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“GRADUAL SHOCK THERAPY”

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The reaction of the economics profession to the fall of communism reveals some of its theoretical preferences. Though there are substantial differences among the practitioners of the, let me call it, post-communist transformation economics, the leading, though perhaps not any more quite the mainstream, policy approach is the one that advocates price stabilization through so-called shock therapy and institutional transformation through something called a big-bang (see Lipton and Sachs 1990a, 1990b, 1992; Murphy et al. 1992).¹ The public accepts it mostly on the authority of the profession often without understanding either the assumptions or the reasons on which this approach is founded. In this article, I explain the motives, the arguments and the problems that shock therapy and big-bang approach face.

Reasons to Shock

The motives are simple. It was believed by the economists who went to work as advisers of the transformers in the ex-communist countries that (i) the transformation can sidetrack, if it is not implemented quickly and decisively, and (ii) that the fluid authority structure that emerged after the breakdown of communism is conducive to the goal of speedy transformation so that just about anything could be done by right kind of people (the technocrats) in practically no amount of time.

These motives reveal judgements that may be well or not so well informed, but I do not think that they can or should be criticized directly. I take them to be grossly mistaken, but this is not decisive for the policy recommendations that they prompted, because the latter may be founded on the well established principles of the respective sciences (if the diagnosis was right, it does not really matter how it was arrived at, as long as the prescribed cure was adequate).

The recommendations given were essentially a generalization of the shock therapy approach to stabilization policy. That policy is founded on (i) an interpretation of successful attempts at price stabilization in various hyper-inflationary situations,² and (ii) on an eclectic monetary theory that is probably most closely connected with the new-classical version of monetarism.³ These two foundations apparently make the recommendation of shock therapy theoretically sound (it follows from the first principles of economics) and empirically verified (it was tried and it works). Then, it was argued, mostly by Sachs and Lipton,⁴ if it works for stabilization, it should work for reforms or transformations in general, and the big-bang idea was born.

All of these claims are disputable and are in fact disputed in the profession (for an early discussion see Kaser and Allsopp 1992, for a recent one see UN/ECE Economic Survey 1993). However, I will not go into the empirical evidence, as the post-communist experience, that I review briefly at the end of this

article, is evidence enough. I will just comment on the theoretical claim and on how justified the generalization is.

Shocking Generalizations

It is important to realize straight away that the policy of shock therapy does not follow from the first principles of economics. Once stated, that is obvious: no policy does. But, as some policy is unavoidable, one may look for one that is closer to them, rather than not.

I take the first principles of economics to be those theoretical propositions that can be derived from the assumptions about preferences and endowments of individuals and an economy (about demand and supply to put it simply); essentially those that are derived in the theory of value or are founded on it (on this see Hahn 1984b and Lucas 1981b). To say that the policy of shock therapy does not follow from the first principles is methodologically the same as to argue the following two things. First, that the employment policy based on the Phillips curve does not follow from satisfactory assumptions about individual expectations. Second, that the policy recommendations that treat the governing authority as an exogenous factor rely on assumptions outside of the economic ones. In general, I take it that economics relies on the assumptions about individual preferences and endowments to argue for gains from trade and to explain efficient use of resources (see Hahn 1984a). If a persuasion or even a shock is necessary for these

consequences to be arrived at, whatever else could be said about these policies, there is no economic argument for them.

There is no denying that the principles of economics are subject to controversy and discontent. However, if shock therapy and big-bang approaches are to be based on anything, they have to be based on microeconomic fundamentals. Indeed, the idea of a shock being useful as a policy instrument comes from the understanding that only unexpected changes in the fundamentals (preferences and endowments) can have lasting effects. The problem with the theoretical status of shock therapy is precisely with whether there can only be real shocks or there can also be therapeutic, i.e., politically engineered shocks.

How is shock therapy of any kind connected to the fundamental principles of economics? Stabilization policy provides the leading example. Take a country with inflation. Inflation is, among other things, a kind of tax. Therefore it is, at least partly, a monetary response to government's fiscal preferences (and incomes policies, as they depend on the fiscal regime chosen too). It works itself out through citizens' expectations: they know their government, thus they increasingly act on the expectation of government imposing the inflation tax on them. This being the case, after a period of learning and adaptation, expectations in conformity with that right theory of government will be formed and no level of inflation will have substantial real consequences: everybody would have insured or indexed oneself against it. All the consequences will be absorbed by the expectations. As they can

change instantaneously, all the consequences from some point on will be purely nominal.

