. (1986b). Stabilizing an Unstable Economy. London: Yale University Press.

Monvoisin L. and *Rochon L.-P.* (2009). Keynes and the Real World: Davidson, Money and Uncertainty // *Journal of Post Keynesian Economics*, vol. 32 (1), pp. 43–58.

Niggle C.J. (1990). The Evolution of Money, Financial Institutions and Monetary Economics // *Journal of Economic Issues*, vol. 24, pp. 443–450.

Niggle C.J. (1991). The Endogenous Money Supply Theory: An Institutional Appraisal // *Journal of Economic Issues*, vol. 25, pp. 137–151.

Palley T.I. (1996). Growth Theory in a Keynesian Mode: Some Keynesian Foundations for New Endogenous Growth Theory // *Journal of Post Keynesian Economics,* vol. 19 (1), pp. 113–135.

Panagopoulos Y. and *Spiliotis A.* (1998). The Determinants of Commercial Banks' Lending Behavior: Some Evidence for Greece // *Journal of Post Keynesian Economics*, vol. 20 (4), pp. 649–672.

Papadimitriou D.B., Nikiforos M. and *Zezza G.* (2013). The Greek Economic Crisis and the Experience of Austerity. Strategic Analysis. The Levy Economics Institute of Bard College, July.

Pollin R. (1994). Marxian and Post-Keynesian Developments in the Sphere of Money, Credit and Finance: Building Alternative Perspectives in Monetary Macroeconomics / In: *Glick M.A. (ed.)* Competition, Technology and Money. Classical and Post-Keynesian Perspectives. Aldershot: Edward Elgar, pp. 97–117.

Rousseas S. (1998). Post Keynesian Monetary Economics. London: Macmillan.

Rozmainsky I.V. (2014). «Reverse Gradualism», Investment Collapse and Monetary Degradation in Russia // *Economic Herald of the Donbas*, no. 4 (38), pp. 5–11.

Sapir J. (1999). Russia's Crash of August 1998. Diagnosis and Prescription // *Post-Soviet Affairs,* vol. 15 (1), pp. 1–36.

Studart R. (1995). Saving, Financial Markets and Economic Development: Theory and Lessons from Brazil / *Arestis P.* and *Chick V. (eds.)* Finance, Development and Structural Change. Aldershot: Edward Elgar, pp. 46–70.

Tsang S.-K. (1996). Against «Big-Bang» in Economic Transition: Normative and Positive Arguments // *Cambridge Journal of Economics*, vol. 20, pp. 183–193.

Wray L.R. (2009). The Rise and Fall of Money Manager Capitalism: A Minskian Approach // *Cambridge Journal of Economics*, vol. 33 (4), pp. 807–828.

Wray L.R. (2011). Minsky's Money Manager Capitalism and the Global Financial Crisis // *International Journal of Political Economy*, vol. 40 (2), pp. 5–20.