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Olivera, Tanzi, Milošević: Why Was Avramović's Programme Adopted?

Summary: It was under the UN sanctions during 1992 and 1993 that hyperinflation hit the FRY. Its leadership believed that the fiscal deficit could be covered by printing money, but such a practice resulted in acceleration of hyperinflation. Former World Bank economist Dragoslav Avramović understood that stopping printing money should represent the core of his Programme. He was aware of the Olivera-Tanzi effect, but the fierce attacks on the Programme in the course of its presentation to the nation's top leadership indicated that those people were not – despite the fact that the real value of all collected taxes decreased to only several tens of millions of US dollars. It was ultimately Milošević himself who decided that the Programme should be approved. The economic problems of the FRY ran much deeper. The involved interests of the nomenklatura in the real sector blocked further reforms and Avramović was dismissed in 1996.

Keywords: Hyperinflation, Olivera-Tanzi effect, Inflation tax, Stopping money printing, Money illusion.

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It was under the sanctions imposed in May 1992 on the Federal Republic of Yugoslavia (FRY) (consisting of Serbia and Montenegro) by the UN Security Council, followed by the wars waged in Bosnia-Herzegovina and Croatia – which engaged very significant transfers to the yonder Serb entities – that the country lost its borrowing capacity and experienced economic collapse. In the course of 1992 and especially during 1993 hyperinflation raged on, which was unparalleled in the economic history in terms of duration (22 months) and in terms of intensity trailing only the Hungarian inflation in 1946. The political leadership, both at the federal level and in Serbia and Montenegro, shared the view that the ever-increasing fiscal deficit could be financed by printing more money, which resulted in speeding up the pace of hyperinflation.

As the end of 1993 approached, the rate of inflation skyrocketed. The notes of 10,000 and 5,000 dinars, which were issued on October 1, 1993, lost 66% of their value (measured according to the spot "street level" exchange rate of the German Mark – DEM) within 14 days; notes of 50,000 dinars, which were issued on October 14, 1993, lost 81% of their value within 16 days; notes of 500,000 dinars, which were issued on October 30, 1993, lost 96% of their value within 13 days; the notes of 500,000,000 dinars, which were issued on December 2, 1993, lost 99% of their value within 10 days; notes of 50,000,000,000 dinars, which were issued on December 15, 1993, lost 97% of their value within 7 days (Đorđe Đukić 2018, p. 13). The national currency was completely destroyed.

The aim of this paper is to establish why the reaction of the FRY authorities to the hyperinflation was significantly delayed and to provide insight into the ideas that led the eventually required experts to draft measures aimed at the immediate halting of hyperinflation and creating conditions for subsequent economic recovery (which proved to be short-lived).

The paper is structured as follows. After the introduction, Section 1 presents the core of the proposed measures in the domains of both monetary and tax policy, while Section 2 explains the national leadership's ignorance of the Olivera-Tanzi effect (Julio H. G. Olivera 1967; Vito Tanzi 1978) and the ways it affected the proposals. Finally, Section 3 indicates why these measures could not have had deeper longer-term impact.

1. The Core of the "Monetary Reconstruction" and the Ensuing Tax Policy Measures

In October 1993 the dinar started to rapidly lose its value with the intensification of issuing of currency, which was aimed at bridging permanently increasing fiscal deficit, in accordance with then deeply rooted beliefs. It was at this time that Serbia's leadership contacted Dragoslav Avramović, a retired economic expert who had previously worked for the World Bank, UNCTAD, and the Bank of Credit and Commerce International. A month earlier three academic institutions were asked to prepare a broad programme of economic recovery of the FRY, including an anti-inflation programme. Avramović was destined to lead this project, but as a result of his perseverance and the existence of occasional contacts with Slobodan Milošević, then president of the Republic of Serbia, his view that priority must be given to "almost total stabilisation of the dinar because possibilities of gradual stabilisation are exhausted" and that "the dinar is so compromised that there remains no middle course: it is either stabilisation or the risk of termination of the dinar as a means of payment", was eventually accepted (Dragoslav Avramović 2007, pp. 39-40).

This is how in early November 1993, within the abovementioned broad project, the work of a separate expert team commenced, led by Avramović, with the task of preparing the Programme of Monetary Reconstruction (hereafter: Programme)[1]. Coordinated carefully by Avramović, who insisted on focusing on the means of halting hyperinflation, the team worked through meetings held at the Economics Institute and communication with a number of local and foreign experts, during the course of November and early December. Its report, *Reconstruction of the Monetary System of Yugoslavia*, was finalised on December 5, 1993.

