The Demonetisation of the Russian Economy: Causes and Policy Options*

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I) Introduction

The virtual explosion in the use of barter and money surrogates in the Russian Federation between 1995 and 1998, a process which has no real counterpart in most other transition economies, has motivated a number of studies in recent years. Despite a significant past legacy from the Soviet period of barter and other non-cash transactions, Russia had appeared to make major progress in the first years of transition toward the unification of economic activity around a single monetary unit and exchange rate. This persistence of some barter in this context was widely attributed to high and unstable inflation, as well as possibilities for tax evasion. Yet progress in stabilisation between 1995-97 did not lead to a widely expected rapid expansion of wholesale markets based on the cash rouble. The share of economic transactions and budgetary operations in money surrogates and barter increased sharply, along with specialised non-cash intermediary organisations, a fragmentation of markets, and an elaborate differentiation of prices for the same commodities according to type of transaction. Furthermore, as opposed to the past, when barter prices were commonly decreased below cash prices as a means of tax avoidance, average non-cash prices have become significantly higher than their cash counterparts. This defies the basic logic of a market economy, as producers commonly accept commodities in payment at a surplus, as opposed to a discount, relative to cash. Furthermore, these very same producers often complain of their own cash shortages and liquidity constraints.

Money surrogates can take many forms in Russia. First, there is direct barter between firms, ranging from simple bilateral exchange to complex chains of deliveries involving many firms and organisations, often arranged by professional intermediaries. Another very common form of money surrogate are offsets, involving the cancellation of mutual debts or the acceptance of goods or services in exchange for writing off debts or future payments. As with barter, offsets can vary in complexity from a simple bilateral cancellation of debts to elaborate schemes of deliveries and write-offs involving a large number of organisations. Such offset arrangements have become a major means of state budgetary fulfilment, particularly at the regional and local levels. Along with pure barter and offsets, bills of exchange and other paper securities have become important surrogate means of payment in the Russian economy since the mid-1990s.

While the use of money surrogates can have positive uses in the context of the Russian economy, including the multilateral clearing of debts and greater working capital for some liquidity-constrained firms, the costs appear to have been much greater. This includes generally higher transaction costs, market fragmentation, a lack of clarity and transparency in business and government accounting, problems in the implementation of tax and other regulations, and corruption. State budgets typically lack sufficient cash revenue for the payment of wages and other transfers. Demonetisation can also be linked to problems in the fiscal system, bankruptcy, and corporate governance. Combating demonetisation will require a comprehensive set of policy measures.

II) Trends in Demonetisation

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1 This paper summarises the main arguments of Chapter 2 of the *OECD Economic Survey of the Russian Federation: 1999-2000*. This survey was prepared in co-operation with the Russian government and a number of administrations of Subjects of the Federation. Most of the data comes from primary or official sources. For figures lacking a citation in the present paper, the reader is referred to the *OECD Economic Survey.*

Although the use of barter and other non-cash exchange has a long history in the former Soviet Union, the period between 1994 and 1998 witnessed fundamental quantitative and qualitative changes in the use of money surrogates. First, the overall use of money surrogates exhibited a strong upward trend between 1994-98, with the share of surrogates in industrial transactions rising steadily from 10 to over 50 per cent, and the share of surrogates in state budgetary operations moving from negligible to highly significant levels. By 1998, surrogates accounted for a majority of revenue at the subnational level.[2] Second, while non-cash transactions in 1994 usually took the form of pure barter, and were concentrated in manufacturing industries, various forms of debt offsets and, to some degree, bills of exchange came to predominate in later years. The highest concentration of non-cash transactions also shifted to the primary industries, particularly electricity and gas. The greater significance of debt offsets in non-cash transactions mirrored a sharp rise in inter-enterprise arrears and net indebtedness of industrial firms to state budgets.[3] The degree of reliance on money surrogates of industrial firms and state administrations differs significantly across Russian regions, although there does not appear to be a strong relationship between the extent of demonetisation and basic economic indicators such as per capita output, income or industrial concentration. Higher per capita export earnings, however, do appear to have a measurable impact in increasing the relative share of cash transactions within a region.

