János Kornai*

The Soft Budget Constraint

I first expressed my thoughts on the soft budget constraint in a lecture series I gave at Stockholm University in 1976. Two years later came my first publication to deal with it (along with other matters). That piece appears in this volume as Chapter 1.[1] Almost four decades have passed since the idea was conceived, and during that time, all those of us who have dealt with the problem have advanced in understanding it. The introduction to this volume sums up how I interpret the soft budget constraint today, in 2014, and reviews the research done into explaining and analyzing it.

The soft budget constraint syndrome

The syndrome

I have taken the expression *syndrome* from medicine, to mean the *set* of symptoms – recognizable, observable phenomena – absent from an ideally healthy organism. There can be one or more causes for such a set of symptoms to develop.

Medical science strives to find causes, but clinical practice must set about treating the syndrome even if the causes are still not sufficiently understood.[2] In living organisms, a syndrome will usually appear in several variants: here one, here another symptom or group of symptoms will appear more strongly, while others are less apparent or fail to appear at all.

Economists make only sporadic use of the expression syndrome, apt though it is for describing some phenomena in economic organisms. Although it is not customary to refer to the crisis syndrome of the capitalist economy, for example, I gladly do so. There are many kinds of crisis with many kinds of symptoms and many kinds of factor to explain their development. Yet they have something in common: all the various types of crisis frequently appear bundled together.

That is the sense in which I use the expression soft budget constraint (SBC) syndrome in what

---

* I owe great thanks to those who helped me prepare and formulate this Introduction, by making comments on the manuscript, gathering and processing information, and editing and cooperating in other ways. I simply list their names here, rather than attempting to weight their contributions individually: Réka Branyiczki, Rita Fancsovits, Dóra Győrffy, Ádám Kerényi, Boglárka Molnár, Anna Patkós, Andrea Reményi, Eszter Rékasi, Miklós Rosta, András Simonovits, Tamás Vasvári, and Ágnes Vidovics-Dancs. I am indebted to Brian McLean, the permanent translator of my works, who helped me this time again to convey my thoughts to those reading in English.

1 My book *Economics of Shortage*, which originally appeared in 1980, devoted a whole chapter to the soft budget constraint. This was followed by the papers republished in this volume as Chapters 2, 3 and 5, which appeared originally as journal contributions in 1980 (“Soft and hard budget constraint”), 1983 (“Softness of the budget constraint – based on data from firms”), and 1986 (“The soft budget constraint”).

2 Wikipedia notes that *syndrome* derives from the Greek word meaning "concurrence".

follows.

The phenomenon

The major common feature of the many variants of the SBC syndrome is as follows: the behavior of every organization concerned is affected by the expectation that it will be bailed out if it gets into serious financial trouble. Each of the expressions in this basic interpretation calls for more detailed explanation.

There are many types of budget-constrained organization in whose behavior the SBC syndrome may appear: households, firms, non-governmental organizations (NGOs), investment projects not tied to a for-profit enterprise,[3] distinct local government organizations (LGOs) within the apparatus of state, or other publicly funded institutions, and finally, central government on a national level. Initially SBC researches were centered on the enterprise sphere, but they later spread to organizations of other types.

The above basic general statement refers to "serious financial trouble," but consciously avoids denoting its specific nature. At the outset of the research, the concern was that state-owned enterprises under the socialist system were chronic loss-makers, yet did not need to close their gates because the state covered their losses. However, that is but one variety of serious financial trouble; the initial stimulus for a bailout may also come from several other phenomena. One of any of the organization types listed may fail financially, being unable to cover its due expenditures, or service its accumulated debt, or raise new loans having lost its creditworthiness. Another case of financial trouble is one that stimulates a bailout if the catastrophe has already occurred, or if it is foreseen that the organization stands on the brink of such catastrophe and the bailout comes in time. The breadth of the definition covers both single bailouts of single troubles and regular bailouts in response to chronic troubles.

When SBC researches began, the rescuer was the state (the central administration or some distinct organization within it). Later researchers notice the existence of several other types of rescuer or subsidizer: a large bank or bank consortium (Treisman 1995), or a private or public foundation. Bailing out at an international level were international organizations such as the IMF or the administrative bodies of regional associations, such as the EU.

Initially the bailout method that attracted most attention were single, repeated, or possibly regular state subsidies. This was the form most commonly associated with bailout. In fact rescuing parties had a wide variety of means available to them: full or partial remission of debt, changes in fiscal law to ease the tax load on rescuees, rescheduling of debt, full or partial exemption from tax, or lending to uncreditworthy borrowers. Where the main income of a rescuee came from products or services sold

3 For example, infrastructural, scientific, health-care or military projects financed from public funds.

at controlled prices, these could be raised.

Key constituents in the definition of the SBC syndrome are expectation and behavior. There are many misunderstandings surrounding them. Some view soft budget constraint and bail-out as synonyms, but far from it: where a firm or household is pulled out of trouble once, exceptionally, that is still not softness of the budget constraint. SBC appears, and only appears, where the rescuee organization expects to be rescued from trouble. It counts on a bailout because it can draw that conclusion from earlier instances, for example, where others in trouble have been frequently bailed out. That expectation appears not only subconsciously, but as a factor in decision-making and activity that affects its behavior.

For a moment let us leave open how strongly it expects rescue and whether the expectation rests on a correct diagnosis. Let us also leave open the kind of influence exerted on behavior. And let us ignore, of course, whether the rescue is right or wrong. The concept is being clarified: whether or not there is expectation and whether or not it affects behavior.

To sum up, the SBC syndrome is more than a financial phenomenon. It concerns a *social relation* between organizations linked interactively, between an applicant for rescue and a provider of it. The two parties are unequal: the applicant is at the mercy of the provider; the former is weaker, the latter stronger; the former is in a lower, the latter in a higher position. There is a vertical, not a horizontal relation between them. In the sense that the latter is the predominant force, this is not strictly speaking an economic relation, but one of *power* and *subordination*, where a lasting *behavioral pattern* emerges between them. The behavior on each side is governed by specific *motivations*, but that leads on to the causal analysis.