Now, once the government comes to realize that, for among other reasons because it will be increasingly unable to achieve its fiscal objectives (the Olivera-Tanzi effect), it might decide to substitute the inefficient inflation tax with another that relies on real sources (it may want to change its incomes policy too). But, for that to be done, formed inflationary expectations have to be changed. And, if the government has acquired a reputation for relying on inflation, it will take some persuading for the citizens to change their expectations. Pronouncements and promises will not do for the government to get its credibility back or to acquire one. The citizens may have to be shocked with the reality of a new economic policy to change their beliefs.

Two things could, in theory, do the trick (see Sargent 1982). First, the government could fix the value of its own currency in some stable foreign currency, thus signaling that it renounces inflationary monetary policy that it practiced and now aims at price stability. Second, it should give a proof that it has indeed changed its preferences by changing its budgetary obligations (and possibly its income policy too).⁵ These two things are what a minimal stabilization therapy consists of. It is a shock therapy if it is done at once and against everybody's expectations. When administered, the shock should lead to immediate changes in people's expectations and should thus enable the government to do whatever it is elected or set up to do.⁶

This argument appeals to the first principles of economics (those derived from preferences and endowments of an economy only), because its force springs from reliance on individual preferences and expectations (preferences over uncertain outcomes). Why is it unsatisfactory? A simple way to see that is to look at what it assumes. It builds on:

(i) a theory of shifting expectations. It is not obvious whether people are assumed to have adaptational expectations (relying on the past price changes) or rational expectations (relying on expected future prices) and when, how and why they switch from one to another.

(ii) an institutional theory of monetary policy. It is not clear what is the monetary authority based on: bank's independence is an economic asset too. Also, it cannot be simply assumed that the central bank can control the supply of money, especially in an open economy.

(iii) a theory of real effects of fiscal policy. Most of the arguments rely on an idea of fiscal illusion, implying that a change in the fiscal regime can have an effect of people paying more taxes than they really want.

All these assumptions are highly controversial. However, let us assume that:

(i) expectations are rational;

(ii) the exchange rate is determined by the market and is not a policy instrument; and that

(iii) the changes in fiscal regimes have only nominal consequences for essentially the same reasons as those invoked to argue for the inefficiency of the inflation tax (people pay as much as they want to pay).⁷

Then nothing in the argument on which shock therapy relies follows.⁸ Quite to the contrary, an opposite policy conclusion does not conflict with the latter assumptions.⁹ Worse than that, the assumptions that the policy of shock therapy violates are arguably more fundamental than the ones it satisfies. Thus, shock therapy even in stabilization policy apparently violates the first principles of economics rather than following from them (see Hayek 1948 for criticism of constructivist policy arguments; also Kornai 1990 and Murrell 1992; however, I do not agree with their policy proposals).

Let us disregard that, and assume the contrary: the theoretically most sound stabilization policy is that of shock therapy.¹⁰ Can it be generalized into an institutional shock therapy, i.e., into a big-bang transformation policy? Once the question is asked, the answer clearly has to be negative.¹¹ I will stay with stabilization policy for a moment and consider the institutional changes it requires. To just implement the shock therapy type of stabilization and sustain its effects, an independent central bank is required (see Sargent 1982; for some recent interpretation of the evidence on the stabilization and growth roles of central bank independence see Alesina and Summers 1993; for the extent that the countries caught up in a political conflict

rely on inflation tax see Cukierman et al. 1992). That means that the communist state bank,¹² used as an institutional instrument of government's planning and fiscal policies, has to be transformed into an institution free to follow independently set monetary policy. Assuming that there is such a thing (and there is an influential argument to the effect that there is not, see Lucas 1981a), the shock therapy type of transformation requires (i) a change in the statute under which the bank operates, and (ii) a team of technocratic bank officials (those that are politically out of reach). Thus, the transformation requires an institutional change and a change in the balance of power.

Is there any reason to believe that these two types of changes will come about in an instantaneous manner? The answer is, no. While an argument can be made to the effect that expectations can be changed with a shocking speed (though this is arguable), nothing analogous can be argued for in cases of institutional and power changes. For:

(i) unlike expectations, institutions are based on values and interests, they have a procedural or rule aspect by definition (even if no historical or sociological considerations are taken into account and institutions are thus seen just as a particular configuration of aggregate demand and supply, of the way things are seen and done).