Having checked the modalities for stopping hyperinflation applied by a number of European states in the years after the First World War, Avramović was convinced that halting printing money must be the core of the Programme. He and the members

[1] The team consisted of Nebojša Savić, Zoran Popov, Dejan Popović, Ivan Stojanović, Branko Hinić, Miroljub Hadžić, and Janko Radulović (Avramović 2007, pp. 45-46).

of the expert team were aware of the existence of the Olivera-Tanzi effect, while the creators of the economic policy did not quite understand that intensifying the printing of money could not solve the fiscal deficit problem. Essentially, under hyperinflationary conditions, the Olivera-Tanzi effect infers that the increase in the rate of inflation diminishes the real value of tax proceeds because there is an inevitable time lag between the moment of the occurrence of a taxable event and the moment of the collection of the tax. The credit for observing such impact on real tax proceeds belongs to economists from the period between the two world wars who studied the effects of the hyperinflations that hit a number of European countries in the early 1920s (Constantino Bresciani-Turroni 1937) but it was only in the last third of the 20th century that an explanation was offered by Olivera and Tanzi, based on the standard analytical toolbox.

A state's tax revenues can be broken down into two tiers. The first one represents the revenues from "normal" taxes (personal income tax, corporate profits tax, VAT, etc.), which would exist even without inflation. The second tier is the revenue from the inflation tax (often equated with seigniorage). Therefore, two parallel causality channels are hidden behind the Olivera-Tanzi effect: (1) elasticity of the inflation tax revenues in real terms with respect to the rate of inflation; (2) elasticity of the revenues from "normal" taxes in real terms with respect to the rate of inflation. Given the time lag in collection, the government's inflationary revenues from printing money will be suppressed once revenues in real terms start to increasingly lose their value (Zoran Anušić and Sandra Švaljek 1996, p. 74 et seq.). The trap that the creators of economic policy in the FRY had fallen into during the 1992 and 1993 inflation can only be understood as their inability to comprehend that once the nation enters the hyperinflationary zone the benefits of seigniorage will be exhausted, with further increases in the rate of inflation leading to the erosion of public revenues in real terms. In Keynes's words: inflation tax, "as a powerful financial instrument of state, applied exceedingly it cracks in the hands of those who use it, leaving the entire tax system completely in ruins" (John Maynard Keynes 1978).

It was the objective of the Programme to secure the currency's stabilisation in the short-run despite the insistence of an influential local economist that hyperinflation should be slowly curbed through the gradual reduction of the money supply; this remark was deemed "illusory in that situation" by the team (Vreme 1999). Once currency stabilisation was achieved, in an environment "closer to normal", the necessary and more ambitious reforms, aimed at privatisation and foreign trade liberalisation, could be commenced.

Avramović's programme was based on the introduction of the new dinar, pegged to DEM at a fixed rate of 1:1, although certain influential local economists of that time (e. g., Milutin Ćirović) were in favour of a floating exchange rate. New dinar would have 100 percent backing in foreign exchange reserves and gold. Avramović also proposed a transitional solution (for several weeks) with retaining of old (inconvertible) dinar in circulation, whose further issuing would stop. His idea was to relax the pressure on foreign currency reserves and to channel controlled issuing of new dinar primarily towards financing government budget and revitalisation of economy (Avramović 2007, p. 67). Public revenues could be paid exclusively in new dinars. The expert team did not accept proposals for freezing wages, salaries and prices for a period of several months, arguing that inflation expectations would be curbed if a monetary policy with positive real interest rates and a hard budget constraint were provided (Dejan Popović 1993). Such an approach was eventually proved correct – the subsequent re-activation of inflation (starting in mid-1994) being the result of the Government abandoning the Programme's basic commitments.

With respect to the tax policy, the expert team proposed the reduction of the tax burden on the companies and entrepreneurs who were conducting their businesses legally (Popović 1993). This was intended to be complementary to the convertibility of new dinar and expected relaxation of the economic sanctions, which would be followed by foreign trade liberalisation. Such measures could lead to the diminishing of the country's large shadow economy. The Government's previous tax policy was based on the belief that the devastating impact of hyperinflation on the real tax revenues could be overcome by indexing the tax schedule. The empirical evidence confirmed the failure of such an approach because even a brief time lag between the taxable event and the tax collection substantially decreases the collected tax revenues in real terms. In addition, the enormous scope of the shadow economy, which was blooming under the UN sanctions, had its own negative impact on the public revenues. The expert team's approach was based on the idea that after stopping hyperinflation an inverse Olivera-Tanzi effect would be produced, thus creating the room for tax rates reductions, which would be followed by the growth of tax revenues in real terms (Popović 1994, pp. 66-67).