Causal analysis

I am unsatisfied by a simple statement that the interacting parties each maximize their utility. That is an empty statement. Their motivations must be grasped more specifically.

Let us first examine the driving forces acting in the first phase, *before* the financial trouble ensues.

Let us begin by examining the organization applying for rescue. Notice that seven of the eight organization types listed are not profit-oriented. The motivations of each would need to be discussed singly, as they are complex, not reducible to one force. Without aiming at completeness, let me pick out the motives of some types of organization of particular interest to the subject here.

o Households want to spend more, gain better living conditions. If they were hitherto poor, living in cramped homes, they want acceptable dwellings and to buy a first car. Their haste is psychologically understandable: they want access to these goods soon. Having reached reasonable prosperity, they strive to step ahead. To compound this is a kind of spending passion in some. While economic conditions look sound and households gain quite easy access to credit, they fail to sense their budget constraint and their spending speeds on. The more the economy thrives, the greater the spending drive becomes.

- NGOs, LGOs distinct within the apparatus of state, budgetary institutions for special purposes, or projects not tied to a specific for-profit enterprise: all would like to expand their activity. Hospitals will want better equipment and new patient accommodation, fire and ambulance services ever better vehicles, settlements new public buildings, kindergartens, and schools, the armed forces more and better planes, observation facilities, warships, and tanks, welfare foundations more support for their beneficiaries, and so on. Their identification with their tasks provides sufficient inducement for this propensity to spend and expand.
- Governing political forces would like budgetary funds to increase their popularity (and where elections play a role, their vote). Every high official in the apparatus of state works to gain more spending money for the activity under his or her authority (Desai and Olofsgård 2006, Kaiser and Taugourdeau 2013).

I call the common feature in these psychologically defined motivations the *expansion drive*. It stimulates growth in spending and stops only where it meets a constraint. The buffer may be conservative bank lending, legislative limits on spending, or state controls. In some cases caution acts as a limit or sober appreciation of the risks of overspending. But the drive to spend, the expansion, investment hunger, “fiscal alcoholism”[4] – these are instinctive, natural traits well explainable psychologically. What stands up to them as a constraint is an artificial formation. The expansion drive comes from within, the expansion constraint from the outside.

I have left profit-oriented firms to last. If a firm had a single motive – maximization of long-term profit – it can be seen logically that it would limit its spending of its own accord.[5] But trade fluctuation in the business sphere belies that convincingly as too simplistic a theory of motivation. When things go well in the economic environment, the drive to expand wins in profit-oriented firms too. That in turn is stimulated by rivalry: one firm feels it can keep its place only by growing. If a firm fails to grow it lags behind. It is easy to obtain credit in such an environment because banks want to grow as well. In many firms expenditures grow in relation to earnings: the easy availability of credit

4 The apt expression was coined by György Kopits.
5 I assume here the budget constraint on private firms is hard. If it weakens, the propensity to spend will strengthen, of course.

leads to a rapid rise in investment. And so it goes on, until the growth spurt meets one of the constraints on expansion.

This introduction is not intended to analyze the processes in *macroeconomic* terms, only to show the *motivation*: the clear inducements for some organizations sooner or later lead to overspending, to court trouble that leads ultimately to calling for a bail-out.[6]

Let us turn to the phase where the trouble is imminent or has occurred.

The motive of organizations seeking rescue is largely self-evident. The driving force is simply an effort to *survive*, an urge so strong it can often vanquish all others. If households cannot meet their financial obligations, they may face elemental problems of survival. Non-profit organizations of various kinds strive to fulfill the tasks for which they were created, if only at a lower level. Central government on a national scale seeks to perform the usual state functions; the political lives of those in government may depend on averting financial failure. Often profit-oriented firms have so strong an urge to survive at all cost that it overrides the course that a strictly profit-maximizing calculation would dictate: liquidation of the firm.

The will to survive is a *sufficient* motive for some bodies in trouble to apply for help.

The next thing to consider are the motives of organizations providing support. It is no good looking for just one. The motivation depends, on the one hand, on the rescuer/rescuee relation: what particular applicant is making a call upon what particular supportive body. Populist politicians and charitable foundations have different motives for helping households in trouble. Furthermore, there may be several motives at work on a rescuing body within a particular relation, concurrently or in conjunction. Let us take some of them.

o A lender such as a bank is "after its money." The amounts spent on the borrower so far count as sunk costs: it would be sad to let them go. In business language, there is "too much invested to quit." It still seems preferable to refinance and continue the investment funded by the loan than to halt it and lose all the expenditures entirely.[7]

o In some cases central government, LGOs, and some weighty business organizations may be inclined to bail out organizations in trouble to prevent spill-over effects of an *economic* micro-crisis occurring. If one firm fails to pay its suppliers, they may be unable to pay theirs, and so on, in a chain of unpaid debts. The further this goes, the greater the threat of a macro-crisis. Bailing out key insolvent

---

6 Looking at a longer period of history, decision-makers for a time become more cautious while the experience of micro and macro-catastrophe is still fresh. Later memories of the trauma fade and overspending propensity returns, so that the process begins again.

7 This case is analyzed in a pioneer study by Dewatripont and Maskin (1995), whose underlying ideas have been adopted by many researchers.

debtors may avert this.

o	There may be *moral* inducements to rescue: social solidarity, sincere compassion. Many do not want to stand idly by while those behind on their mortgage payments have their homes auctioned over their heads, or a failed firm sacks its employees. Such noble feelings dwell in many political decision-makers, or if the feelings are too weak, they may be pushed into a rescue by protest movements or taunts from political rivals (Becker 1983).

o	Mass occurrence of micro-crises may escalate into social tensions that lose governing forces popularity. Politicians may be driven to a bail-out by the motive of political survival, or under a democratically operating political structure, maximization of electoral support.

o	Some rescuees (say a firm with a well-known brand, an excellent theater, or a famous museum) may have a nimbus they can call on when applying for help.

o	The hidden aim of a rescuing organization may be to gain supporters in business or the arts – build up patron/client ties of a political nature (Robinson and Torvik 2009). Repetition of this trouble/rescue scenario may reinforce the power relation between them.

o	Rescuers may be motivated by their own financial interest: the applicant for rescue has bribed the decision-maker or his or her adviser, the person preparing the decisions. Even if there has been no corruption in a crudely lawbreaking sense, the decision-maker may be influenced by personal ties: applications may have come from friends, old school or university fellows, fellow club members, or like-minded people from the same political party.