(ii) the vested interests in political power can hardly be denied. Changes in these take time, and if political philosophy is to be believed to any extent, it better take time, as institu-

tional break-ups and revolutions may lead to disorders and tyrannies.

Why is it then that shock therapy is generalized to a big-bang transformation policy?¹³ The reason is that it is combined with an argument for liberalization and deregulation that is basically sound. Though that has always been disputed (most notably by Keynes and his followers), it seems to me that if anything like policy recommendation follows from the first principles of economics, that is the one of liberalization of trade and deregulation of business in general (the enlargement of the social opportunity set). There are difficulties in mobilizing political support for these policies in welfare states and democracies, but that can be taken to be a separate issue at least when problems of highly illiberal economies are discussed. Luckily, there often is a widespread support for liberalization and deregulation in economies that had experienced centralized socialism (see Kornai 1988; for more on all that see Gligorov 1993a).

Liberalizations can be instituted in a big-bang manner and can give good results almost immediately, when they are in general conformity with people's interests and their desire for freedom (the fall of the Berlin wall may be seen as a metaphor for that). But, that does not generalize to further institutional transformations.¹⁴ As the central bank example shows, institutional design is needed and a constitutional guarantee of a power change is necessary, both backed by real interest and distribution of power changes. Liberalizations work because they remove obstacles

people's interests encounter (thus the slogan: laissez-faire, laissez-passé). Already stabilization has an important liberalization aspect in post-socialist economies as it introduces otherwise non-existent markets. Introduction of democracy can also be seen as an instance of liberalization, especially in countries that had been moving towards or have experienced democracy, with that development being interrupted by the introduction of communism. However, other institutional transformations are like technology changes and innovations, they have to be learned, require getting used to, and take time to diffuse (on the incentive structure of institutional transformation see Tirole 1991; I do not know of a big-bang theory of economic growth, apart from Feldman's and that of central planning; for a very interesting analysis of successful economic transformations see Lucas 1993).

Also, liberalizations usually follow changes in the distribution of power, transformations are meant to change the power structure. In all the relevant cases, a new government and a new constitution are needed. A change in the constitution, or an expected introduction of a new one, can lead to a break-up of a country (as in cases of Soviet Union, Czechoslovakia and Yugoslavia; for the latter see Gligorov 1993c) and to all the other problems connected with the distribution of civic, political and economic rights. In addition to that, political stabilization of a democratic government, requiring an increase in the legitimacy of political authority, cannot be done in a shock-like manner. And if we know anything from political science, we know that power

struggles are difficult, wasteful and time consuming, to say the least. Therefore, transformation policies are not generalizations either of stabilization or of liberalization policies.

The Shock of Evidence

It is often argued, however, that the difficulties that shock therapy and big-bang approaches face are well understood, but all the alternative policies are worse. Let us assume that to be true. How bad shock therapy can in fact be? In my opinion, it can bring about quite bad results if it leads to a kind of a big-bang process that might be called a gradual shock therapy, that is, if it turns into a big-bang process that consists of a sequence of shock therapies. By analogy with shock type changes in expectations, if an initial shock is followed by a new shock and then by a succession of shocks, diminishing returns of that policy will set in quickly (see Barro 1986). Very soon, it will leave the government without any policy alternative. Then, one may have to decide what is worse and less effective: hyper-inflation or hyper-shocking. The general aim of transformation is an increase in liberty, with this approach one is reminded of Kafka's "Penal Colony" or of Bulgakov's "Maestro and Margarita."

What is the experience of ex-communist economies supporting? The way I read it, even the adjustment period required for the stabilization of prices is proving to be much longer and the process is much more complex than the shock therapy argument predicts or advises. Thus (i) some of the transforming economies

have gone through the experience of hyper-inflation and (ii) most have maintained relatively high levels of inflation even after the introduction of shock therapy or other types of stabilization policy. Also (iii) the success in price stabilization does not seem to be clearly related to the choice of shock or an alternative stabilization therapy.¹⁵ For instance, Slovenia has apparently had a successful stabilization record for a while, though it did not follow the shock therapy approach (see Mencinger 1993).