In the context of the high inflation and depreciation of the rouble following the August 1998 crisis, the absolute magnitude of demonetisation has declined somewhat. Given factors particularly favourable to cash receipts for the federal budget (see below), the federal government has succeeded in implementing a cash-only rule for budgetary operations since the second quarter of 1999. In the context of a much higher rouble value of (cash) export earnings and much lower relative prices for gas and electricity, the shares of surrogates in industrial transactions and subnational budgetary operations have also declined, but remained significant at close to 40 per cent in 1999. Despite these somewhat favourable external factors, the root causes of demonetisation remain.

The Causes of Demonetisation

Previous investigations into the causes of demonetisation in the Russian economy have placed differing emphasis on a number of factors involving inherited Soviet institutions, changes in macroeconomic policies, and problems and delays in structural reforms. Four relatively comprehensive studies from 1998 (Neplatezhi (1998), Gaddy and Ickes (1998), Woodruff (1998), and Commander and Mumssen (1998) place some stress on factors from all three of these categories, although the emphasis and conclusions of these studies vary considerably. More recently, Pinto et al (1999) completed an important comprehensive study on the closely related problem of nonpayments.

Inherited institutions include a past Soviet tradition of barter, a former “non-cash” monetary circuit for industrial transactions, and the relics of an administrative organisation (Gossnab) for the territorial allocation of goods. While these inherited Soviet institutions might help to explain the general persistence of the non-cash economy, they leave open the questions of its relative increase since 1994 and the other recent trends summarised above.

[2] Estimates that document trends in the use of surrogates come from a number of sources, including various surveys, Ministry of Finance data, and Goskomstat data. See OECD (2000) for details.

[3] The build-up in indebtedness to state budgets has been given the interpretation of an implicit increase in budgetary subsidies over this period (Commander and Mumssen, 1998). While this may be the case to some extent, it is also true that this build-up mostly concerns interest and penalties on past tax arrears. As state organs, in contrast to taxpayers, do not have to pay interest on their arrears, much of this build-up reflects large outstanding mutual debt, as opposed to such an infusion of new implicit subsidies. See OECD (2000).

The demonetisation process has coincided with a major shift in monetary policy since 1994, including the virtual elimination of implicit subsidisation through "soft" central bank refinancing and a tougher regulation of commercial banks that discouraged high-risk lending. Studies that emphasise the importance of this policy shift for explaining demonetisation point out (a) the use of barter and surrogates as a possible substitute for now scarce commercial credits for working capital and (b) high interest rates on government bonds (GKO, OFZ) that both further discouraged commercial bank lending and increased the opportunity cost of using cash for transactions. The rise in the non-cash economy paralleled a major contraction in the ratio of commercial credit to GDP.

The initial build-up in arrears and non-cash settlements in 1994 and early 1995 was almost certainly related to the limited credibility of the new "tough" monetary policy. Many enterprises continued to accumulate the debt of other enterprises, without a consideration of their solvency, under the expectation that the Central Bank would eventually accommodate with a new expansion of credit. This had already occurred several times in previous years of transition. After the new policy gained some credibility, however, the continued and accelerated expansion of nonpayments and surrogates requires further explanation. Certainly, the high prevailing interest rates on GKO may have contributed somewhat to the demonetisation process. On the other hand, the demonetisation process appears to have been even slightly more severe in regions that are relatively isolated from financial centres and GKO markets. In addition, at the time of the build-up in surrogates, regional banks appeared to have been operating with a rather high degree of liquidity (OECD (1997)). Only a few of the relatively large Moscow banks had high shares of government bonds in their portfolios, the most important of which was the giant state-owned savings bank, Sberbank. This bank, however, relied largely on attracted resources in the form of household deposits at rather low interest rates. The most important explanatory factors for the decline in commercial credit to the nonfinancial sector appear to have been greatly toughened refinance policies and prudential regulations (including rapid license withdrawals for violations), and extremely poor institutions for the defence of creditor claims in the event of default on commercial loans (OECD (1997)).

Important causes of the demonetisation process appear to be structural, lying in a web of complicated and distorted institutional arrangements surrounding fiscal federalist relations, the regulation of natural monopolies, and taxation. A number of studies have highlighted the advantages of non-cash transactions for the avoidance of bank accounts that have been blocked by tax authorities in the context of accumulated tax arrears since 1994 (Hendley et al (1997)). In responses to surveys on this topic, enterprises themselves have tended not to stress this factor as a primary motivation for non-cash transactions. As indicated below, however, officials from regional and local governments also often operate under incentives to make arrangements to avoid cash flows into enterprise accounts. The common blocking or impounding of the accounts of local governments due to the underfulfilment of obligations according to one of numerous unfunded federal expenditure mandates has had much the same effect.