There exist many other motives, but these examples suffice to show it is incorrect to ascribe to a single motive willingness to subsidize organizations in trouble.

There remains a psychological factor to examine: how does the expectation of rescue develop? There is no simple, generally valid answer to the question. The rescuees' decision-makers have learned from *experience*, not necessarily their own, but from observing bailouts being made to other organizations. If others are bailed out, they can expect the same. Or the rescuees' decision-makers may work out a hypothesis what the potential rescuers' interests or motivation may be: "Ours is the only large company in town. It would damage the reputation of the mayor if it was allowed to go bust."

Expectations can be sober and realistic or mistaken. Perhaps rescuees assess wrongly what potential rescuers are willing to do. But wrong expectations may also shape behavior.

The logics of the explanation is this. The behavior of organizations concerned (rescuees and rescuers) is explained by their inclinations, both in the first phase, before trouble occurs, and in the second phase, when application for and decision on the rescue are formed. Inclinations and ultimately the behavior are shaped by their motivations and the social psychological situation that emerges. Given the concurrence of the conditions, the phenomenon *has* to occur. It is another matter that neither the frequency of occurrence nor the intensity and strength of it are preordained.

Effects

The favorable effects of a specific bailout may outweigh the unfavorable ones. This will be treated in the subsequent section on therapy. The SBC *syndrome*, however, I judge to be an unhealthy phenomenon.

1. The SBC syndrome encourages *wanton spending*. There is no need to fear grave financial troubles much as they will not become matters of life or death. The bailouts will ensure that we survive them. The wantonness appears in many different forms:

o Market demand gets out of control, even though some of it is not actually covered by available funds (see Chapter 4 of this volume: the 1983 study written with Jörgen Weibull, entitled "Paternalism, buyers' market, sellers' market" and these articles: Goldfeld and Quandt 1988, 1990, and 1993; Magee and Quandt 1994; Pun 1995; and Quandt 2000). Demand "runs away."[8]

o Decision-makers embark on irresponsible investments. They fail to gauge risks or the possible loss-making consequences with due care. They feel they are covered: the rescuing organization will play the role of insurer. This is primarily what is meant by the expression "moral risk" applied in standard economics.

2. The SBC syndrome reduces the price and cost sensitivity of decision-makers. Those fairly sure of rescue from big trouble have no inducement to penny-pinch or make small savings because the rescuer will cover excess expenditure an order of magnitude greater.

3. The SBC syndrome alters the outlook of managers of bodies applying for rescue or subsidies and their allocation of attention and activity. They devote less attention and energy to improving their original function (for instance, the attention a production firm pays to raising quality, reducing costs, marketing, and so on.) Meanwhile they give more heed and energy to fostering relations with potential rescuers and to gaining patrons and serving them faithfully.

These three effects together reduce the efficiency of the organization.

4. The SBC syndrome also damages the *morals* of society. The deep financial trouble I referred to earlier is linked in every case to failure to meet obligations previously agreed, and breaches of contract and other commitments. What this usually means is that debtors fail to pay creditors, suppliers, or their own employees. The SBC-syndrome tends to urge decision-makers to breach their contracts, not to pay for the goods or service, not to pay their debt. They will muddle through somehow; somebody else will

8 Goldfeld and Quandt called the demand-raising outcome of the SBC the "Kornai effect."

pay instead of them, they think. (See the article “Breaking Promises,” written in 2013 and reprinted here as Chapter 13.)

The SBC outlook inspires a process of redistribution that many find unfair or dishonest. That was the reaction to bureaucratic redistribution of profits among state-owned enterprises under the socialist system. (See Chapter 3 of this volume, which republishes a 1983 study co-authored with Ágnes Matits: “Softness of the Budget Constraint – An Analysis Relying on Data of Firms.”) The same indignation is repeatedly felt at unjustified profit redistributions under the capitalist system, and comparable feelings arose over the debt moratoria awarded to spendthrift LGOs in Hungary in 2011–2013, covered and analyzed in the Appendix to this Introduction. Let me recall here two newspaper headlines reporting on reactions from communities not covered by these exceptional bailouts: “Heads of 22 non-indebted cities bang heads against the wall” (Éber 2014) and “Better performers punished” (Sóvágó 2013). The thrifty and upright do badly, the wasteful and feckless do well – this is a conclusion that is harming the well-being of society.

Some qualifications

So far some simplifications have been made for clarity’s sake. It is now time to express things more precisely.

The words “soft” and “hard” have been used in my explanations, whereas in fact that there are *degrees* of softness and hardness. However strongly the SBC syndrome applies, organizations cannot be utterly certain of rescue. The potential subsidizing body may act inconsistently. So no perfectly soft budget constraint pertains in this sense. This recognition, however, may prompt the applicant for rescue to put more effort still into currying favor with the organization that could save it.

The degrees of softness or hardness are expressing ultimately the security of the expectations of organizations for rescue or support; what is the subjective probability of being rescued if they meet trouble? It is hard to say how such subjective probabilities can be observed and measured in practice. One approach is a questionnaire (Anderson, Korsun and Murell 2000). Another approach is to derive from the econometric analysis of objectively observed and measured variables certain proxy variables which quantify the likelihood of rescue (Pettersson and Lidbom 2010, Tjerbo and Hagen 2009).

It emerges from the earlier discussion how many variants there are of the relationship between the applicant for rescue or support and the organization providing it, in how many forms the SBC syndrome appears, and how severe the syndrome is, depending on the specific circumstances of its appearance. The SBC syndrome is a *heterogeneous* set of phenomena. So it is wise to refrain from excessively general statements about it, for example, from stating simply that the budget constraint is soft under socialism or hard under capitalism. This proviso leads on to the next subject.