The same goes even for price and other liberalizations. In many cases, the transforming economies have continued to rely on trade restrictions and subsidies, as the growth of the black market activity demonstrates (some of the protectionist measures are a reflection of the general level of protectionism in Europe and the world). There are well recognized problems with the liberalization of labor markets too (on some implications of the labor market for the speed of the overall transformation see Aghion, Blanchard, 1993). There is also a continuing debate over the desirability of full liberalization of foreign investment. Indeed, there is a continuing political debate over the advantages and disadvantages of liberalism vs. nationalism, that is indeed not unrelated to the similar debate going on in the rest of the world.

However, from the point of view of the big-bang theory, the really puzzling aspect of the transformation process is the sharp (up to 25% per annum at places) and prolonged (at least three years), in cases sustained (Russia and some of the other former Soviet Union states), fall in the level of output. Whichever way

that fact is explained, it presents problems. If it is explained as an outcome of the political reluctance to go the big-bang way (as in Murphy et al. 1992),¹⁶ that almost implies that such policy was infeasible, given the individual preferences and expectations. If it is seen as an outcome of the implementation of shock therapy and big-bang measures (as for instance in the case of former East Germany), then the infeasibility of that policy is indeed underlined (on some discussions of the drop in output see Winiecki 1993, Schmieding 1993).

Other aspects of the ongoing transformation are predictably much slower, more gradual and more diverse. (i) privatization follows the general transformation rather than leading it. Looking at the sequencing of the sectors privatized (first trade, then services, then small enterprises, and only at the end the hard-core socialist sector), it could be argued that the actual privatization, rather than following the different privatization schemes, has been determined by two factors: the pace of liberalizations and the investment opportunities (some issues are interestingly discussed in Aghion et al. 1993 and Phelps et al. 1993). (ii) the other aspects of institution building are in places slow, indecisive and increasingly painful, especially if one looks into the construction of the institutions connected to the so-called legal state. Finally, (iii), the pace of transformation is especially difficult to follow in countries like Russia and the other member states of the former Soviet Union that are still not sure as to which type of institutional structure they want to transform

themselves into (on some Russian constitutional dilemmas see Gligorov 1993b); and especially, if they have not made the decisive pro democracy choice yet.

All this was to be expected. It is sometimes lamented that it in fact was not, because the profession itself was confronted with a serious shock as it supposedly knows how an established market economy is run and even how that economy can be transformed into a socialist one through a revolutionary shock therapy, but it lacks knowledge of how socialism is to be transformed back or forward, as the case may be, to capitalism.

Both claims are misleading and inaccurate. It is true that those studying and advocating socialism have argued almost from the start (see Lange 1938 for the most influential statement by an economist) that either it will have to be forced on society in a shock-like manner, or the attempt will be a failure. It turns out to have been a complete failure, no amount of force and speed proved to be enough to make it stick. But it is inaccurate to claim that the same danger faces capitalism construction. There is nothing that social sciences can teach us that supports the belief that any kind of definitive institutional construction is feasible or desirable. Therefore, there is no capitalist model to shock people into or to big-bang societies into. Consequently, there are no technologies and no technocrats, let alone politicians, for the job.

That means neither that transformation is impossible nor that it cannot be influenced and even guided (though it is

inaccurate to claim that economics, politics and social sciences in general know how market economies are to be run, let alone developed; that I think was the point Hayek made over and over again). Fortunately, with the socialist alternative utterly discredited, the move away from it can hardly run out of a momentum. But the actual transformation will follow the development of individuals' economic and political preferences and those better evolve than revolve.