Table 1 Tax Rates 1993-1994

Tax instrument	Tax rate (1993)	Tax rate (March 1, 1994)	Tax rate (July 9, 1994)
Corporate profits tax	40% (for small enterprises - 30%)	30%	30%
Turnover tax	46% (basic rate)	27% (basic rate)	24% (basic rate)
Personal income tax (global)	24%-40%	Abolished for 1993	Abolished for 1994
Advance withholding tax on wages and salaries	Up to 3 MNWs - 25%[2] From 3 to 4 MNWs - 45%[2] Above 4 MNWs - 50%[2] For government officials - 30%	30% (25% from April 30, 1994) on wages and salaries exceeding guaranteed gross wage/salary[3]	20% on wages and salaries[4]

Notes: [1] MNW stands for minimum net wage or salary augmented for the social insurance contributions to be paid on behalf of the employee. [2] The advance withholding tax on wages and salaries was reduced by 7% for one dependant and 14% for two or more dependants. [3] Net wage/salary + social insurance contributions to be paid on behalf of the employee. [4] The advance withholding tax on wages and salaries was diminished by 10% as a basic personal tax allowance.

Source: Author's compilation.

On the eve of the Programme being applied, a tax on financial transactions was introduced, as a precaution in case there would initially not be sufficient revenue from other taxes. Its rate of 2% was quickly reduced to 1% and subsequently to 0.5%, and the levy was eventually repealed (Popović 1994, p. 67). However, the Government enacted two levies that did not belong to the Programme, actually being in contrast with its overall pro-market orientation: the levy for the disclosure of the name of a company and the levy for temporarily leaving the country (exit fee). The author of this paper opposed the adoption of these two levies in his letter to Avramović on January 20, 1994 (Avramović 2007, p. 87). The exit fee was repealed only in November 2000, after the fall of Milošević.

2. Facing the Olivera-Tanzi Effect

Although the Programme was delivered to "the client" on December 5, 1993 (Avramović 2007, p. 64), the members of the expert team had no feedback regarding the reactions of the Federal and Serbia's governments to the proposals contained in it. It appears that Avramović received a message that Milošević considered the Programme generally acceptable, but that it is necessary to await the Federal Government's response (Avramović 2007, p. 65). Despite the further acceleration of the hyperinflation during the last month of 1993, the political decision on whether to approve the Programme was delayed until December 27. On this day a meeting of the government (Federal, Serbian, and Montenegrin) top leadership and general directors of the most important state-owned enterprises, with Avramović and two members of the expert team (Nebojša Savić and Dejan Popović) was held at the Office of the President of the Republic of Serbia.

After the Programme was presented, it faced harsh criticism both from the politicians and the directors, which testified to their deep ignorance of the Olivera-Tanzi effect, even at the stage when the value of all collected public revenues in real terms in the FRY fell to the level of only several tens of millions of US dollars. Businessmen's rude, even insulting statements regarding the Programme could be summarised as a warning that halting issuing money would thwart the financing of support for the Serb side in the civil wars in Bosnia-Herzegovina and Croatia[2], while undermining liquidity and compromising payments of pensions and salaries in the public sector. The politicians also voiced their rejection of the Programme, their arguments being basically the same but expressed somewhat less rudely. It was only Milošević, as the chair of the meeting (in the capacity of the President of the Republic of Serbia, despite the presence of the Federal President), who in summarising the debate supported the Programme, stating that it offered the only way out[3]. Actually, Avramović had indirectly communicated with him, conveying prior to the meeting a clear message on the nature of the Olivera-Tanzi effect. In doing so Milošević caught his present associates by surprise. His words that "useful comments have been heard in the course of the debate, which should be incorporated into the Programme, wherever it is possible, and then promptly start with the implementation" (Popović 1993) were cynical. These

[2] These transfers in 1993 were estimated at 5.2% of GMP by Željko Bogetić, Diana Dragutinović, and Pavle Petrović (1994, p. 7 and p. 17; as share of GPD see Bogetić, Dragutinović, and Petrović 2022). Given the subsequently established fact that the salaries to the members of yonder Serb military forces were paid from the budget, it is my assessment that in 1993 the total budget transfers to the territories controlled by local Serbs in Bosnia-Herzegovina and Croatia were around 6.5% of GMP, which is approximately 5.8% of GDP.