Situation report on the prevalence of the SBC

When (at what stage in history), where (under what system, in what sector, in what sphere), and how strong and serious is the SBC syndrome? It would be good if these questions could be answered on a basis of detailed surveys, but unluckily I only have impressions to fall back on, gained from my own researches and examining the literature on the subject. I have sought these impressions not only from works that apply the apparatus of SBC theory, but from those where the key expression in describing the problem is “moral risk.”

The socialist system: the pre-reform period

There were 26 socialist countries in existence in 1988. A table of these appears in my 1992 book *The Socialist System* on pages 7–8.. Now, two decades later, as I work on this paper, the number has sunk to two. Only North Korea and Cuba count unreservedly as socialist countries by the criteria then employed. The questions put at the beginning of the section apply, in relation to the socialist countries, in the past, not the present. Yet they are still worth raising, not least because it was experience under the socialist system that led to recognition of the SBC phenomenon: there it took an extreme form that made it more noticeable. Furthermore, the SBC syndrome under socialism provides a marked basis of comparison for studying the related phenomena apparent under capitalism.

I have singled out in my works two operative phases or prototypes of the socialist system: *classical socialism* and various moves from it; in other words, I distinguished the Stalinist model from *post-Stalinist reform socialism*.

The budget constraint was obviously soft for state-owned firms under the classical socialist system. Enterprise inputs and outputs were expressed in money and official political textbooks declared that income had to cover expenditure. This was known as the principle of autonomous cost accounting, often known by the Russian term *khozraschot* (Joffe 1949). So there existed a budget constraint on paper; among the enterprise’s compulsory plan figures was one for profit as well. But enterprise chiefs were not mobilized to fulfill that target and they were given no strong material or moral incentives to do so. (See Kornai: *Overcentralization in Economic Administration*, 1959 [1957].) Whether profitable or loss-making, this did not affect an enterprise’s subsequent operation or development. Losses were either covered automatically, or its administratively controlled prices would be adjusted from time to time to its costs. What was demanded above all from existing enterprises was fulfillment of its production plan. Investment decisions prescribed firstly what capacity was to be created and when production was to begin; expected profitability did not play any essential role. There was of course a cost target, but exceeding it was ignored. What was punished was late completion of the new facility. If the investment proved loss-making in the narrow, book-keeping sense, for example because the costs had not been spared to complete it in time, the loss would be covered in some form.

Decisions on funding central government, LGOs (councils in Hungary, soviets in the Soviet Union), or any other agency of the state were taken by the superior body in charge of the organization, and the enforcement of financial discipline was in the hands of that. The various non-state organizations (trade unions, professional bodies, associations for the young and for women, etc.) acted as transmission mechanisms for the party-state. Their existence rested solely on whether party-state leaders wished to operate them and how much they were willing to spend. No idea ever arose of slimming or ending the operation of such a “social” organization because there was no money to pay for it.

All this, to use the parlance of the SBC, meant the budget constraint was extremely soft throughout the state and semi-state sphere.

In reality the one type of organization whose budget constraint was hard, in fact very hard indeed, were households. Apart from some insignificant, sporadic exceptions, there did not exist any bank or commercial credit for households under the classical socialist system.[9] There were no credit cards. Consumers paid up front in cash. Even if they had wanted to, they could not overspend or fall into debt.

The socialist system: the reform period

Some socialist countries – Yugoslavia, Hungary, and Poland being among the first – brought in reforms that enhanced the role played by market coordination. The reforming countries in many respects differed from each other, in their moves away from the old economic order and in timing of them. But they had a common feature: each sought to create a combination of the centrally controlled economic system with a decentralized market economy.

The various alterations were intended to produce an economic system that gave greater autonomy to state-owned enterprises, and coupled financial incentives for their managers –and to

9 There were two credit schemes in reverse, whereby citizens lent to the state. One was a strange way of buying state bonds. Citizens in a market economy may buy state bonds voluntarily, but under the socialist system, strong pressure could be applied on them to subscribe. The other reverse form of credit evolved out of the sale of private cars. Buyers waited years for their order to be fulfilled, but all or part of the purchase price had to be paid in advance. In other words, citizens seeking to buy a car were lending money to the state vehicle trade.

some extent also enterprise development – to profitability instead of fulfillment of central planning commands. Under those conditions the question whether firms made a profit or a loss became relevant again. And if they made a loss, what were the consequences? To a greater or lesser extent in the reform socialist countries, bank credit to enterprises began to play a separate part. But that posed a dilemma: what if a firm cannot repay its loan?

These circumstances (new and unfamiliar to managers socialized in a classical socialist economy) turned the softness or hardness of the budget constraint into a relevant problem. But the experiences were disillusioning. Despite the partial or total dismantling of the system of planning commands and the fundamental changes in the coordination mechanisms of the economy, the budget constraint remained soft. Special significance is attached here to the experiences in Hungary, where the reduction in centralized economic planning and increase in the role of the market went furthest. But not even that was enough to harden the budget constraint. (See my 1986 study "The Hungarian reform process: visions, hopes and reality" and my 1992 study "Market socialism revisited".) Poland and Yugoslavia had similar experiences in the period of socialist economic reform. But a radically different situation emerged in the small-scale private sector, which began to expand at this time. For these small economic units the budget constraint was hard from the outset and remained so.[10]

Let us turn back from a historical distance to the socialist system and to its two prototypes: classical and reform socialism. Decades later I still consider correct a statement made in my 1980 book *Economics of Shortage* (republished in 2011): the budget constraint on state-owned enterprises was soft not only under classical socialism, but under the economy of somewhat reformed "market" socialism as well.

However, there are two essential matters on which my position has changed since then.