OECD (2000) stresses two primary structural factors that have contributed to demonetisation: the conditions under which natural monopolies and subnational administrations operate in the Russian Federation. The former causes are related to the particular status of natural monopolies as quasi-fiscal organisations in Russia, while many of the latter are rooted in the current distorted nature of fiscal federalist relations (OECD (2000), Lavrov, Litwack, and Sutherland, (2000)). The demonetisation process can be understood largely as a consequence of the combination of these factors, the tightening of monetary policy, and administrative increases in relative prices of natural gas between 1994-98. For reasons described below, non-equivalent barter and debt offsets, along with nonpayments, have been a primary means for the implicit subsidisation of manufacturing enterprises in recent years. Non-cash instruments also represent important tools for the implementation of policies at the regional and local levels of government in the context of a highly problematic system of fiscal federalist relations.

A number of previous studies have already linked the rise of money surrogates to the operation of the natural monopolies ((Buckberg and Pinto (1997), Gaddy and Ickes (1998), Woodruff (1998, 1999), and Commander and Mummsen (1998)). Tariffs on the products of natural monopolies are heavily regulated by the Federal Energy Commission, the regional branch of which has a close relationship to the corresponding regional state administration. Branches of the gas and electricity monopolies have only very limited abilities to reduce supply to a number of non-paying customers. These limitations derive from both political pressures and technological deficiencies. Political pressures reflect the importance of many large enterprises for employment and the financing of social infrastructure in the region, combined with the strong leverage of the regional administration over economic activity in its jurisdiction.[4] Technical limitations are also important in many regions, as the nature of pipelines, central heating systems, and the absence of meters often hinder the regulation of supplies on an individual basis. In this context, regional administrations, branches of the natural monopolies, and customer-enterprises all have an incentive to reach a compromise solution on a case-by-case basis that reflects relative bargaining power. As the managers of division of natural monopolies have been typically evaluated on the basis of balance-sheet profitability that does not discount receipts in non-cash form, the natural mechanism for the realisation of this bargaining solution has become payment in commodities evaluated at prices inflated beyond their corresponding cash values (OECD (2000)).

In addition to explaining the growing concentration of the non-cash economy in the natural monopolies since 1994, the above considerations, along with those concerning the policies of subnational administrations below, offer an explanation as to why average barter and offset prices are 40 to 50 per cent higher than their cash counterparts. This is a regularity that is observed throughout the Russian Federation. Other authors have proposed theories to explain higher barter and offset prices that highlight either the higher costs of barter transactions or the lower degree of liquidity of surrogates relative to cash. The latter theory proposes a hierarchy of prices based on liquidity considerations. If payment is made in bills of exchange, for example, the price of the commodity is increased as a means of implicitly discounting the bills relative to cash. If payment is made in a still less-liquid form (such as commodities), it is argued, the price should be even higher.

In our opinion, neither the cost nor liquidity theories suffice for explaining the higher overall level of barter and offset prices. For the case of pure barter, in the absence of taxation, only the relative price (terms of trade) matter. As concerns tax advantages, lower, as opposed to higher, prices are preferable. Therefore, while relative barter prices may vary according to differing liquidity, the answer to the question as to why average barter prices are higher than cash prices must lie elsewhere. This must include a consideration of regulations that limit price flexibility for certain commodities or factors associated with the interaction of the cash and non-cash economies. In this context, the cost and liquidity-based theories fail to answer the central question: why should a seller accept commodities in payment evaluated at inflated barter prices in lieu of a greater cash equivalent? One of the answers is the following: as the prices of gas and electricity are administratively regulated, and typically do not vary according to type of payment, higher barter and offset prices facilitate the non-equivalent exchange (implicit subsidisation) agreements described above. A second reason is the fact that higher barter and offset prices help to empower state administrations in the fulfilment of their budgets and realisation of economic policies, as described below.