[3] The daily rates of depreciation of dinar *vis-à-vis* DEM were as follow: December 12, 1993 – 33.5%; December 22, 1993 – 100%; December 23, 1993 – 100%; December 24, 1993 – 100%; December 25, 1993 – 75% (Bogetić, Dragutinović, and Petrović 1994, p. 11, 2022).

comments regarding the Programme were devastating and belonged to an entirely different universe, implying that none of them could be incorporated into the text.

Such an attitude on Milošević's part immediately triggered a bizarre reaction from almost all the participants, in the form of self-criticism of their own inability to comprehend the value of Avramović's Programme and expressing gratitude to the President who "enlightened" them (Popović 1993). After certain hesitation in the Federal Government had been overcome (Avramović 2007, p. 77 et seq.), the Programme was successfully implemented as of January 24, 1994 halting the hyperinflation that in January 1994 had reached a monthly rate of 313,563,558%. But already in the second half of 1994 signs of the Programme's long-term unsustainability emerged and Avramović attempted to react by preparing new set of measures, which drew him into conflict with Milošević himself.

The resistance of Milošević's top nomenklatura to the approach based on the idea that issuing money must be stopped, which had been divulged during November and December 1993, is testimony not only of the scope of money illusion but also of the absence of a relevant level of economic education among the persons who headed the Federal Government, Central Bank and the governments of the federal units and the directors of state-owned enterprises, all of them belonging to the ruling Socialist Party of Serbia and its sister party in Montenegro. The autocrat who chaired the meeting on December 27, 1993 probably enjoyed watching the humiliating transformation of his associates, whom he had previously misled to believe that the issuing of money would not stop. It was only the emergency indicated by Olivera and Tanzi that coerced the state to implement Avramović's Programme.

3. Concluding Remarks

The economic problems in the FRY were nevertheless deeper than those that could be cured by only stopping hyperinflation. The interests of the nomenklatura in the real sector were actually preventing the further economic reforms, which had been prepared and announced by Avramović, new governor of the Central Bank as of early March 1994. Milošević's agenda did not include privatisation (apart from the sectors where it would be beneficial for his own circle) nor liberalisation of foreign trade. It is indicative that a number of proposed tax policy measures aimed at securing equal treatment of private-owned companies and state/socially-owned enterprises, primarily *via* elimination of a number of privileges that the latter enjoyed, were not approved. Since in 1994 the self-managed socially owned enterprises still played a significant role in Serbia's economy, the Furubotn-Pejovich effect (Erik G. Furubotn and Svetozar Pejovich 1970, pp. 431-454), implying that consumption would be preferred to investment, since a self-managed firm cannot be traded, should be taken into consideration. A 30 percent rate of tax on profits, applied both to state/socially-owned enterprises and private companies, was thus favourable for the former, whose goal was not to maximise profit. The proposal to compensate such an advantage by introducing a payroll tax was not approved at the time. The same happened with the recommendation to replace the book value of real estate, as the base of the property tax, with the market value. The undervaluation of the assets' book value, although present both in the public and private sectors, actually discriminated against the latter, since the share of the real estate on the asset side of the balance sheets of private companies was significantly lower than in the case of state/socially-owned enterprises. It was also proposed repealing the provision of the Law on Audit, Assessment and Collection of Public Revenues that authorised the Republic's Public Revenues Administration to extend the statutory deadlines for paying taxes to certain taxpayers, under the conditions specified by the Government, since this relief was granted only to privileged state/socially-owned enterprises, thereby practically annulling their tax liability under hyperinflation and, once it was stopped, provided them with extra liquidity and other advantages with respect to the competition (Popović 1994, p. 72).

Milošević skilfully abused the Programme for the purpose of halting hyperinflation, which had represented an imminent threat for him staying in power, but he was not prepared to modify the highly centralised and decadent socialist system. Within two years Avramović was dismissed from the governor's position, following a campaign led against him by Milošević and his henchmen. The hopes of a more rapid economic recovery, especially once the UN economic sanctions were lifted, were thereby postponed for several years.

The author of this paper somehow anticipated the future developments and, in the letter sent to Avramović on January 20, 1994, raised the issue of the political forces "which are able to execute a turnaround in our society. Notwithstanding the criticisms of the Programme, named Avramović's, in its essence it is predicated on a market-based orientation. I am not sure that the establishment supports it wholeheartedly in the full sense of the words. The Programme implies restoring order in finances, which means that it implies abandoning of the existing model" (Avramović 2007, pp. 87-88). Unfortunately, these concerns proved correct. It took additional years of suffering for the creation of a majority capable of overthrowing Milošević's regime, first in the elections and then on the streets of the capital.

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