1. *The role of the SBC explaining the shortage economy.* The first chapter of this volume, containing a study of mine published as early as in 1978, sums up the view I held when writing *Economics of Shortage*. I then stated that several factors had to coincide for an economy to become one of chronic, general shortage. Of these I viewed the soft budget constraint as the prime mover, the most important factor. Without a hard budget constraint to curb expansion drive and its most important manifestation, investment hunger, the demand for investment goods will be insatiable. Though the budget constraint on the household sector may be hard, which places a limitation on demand from households, there are many leakages between the markets of investment, production and consumer

10 Consumer credit also appeared in the reform socialist economy, primarily in the form of mortgages to build private apartments and family homes. Usually, repayment of these was strictly enforced; it did not lead to an appreciable softening of the hard budget constraint.

goods. If investment demand “runs away,” this has the effect of drawing supply off from all markets.

My later, revised position retains that assertion: the effect of these factors are a *necessary* condition for a general, chronic shortage economy to develop. But to this must be added a necessary but not a *sufficient* condition. Other conditions must also be met.

A notable international debate arose on this question. Of the critics of my position, let me single out the economist of Polish origin then teaching in England, Stanisław Gomułka. For his article, which originally appeared in English, see Gomulka 1985. I replied to this in 1987 and that piece is reprinted as Chapter 6 of this volume.

In correcting my view in *Economics of Shortage* and in replying to Gomułka’s article, still in the socialist period, I was paralyzed by the need to exercise self-censorship. I did not even try to point out the most important factor: that the socialist system will not tolerate private entrepreneurs entering freely into production or any broad evolution of an enterprise sector based on private ownership. Nor did I mention (or rather I thought I could not mention) that the decisive role in eliminating shortage would be played by a free influx of import products.

The debates certainly had an influence on me. More cogent, however, was the influence of the changes I saw happening around me and theoretical rethinking of those *experiences*. There had been a growth of legal or at least tolerated or concealed private economic activity in the Hungarian reform socialist period of the 1970s and still more the 1980s. (Let me note here the household farming in agriculture, the auxiliary sideline activities of collective farms, and the various forms of *maszek* (private sector) activity.) This sector burst forth in that period, at free prices, contributing an appreciable proportion of the supply of foodstuffs and personal services. It could fill the gaps that the state-owned firms, the cooperatives, and the state-controlled imports could not fill. That explained why the shortage economy ceased in those sectors, notably in food supplies, while it remained in other areas of the economy.

I advanced my reconsidered position in my article “Eliminating the shortage economy” (1995), whose 1994 Hungarian version reappears as Chapter 8 in this volume. By then all barriers to free speech had fallen. I summed up all the necessary – and *sufficient* – conditions for a chronic shortage economy. Remove those and *general* shortage was bound to cease (although the possibility of chronic shortage subsisting in some sectors was not excluded). It is enough for readers, while studying the Introduction, to glance at Figure 3 of the article. Now the soft budget constraint on enterprises appears not as *prime mover*, but as one of the explanatory factors, where it belongs. It is a most important *intermediate* explanatory factor, and its correct place is in the second bloc of the complex chain of causality.

I established that even if softness of the budget constraint remained in the *state* enterprise sector, chronic, intensive shortage would cease where private firms were permitted to enter. They could cover amply the demand that the state sector could not meet.

This line of thought is exemplified by the Chinese economy.[11] There is still a sizeable state-owned enterprise sector where the SBC syndrome applies as ever (Wu 2002 and 2005, Xu 2011, Zhang and Freestone 2013). Yet there is now no general, chronic shortage as the market is flooded with goods and services from private firms, and imports also appear (though often curbed). Most goods and services appear freely on the market; only a minority of prices are controlled by the state.

2. *Relative weight of the effects of the SBC syndrome.* The idea of softness and hardness of the budget constraint occurred to me in seeking the causes of chronic shortage. I knew from the outset – and said so in my works – that the SBC syndrome damages efficiency. But I focused on the [SBC → shortage] link and the [SBC → efficiency loss] link was downgraded.

Already then, at the very beginning I was stating that the SBC phenomenon could occur also under the capitalist system. The more I dealt with it, the more aware I became of the [SBC → efficiency loss] connection. I have now believed for a long time that its harmful effect on the efficiency of the economy is the *prime* reason for paying attention to the SBC syndrome.

The capitalist system: sectors exposed to the SBC syndrome

The SBC syndrome exerts itself (with varying force) in several spheres of the capitalist system. It appears not only occasionally due to a random constellation of conditions, but certain combinations of institutions and behavioral patterns occur regularly, and these generate in most cases (although not in all cases) the SBC syndrome. Yet other parts of the system are largely free of the syndrome – immune to this pathological deformation.

I can list nine territories susceptible to the SBC syndrome.

1. *Firms in state ownership.* Let me refer here to Hungarian experience. It is noted repeatedly that Budapest Transport (BKV) and Hungarian State Railways (MÁV) make big losses. Clearly the officially controlled prices for public transport are set at levels where ticket revenue fails to cover running costs, let alone expenditures for development. How should the burden be split between passengers and central and local government? It is not my task to give a detailed specific answer; there is a big literature on the matter. It calls for a robust solution needing little amendment as time goes by.

11 The Chinese economy will be mentioned again. It is not possible to apply to China periodization in which 1989–90 is taken as a sharp divide between the reform process within the socialist system and post-socialist transformation. There the system underwent gradual change, so that they almost merged into each other.

Instead there is continual bargaining, with successive protests, threats, pleadings, and promises kept or broken. The state-owned enterprise has its debts partly or wholly paid and it all starts again. Such events are obvious symptoms of the SBC syndrome. Ultimately, enterprises can rightly expect things not to deteriorate to a point where the trams, buses and trains cease running for a long time. So there is good reason to wait for a bailout.

State-owned enterprises in many other countries are in a similar position.

2. *Local and regional government organizations*. Such bodies struggle in many countries with long-term deficits, unpaid bills, accumulated debts, and insolvency. In many, though not all countries "consolidation" ensues and troubled LGOs are rescued. There is a wide literature on this manifestation of the SBC syndrome (Qian and Roland 1998, Rodden, Eskeland, and Litwack 2003, Fink and Stratmann 2011, Baskaran 2012, Padovano 2013, Josselin, Padovano, and Rocaboy 2013, Dietrichson and Ellegård 2013). Hungary is a notably conspicuous case (Vasvári, 2013). The Appendix to this introduction gives data on how the surge of LGO indebtedness took place and how central government bailed them out again in 2011-2013. The Hungarian story is a classic example vying for a place in textbooks on the SBC syndrome.