In the particular Russian context, there exist advantages to regional and local administrations from the use of money surrogates and inflated non-cash prices. In a previous study, Gaddy and Ickes (1998) emphasised the advantage that conducting budgetary operations and evaluating enterprise performance in inflated barter or offset prices gives the illusion that the corresponding budget and output are greater than

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[4] This even typically concerns cases where the social infrastructure has been transferred from enterprises to municipalities, as such formal transfers commonly leave the informal responsibility with the enterprise.

in reality. This can therefore be a useful device for "fulfilling" an ambitious budget or boosting the relative economic "size" of a region. There also exist countervailing incentives against this sort of exaggeration in bookkeeping, however. First, there are strong incentives to fulfil at least one part of the budget in cash, as state wages and various social expenditures must be paid in cash. It has been typical for demonetised regional or local budgets to possess insufficient cash for these payments, forcing the administrations either to borrow or accumulate arrears. Second, there has been a widespread perception at subnational levels of government that high budgetary or other economic indicators on paper will lead to a downward adjustment of federal transfers and other benefits to the region.

Nevertheless, there also other strong reasons why subnational administrations would like to conduct at least a part of their budgetary operations in surrogates. We can divide these reasons into (a) the fact that only taxpayers, and not state organs, pay interest and penalties on their debts, (b) factors that allow subnational administrations to expand their influence over resource allocation, (c) factors that allow subnational administrations to increase tax revenue and the share of tax revenue remaining in the region, d) the blocking of enterprise and local government accounts in the context of arrears. The following points are treated in more detail in OECD (2000):

- Given that state organs do not pay interest on their arrears, they have a strong incentive to delay payments as a means of budgetary fulfilment. Due to high penalties, administrations may also delay the processing of tax documents from relatively "wealthy" taxpayers, allowing arrears to accumulate. Debt offsets then naturally emerge as a mechanism to clear accumulated mutual debts at the end of the year. The recorded receipt of tax revenue as a result of an offset chain is also typically delayed until the complete chain of deliveries has been realised.

- In the context of a formal system that delegates exceedingly little fiscal authority to lower levels of government, subnational administrations can use money surrogates to promote their own economic policies. Arranging various, often complex, offset chains have a direct impact on production and consumption in the region. As barter and offset prices exceed cash prices, the acceptance of taxes in surrogates is an implicit means of granting individual tax exemptions, while payments in kind are an implicit means of individualised expenditure sequestration. Offsets also provide a convenient mask for illegal and corrupt activities as, in contrast to explicit tax policies, they are not monitored by the regional branches of the Anti-Monopoly Ministry.

- Under certain circumstances, offset operations can also increase both the amount and share of tax revenue that that accrues to regional and local budgets, often at the expense of the federal government. This is due to the budget-specific nature of offsets and the particular rule for the division of tax revenue employed by the federal treasury. In the event that an enterprise does not have sufficient funds to pay all of its tax debts, offset operations can prevent cash from ever reaching the federal treasury, assuring that all tax revenue from this firm remains at the subnational level. Although the federal treasury accounts for offsets during the division of revenue, this accounting is done only on a firm-by-firm basis. For example, if a firm A performs an offset operation for its tax debt to the regional budget, the treasury does not take this into account when dividing cash revenue received from another firm B. In addition, the treasury has a very limited ability to account for offset operations conducted toward the end of the fiscal year, as a large share of cash revenue has already been divided.

- In the context of a large overhang of tax debts from previous years (representing largely penalties and interest on past debts) and an enormous burden of unfunded federal expenditure mandates, bank accounts of enterprises and local budgets have been commonly blocked by tax authorities or the courts. Money surrogates offer a means of bypassing these accounts, which is in the interest of both subnational authorities and enterprises.

Policy Options

Since the crisis of mid-1998, the sharp devaluation of the rouble, the strengthening of Russian export prices, and large decreases in relative (controlled) gas and electricity prices have alleviated somewhat the degree of demonetisation. The rouble value of (cash) export earnings has increased significantly, alleviating liquidity problems and providing a source of cash tax revenue. This particularly concerns the federal budget, which receives all foreign trade taxes. Much lower relative gas and electricity prices have relieved payment problems for a number of firms and increased the share of cash payments. (The economic costs of these price distortions may be substantial, however). Despite these trends, the root causes of demonetisation, as summarised below, remain and require a comprehensive set of policy measures. The positive recent developments can hopefully provide a more favourable context for the adoption of such measures.