Notes

1. For an interesting discussion of the different approaches to transformation economics see Szamuely 1993. I discuss alternative approaches to privatization in Gligorov 1992. After I finished the article I read Murrell 1993 criticism of shock therapy and rapid transformation. However, his criticism is "external" as he accepts the coherence of the shock approach and criticizes it as an advocate of an evolutionary approach. I criticize some of the arguments that a criticism like his often relies on in Gligorov 1993a.
2. For an influential interpretation see Sargent 1982; for a somewhat different interpretation of some of the after the two World Wars stabilization attempts see Dornbusch and Fischer 1986; for more reflections see Dornbusch 1992b; of course, Sachs' Bolivian experience is considered important evidence too, see Dornbusch, Sturzenegger and Wolf 1991 for an assessment and for an alternative theory of hyper-inflations; see Dornbusch 1992b on some lessons for the post-socialist countries.
3. This formulation shows that it is eclectic as these theories are otherwise in conflict. Its eclecticism is best seen in the way it treats expectations. I touch on that below. However, I do not go into an otherwise extremely important question of how this approach models the individuals that are to be subjected to shock therapy. Indeed, I do not go after the two most obvious objections to shock therapy approach. First, who and what is to be cured by shock therapy (who is sick and what is the nature of the illness)? Second, who is to be the therapist (I reiterate this point below)? All I am concerned with in this article is the coherence of the proposed therapy.
4. In the 1990a and 1990b articles. However, there is a more nuanced argument in their 1992 article; see also the interesting discussion that follows the latter article.
5. Dornbusch 1992b stresses the importance of the outside supervision also. For more on that see Santaella 1993.
6. It is to be noticed immediately that the idea of authority that this approach relies on is not in conformity with the idea of democracy. For shock therapy to work in a democracy, people should vote in the government with the mandate to do something unexpected. This is not easy to conceptualize. If it indeed turns out to be impossible to conceptualize, then the idea of shock therapy makes sense only as a reaction to an outside, real shock. Then, there are only real, not political i.e., engineered shocks. I want to make clear that I am not pursuing here the otherwise very important objection that shock therapy depends on high concentration of authority.

7. On the fiscal problems in the transforming economies see Kornai 1992 and 1993 and Tanzi 1993.

8. How realistic the alternative assumptions are? It may be argued that those living under socialism have formed expectations of price and social stability, so that it will take them some time to switch to rational expectations. But that implies the usefulness of inflationary rather than the opposite policies. If, on the other hand, individuals in transforming economies are seen as having rational expectations, they cannot be shocked. Either way, the shock therapy approach is unrealistic.

9. Thus, it is not necessary to rely on controversial institutional and sociological arguments as in Murrell 1993.

10. This has been argued by some practitioners of the new-classical monetary theory, but it is not obvious to me that it has been proved rigorously. In any case, the alternatives are: either no policy works or gradual stabilization. The former is perhaps in agreement with the fundamentals of economics, but is a political non-starter (see Sargent 1984). The latter is hardly a credible anti-inflationary policy. Therefore, though shock-therapy approach is not on absolutely firm grounds even as stabilization policy, it is arguably on firmer grounds than the alternative more gradual approach (but see Bruno 1992 and 1993).

11. For some economic modelling and discussion of the unorthodox path of post-communist transformation see Wyplosz 1993, Coricelli and Milesi-Ferretti 1993, and Aghion 1993.

12. The communist central bank sits on the top of a so-called monobank financial system. Thus, the transformation of the central bank requires a reform of the whole banking and financial system. This proved to be a very difficult task even in countries like Yugoslavia that have long abolished the monobank system. But, even in countries with repressed financial sector the bank restructuring is a difficult and a time consuming task. In post-socialist countries the task is a different one. It is not obvious to me that it is an easier one (it would follow from Murrell's 1993 analysis that it would be easier to reform a banking system like the Yugoslav one than to remove the one like in Poland or in Russia and put in the sound one; I can see reasons for either of the two claims). However, in the text I take the case of central bank independence only and do not go into the problem of restructuring as almost everybody agrees that this is difficult or undesirable to do in a revolutionary manner.

13. One argument can be found in Murphy et al. 1992. They argue that partial reforms did not work and could not work: they all failed. Therefore, only general reforms can succeed. That, of course, does not follow. And it certainly does not determine the type of general reform that is to be applied.

14. For what an openly constructivist approach to ownership transformation requires see Tirole 1991.

15. A curious fact is that it is nowhere clearly defined what is to be taken to be a successful shock therapy stabilization program. Some curious judgments are made in this relation. For instance Lipton and Sachs 1992 seems to suggest that 10 percent inflation per month is somehow stable. For a polemic defense of shock therapy and its successes in Poland see Balcerowicz 1993.

16. In this paper, the fall of output is attributed to the shifts in trade from socialist to market sectors. They attempt to prove that the shift of resources from an inefficient socialist sector to the more efficient market sector due to a partial price liberalization will lead to the fall in overall output. As far as I can see, this is wrong. Sachs has argued in many places (see for instance Berg and Sachs 1992), correctly I think, that there will be a fall in the output of the socialist sector and a rise in the private sector output, the overall difference being accounted for by the break-down in trade not by the shifts in trade.

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