3. *Budget-funded institutions and non-governmental organizations.* Here can be placed organizations with hybrid ownership that share features of budgetary institutions and of enterprises.[12] In terms of financial aims they are usually said to operate on the "non-profit" principle. Into Type 3 can be placed most hospitals, outpatient facilities, museums, arts centers, and non-commercial theaters and opera houses.[13] The "non-profit" character itself means that costs will not be fully covered by revenues generated by selling their services to users. These organizations are dependent on subsidies from central or local government. So a situation emerges similar to the one described in Type 1 (state-owned enterprises): they repeatedly reach the brink of financial catastrophe and appeal for help, and quite often receive it. To an extent they come to expect such assistance and are usually not disappointed.[14]

4. *Banks.* Economists analyzing crises have shown through cold facts of economic history the sequence of the following events. If a bank on the brink of collapse was not rescued, panic breaks out among depositors and other creditors fearful of not retrieving their money can. That is leading to the

---

12 Vahabi (2011) introduced the notion of a "parastatal" sector. In Vahabi's conceptual framework two quite unusual institutions created by the US federal government, Fannie Mae and Freddie Mac belong to the parastatal sector. Their purpose is to assist or rescue those defaulting on mortgage payments. Here too the SBC syndrome appears.

13 The SBC syndrome in the health service is the subject of my paper "The Soft Budget Constraint Syndrome in the Hospital Sector" (2009), which forms Chapter 9 of this volume. It is discussed by several other authors: Bordignon and Turati 2009, Tjerbo and Hagen 2009, Crivelli, Leive and Stratmann 2010, Brekke, Siciliani and Straume 2012. Eggleston and Shen 2011 show that insistence on a hard budget constraint and associated cost trimming may erode quality.

14 The Hungarian government has eagerly expanded the non-profit sector in recent years, primarily in public utilities, but elsewhere too. This forebodes further growth of the sphere where the budget constraint is soft.

insolvency of the bank, which in turn has a knock-on effect among other financial institutions, and ultimately the whole economy. This happened in 1929–32 at the start of the Great Depression, and likewise, the most recent financial crisis was instigated by the failure of Lehman Brothers on 15 September 2008. It has often been possible to avert a crisis if the country's financial administration or the banking sector itself bails out the collapsing bank; sometimes foreign banks or international organizations also contribute to such rescues. "Too big to fail" is the wisdom heard in US business circles about the major banks. The practice has become so widespread (the Lehman Brothers' case was exceptional in this respect) that banks now count quite consciously on such rescues (Buiter 2009, Gros 2012, Stern and Feldman 2004, Khwaja and Mian 2005). This is a typical example of the SBC syndrome in action.

5. *Indispensable private firms*. What are meant here primarily are *vast businesses* that employ tens of thousands (such as large vehicle or aircraft factories). Here also the "too big to fail" argument is heard: if they went bust it would generate waves of unemployment and leave large numbers of unpaid suppliers insolvent as well. Such vast firms put extreme pressure on the state to save them from trouble. Similarly strong is the bargaining position of private firms that may not be vast, but enjoy a *natural monopoly* (Segal 1998). Despite private ownership, susceptibility to the SBC symptom appears wherever a firm feels itself indispensable.

The table in my 2009 study (chapter 12 in this volume,) "The soft budget constraint syndrome and the global financial crisis" gives a long list of major, widely noticed Types 4 and 5 bailouts undertaken in the most developed countries of the world. Reports about these episodes certainly contributed to a worldwide expansion of the SBC symptom.

Hungary has frequent cases of troubled sports clubs (which are openly or implicitly commercial, privately owned organizations) seeking and receiving state bailouts. I must admit I had thought this was a Hungarian peculiarity, but I recently read a study entitled "Soft budget constraints in professional football" (Storm and Nielsen 2012), where it emerged that many truly profit-oriented, privately owned sports clubs in Europe regularly receive state subsidies to cover trading losses, and fully expect them. World-famous clubs realize that their collapse would mean a huge loss of prestige to football fans in their city, county, or country. This gives them a strong bargaining position. (See also Andreff 2011 and Storm 2012.)

6. *Large, priority projects funded with public money.* In some cases both state and privately owned firms participate, in others the contract goes to private companies alone. Two typical examples are the supersonic airliner Concorde and the Channel Tunnel between England and France. Numerous large military orders and infrastructural developments could be added. There is a close affinity to Type 5, of

which Type 6 might be seen as a sub-type. The common denominator is that there is no one enterprise in charge, and some state body keeps control of the project directly. So the distinction between public and private monies can be blurred. Often it is an understatement to use the epithet large, for *giant* sums are spent and there is great public attention paid to the project, unless it is a secret military one. The situation is a hotbed of the SBC syndrome. There is no stopping such a project whatever the excess expenditure. Wikipedia's "Cost overrun" page lists 37 notable, or more precisely, notorious giant projects. Others besides the two mentioned include the Olympic stadia built in Sydney and Montreal, the Scottish Parliament building, the two Airbus airliner types, and the Boston "big dig" tunnel system. Concorde cost twelve times, the Sydney opera house 15 times more than the original estimates. The latest case is the Sochi Winter Olympics, which cost $51 billion instead of the planned $12 billion: more than the aggregate spent on all Winter Olympics so far. On a more modest Hungarian scale, there belong here Budapest's Metro 4 subway line and the CET business center on the Pest side of the Danube.

7. *Firms and individual producers benefiting from sectoral support.* These may be granted under the pressure of industrial, commercial , or territorial interest groups, lobbies or political forces. A typical example is the raft of subsidies given to agricultural producers from the European Union (Rizov, Pokrivcak, and Ciaian, 2012). Reductions or cessations of such support are hampered by repeated political battles and protest actions. The subject remains one of constant debate and bargaining. The invariable argument in favor is that worthy rural families would otherwise go bust. The history of agricultural subsidies in America and Europe demonstrates well the difficulty of combating the SBC.