The widespread use of barter and money surrogates is indicative of a number of economic problems that require the attention of the government. Given the nature of these problems, an attempt to enforce an outright ban on non-cash transactions would likely be counterproductive. Instead, the root causes of the problems should be confronted directly.

A first set of specific measures could be directed at a number of problems in accounting that contribute to demonetisation, although their success hinges on simultaneous progress in fundamental reforms indicated in the next section below.

- Measures are needed to make state organs responsible for their expenditure arrears, perhaps forcing them to pay interest and penalties in the same manner as taxpayers. Until this problem is resolved, state organs will operate under a direct incentive to delay payments and employ offsets to clear mutual debts at the end of the year.

- Accounting practices in the natural monopolies need to be adjusted with the goal of discounting non-cash receipts appropriately in the evaluation of balance-sheet profitability. Otherwise, payment in the form of commodities evaluated at inflated prices will remain the preferable solution to the bargaining problem between energy firms, subnational authorities, and enterprises.

- The rule employed by the federal treasury for the division of tax revenue between the budgets of different levels of government, which currently operates on a strictly firm-by-firm basis, could be adjusted to account better for aggregate tax revenue and (surrogate) offset operations conducted within a region or locality. This could decrease an important advantage to subnational governments for sometimes collecting revenue in surrogates as opposed to cash.

Areas for more fundamental reform are:

- The subsidisation of loss-making enterprises that cannot be immediately shut down or cut off from energy supplies should be shifted, to the largest degree possible, from the natural monopolies to state budgets. While measures since 1994 succeeded in essentially removing implicit subsides in the form of soft bank credit, the burden of a large portion of these subsidies was essentially shifted to the natural monopolies. Even in the event of the implementation of the accounting reforms discussed above, energy firms will still be left with the incentive to employ non-cash settlements as a means of differentiating prices on an individual basis. Also, in this case, the economic costs and benefits of these energy subsidies will not be properly assessed. Part of this cost is already passed on to state budgets in the form of tax arrears of demonetised energy firms. Energy firms should receive cash payments at a single price, while enterprises that cannot afford these payments should be cut off, shut down, or explicitly subsidised through a state budget. Higher cash tax receipts from energy firms will help to finance this greater fiscal burden. In addition to making the costs of these subsidies clear and explicit, such measures could help to separate the problem of demonetisation from other difficult problems in the regulation of natural monopolies and the bankruptcy of large loss-making enterprises.

- The current formal system of fiscal federalist relations places regional and local authorities in an extremely difficult position. They have exceedingly little authority to develop their own fiscal policies and are burdened with unfunded federal expenditure mandates to the point of unfeasibility. Given the high degree of *de facto* authority that these officials have in their territories, however, they successfully circumvent the formal system through various means, and develop their own fiscal policies. The common informal nature of these policies, combined with very low explicit civil servant salaries, also leaves a strong temptation for corruption. The widespread use of money surrogates by subnational administrations is part of this story. A fundamental reform of the fiscal federalist system is needed in the direction of explicitly recognising the *de facto* authority of subnational administrations, but delegating genuine responsibility along with this recognition. Such a direction of reform is outlined in OECD (2000) and Lavrov, Litwack, and Sutherland (2000).

- The large overhang of tax arrears and the failure of local budgets to meet the heavy demands of federal expenditure mandates have led to the frequent blocking or impounding of the bank accounts of enterprises or local authorities. This creates an incentive for both enterprises and subnational officials to avoid these accounts, including the widespread use of money surrogates. Other studies have recommended measures to separate the tax and payments systems as a means of combating demonetisation in this context (Hendley, Ickes, and Ryterman, (1998)). In addition, much of the responsibility for unfunded federal mandates, which are legally of a "recommended" nature, but commonly interpreted by the courts as obligatory, should be shifted to the federal government.

It should be noted that most of these problems are fundamentally related to the need for the imposition of overall greater financial discipline on loss-making enterprises, and the acceleration of reforms allowing for their timely bankruptcies or liquidations. The particular context of the Russian economy implies that major progress in this area will require some time. The specific measures to combat demonetisation, as summarised above, are highly complementary to general reform efforts in this area.

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