8. *Private firms rescued through corruption.* Under Type 7 were listed subsidies that are lawful and in line with ethical norms (though they may be of debatable use). Type 8 consists of unethical cases that often break the law, openly or secretly. If a private firm is in trouble and ignored, it will become insolvent. But it may be saved if it receives some form of support from a state body (by lowering its tax bill, raising the price paid for a state order of procurement, etc.) All it requires is a bribe to the one preparing or making the decision on the matter. The greater the chance of corruption succeeding, the softer the budget constraint becomes.

I have separated Types 7 and 8 to make the theoretical classification unequivocal. In practice the boundary between them is often blurred.

9. *Central government.* For centuries central governments have found themselves in financial trouble from time to time. The trouble can take several forms. The ultimate is a payments problem: reserves run out and revenue fails to cover the outgoings. More common is a debt crisis: interest and

capital repayments due cannot be met, and access to new loans is lost. The catastrophe may not have occurred yet, but the danger is apparent and the sources of credit dry up. Such crises are analyzed over a long period of history in a significant and rightfully celebrated work by Reinhart and Rogoff (2009). The book examines thoroughly the events of the last two centuries, taking each economic crisis occurring in that period in the 66 countries that accounted for the bulk of world GDP. Of the crises described, 320 can be said to have grown from a grave fiscal situation in the central government of some country, while 250 were mainly concerned with foreign debt, and 70 with domestic debt.[15] In an overwhelming proportion of cases the country gets over the catastrophe; with few exceptions states do not disappear off the map as a result of fiscal troubles. Among the alternative solutions are bailouts on a national level. The rescue is performed by the central government of another country, by an ad hoc consortium of central governments of several countries, or the central agency of a supranational regional integration, or an international agency such as the IMF. (Of the ample literature on the fiscal catastrophes, handling of state indebtedness, and countries under threat of insolvency connected with the latest international crisis, including the political implications of these, let me single out Győrffy 2013, Boone and Johnson 2010, and Baskaran and Hessami 2013.)

Such a disaster and recovery cause suffering to the country's inhabitants; those in power at the time usually pay a high political price. Yet that does not leave government politicians immune to the lures of excessive budget spending or improvident debt. Fears from financial rigor are weakened by the expectation: after all, some kind of rescue will appear in a case of deep trouble. I do not claim all governments facing such problems exceed their budgets or incur unlimited debt because they are certain of a bailout, but it is in the back of their minds that the chances of rescue are not unrealistic. One thought, in democracies where governments often change, may be: who knows who will be in power when the loan that saves the day has to be repaid? So the SBC syndrome demonstrably exists also among central governments, with an intensity that varies by country and political cycle.[16]

The survey so far has touched on nine areas where the SBC syndrome lives and operates within the capitalist system. Let us postpone analyzing individuals, the population, the household sector, and compare the following type with the nine examined so far.

10. *Firms and individual producers excluded from bailouts.* Here can be placed the small family

15 The account was drawn up by Ágnes Vidovics-Dancs, defining external debts as credit instruments incurred within a foreign jurisdiction, and domestic debts as those incurred within the country's own jurisdiction. To give an idea of the relative size of the numbers, it can be added that a *bank crisis* was the starting point in around 360 cases, whereas the main role was played by *fiscal troubles* in about 320 cases.

16 SBC problems linked with financing aid programs form a particular subtype. In most, but not all, cases the aid to a country after a natural disaster, civil war, or famine is distributed through its government, which is why I mention it here (Svensson 2000 and Janus 2009).

businesses, individual producers, and small and medium-sized firms (with some exceptions covered under Point 7). Indeed most large corporations in severe financial trouble do not receive or expect bailouts either. (Point 5 covers some exceptions.)

My statement is backed indirectly by the "demography" of entries and exits of firms. The annual proportion of all small firms ceasing to trade in Hungary between 2000 and 2010 ranged from 2 to 6 percent, and among medium-sized firms within a lower range of 0.8 and 3.5 percent. Figures for the time series after 2010 are unavailable, but it can be established from another source that between 2008 and the first half of 2013, from the 500,000–600,000 firms 10,000–18,000 firms ceased to trade per half year.[17] Both statistics show a sizable "mortality" rate.[18]

I will risk drawing some conclusions from the demographic data for firms. Almost all firms on the brink of failure spend some time there, trying to keep going, then give up the struggle. Their expiry means they were left alone, not pulled out of the financial mire. This was the general outcome over many years, and there did not develop an expectation of rescue from trouble. So I dare to state that the budget constraint was hard in this segment.

It would be good to express numerically the ratio between types 1–9 in aggregate and Type 10, i. e. between those subject to the SBC syndrome and those unaffected by it. This means agreeing on how to measure the extents of the two. There are two obvious possibilities. One is the number of those working in them, the other their contribution to GDP. Sadly nobody, to my knowledge, has made such calculations. The proportions in the 150–200 countries that feature in the international statistics vary widely, depending primarily on the state's role in society. Relying on my intuition I would chance the following guesses.

Measuring the numbers employed under today's capitalism, Type 10, the sphere facing a hard budget constraint, is larger in most countries (perhaps much larger) than Types 1–9 together, associable with the SBC. Looking at GDP contributions, the proportions may shift in favor of the Types 1–9 sphere, but it is still unlikely that the majority of GDP derives from there. Nonetheless, the sphere suffering the SBC syndrome is very sizable.

The measure used here is problematic in many ways. Certainly the contribution of Type 4, the banks, to GDP measured customarily in added value, is small. This, though, reflects the proportion of costs to the human and physical capital tied down by them, not to the strength of their direct and

17 The two sources use different methods, so that their data are not directly comparable. It would seem (but cannot be proven because of the methodological problem) that the exit process by small and medium-sized firms speeded up after the crisis broke out.

18 Entry and exit data for Hungarian firms were processed by Réka Branyiczki. Her detailed report with many more data and data sources appears on my website among the background materials for Volume IV www.kornai-janos.hu/Kalligram4_hatter.html.

secondary effects. The same can be said of Type 5, the indispensable enterprises, and still more of Type 9, central government. The key positions in the economy, the main seats of power, are in parts of the economy where the SBC syndrome has a marked effect. Thus it follows that it has a significant effect over the *whole* of the capitalist system.

Unfortunately, I can only build this line of thought on general ideas and intuitions about the situation in various sectors. Nobody has worked on numerical estimates for even one specific country. There is more about such research tasks at the end of this Introduction, but let me say here that this is one of the most important items in the program of future research. While I frankly reveal that all the above are based on conjecture, I still wish to make summarizing evaluations. Based on all I have come to know about capitalism in relation to the SBC, the contrast remains correct: the socialist system is marked by a soft budget constraint, the capitalist system by a hard one. Nonetheless, there are broad and influential sectors under capitalism that are strongly exposed to the SBC syndrome.

The capitalist system: the household sector

How can the SBC concept apply to households as a basic type of organization in the economy? Let us start with a *narrower* interpretation. It has been noted that households in the classical, pre-reform period of the socialist economy had no access to consumer credit: they had to meet their spending out of income and savings. To that extent their budget constraint was hard. On the other hand, consumer credit not only exists in a capitalist economy, it is very widespread. Loans, credit, installment plans, credit cards, and mortgage loans for housing are all normal constituents of household management.

It is quite common for households to be unable to service their consumer loans on time or to repay all their debts. If trouble strikes, attempts are made to renegotiate the credit terms. I would not class this customary refinancing procedure as a ”bailout”. I would reserve the expression in this context for actions where central government intervenes and obtains a reduction in the burdens on troubled households by non-regular means. This may be done with funds at its disposal. Such bailouts, ultimately at the taxpayers' expense, may be augmented or replaced by the state compelling the lending banks legislatively to pay the bill. Such serial bailouts have been occurring in present-day Hungary in favor of indebted households that took out sizable housing mortgages denominated in foreign currency, lured by better interest terms, disregarding risks of exchange rate changes. This occurrence is explored in the article “Breaking Promises,” which appeared last year and anew as Chapter 13 in this volume.

Mass rescue of households may induce in the public an expectation of good chances of rescue for others in similar situations. It is early to say for sure whether this expectation has yet developed, and if so, how intensively and widely. Certainly the series of measures by the Hungarian government to assist foreign-currency debtors has created conditions in which the SBC syndrome may develop in the household sector.

I do not have sufficiently wide information on what government programs exist in other countries to assist households failing to repay their mortgage loans or what effects they are having. Where there were appreciable rescue programs, these might bring about expectations of rescue as well, in other words, the SBC might appear in among households.[19]

Rescue of individuals and households can also bear a *wider interpretation*. Several symptoms of the SBC syndrome occur in non-market social insurance systems. It is possible to see as a type of rescue all benefits received by those harmed or in trouble that are not dispensed by a voluntary private insurance scheme in return for insurance premiums paid as a commercial, market transaction, but out of public funds, i.e. state resources. Here might be listed, for instance, unemployment benefit, or sick pay in case of accident or disease. By this line of argument, the sphere can be widened to include other services of the modern welfare state. If citizens arrange their lives so as to rely on a paternalist state and "bailout" aid from society, we encounter expectations that resemble the SBC syndrome in several respects.[20]

This touches on a problem that leads in several directions. It ties in with debates on the size and functions of the state, and on solidarity with those in trouble, need and poverty or suffering a disadvantage. It would exceed the bounds of this study to discuss these important matters in detail. I just wanted to show how far and how deeply the problems reach once one begins to meditate on the causes and effects of the SBC syndrome.

The post-socialist transition

Let us look first, from the angle of the SBC syndrome, at the transformation undergone after 1989–90 in the area of the former Soviet Union and the East European socialist countries. Within a few years, at most a decade, radical changes in ownership relations took place at a speed very rapid in historical terms. The dominant property form beforehand was state ownership, afterwards private ownership. With that the hard budget constraint took over from the soft as the predominant situation in the economy *as a whole*.

Along with transformation of property relations came change in the legal system. Laws and

19 I have written these lines in the conditional because I know of no study to examine the budget constraint on households using the scientific apparatus and conceptual framework of the SBC theory. It would certainly be instructive to examine from this angle the long-term effects of the two American institutions to rescue mortgage debtors, mentioned earlier, Fanny Mae and Freddy Mac.

20 For a theoretical approach using a mathematical model see Lindbeck and Weibull 1988, and Bergstrom 1989.

directives appeared that sought to enforce contracts and redefine legal relations between creditors and debtors. Hungary was the first country in the postsocialist region to adopt a strict bankruptcy law; this initiated a surge of failures in the economy. Laws and regulations on bankruptcy and liquidation were passed across the region, and applied in practice, not just on paper. The "mortality rate" among the region's private firms is substantial.[21]

However, even after the postsocialist transition the SBC syndrome subsisted in the nine areas detailed above (Lizal and Svejnar 2002). Here let me underline the position of the publicly owned firms (Mykhayliv and Zauner 2013), in central government and LGO hands. Some stayed in state ownership over the transition; a few were privatized, then nationalized again, or founded by the state as its own property within the capitalist economy. The wider and stronger the publicly owned sector was, the more liable the economy became to the SBC syndrome. The peril has been described forcefully by Chinese economists pushing for market reforms (Chow, Song and Wong 2010, Wu 2002 and 2005, Xu 2011, Li 2008, Zhang and Freestone 2013, and Shi 2004).

Therapy

The first two sections of the Introduction took a *positive* approach to examining the SBC syndrome, asking how the phenomenon appears in reality. Now let us turn to a *normative* approach. Since the syndrome persists, what can be done?

At the height of the last financial crisis, Larry Summers, Treasury secretary under President Clinton, wrote for the *Financial Times* a provocatively titled article: "Beware moral hazard fundamentalists" (Summers 2007). Let me say at the start of the normative discussion: I am no fundamentalist believer in hard budget constraint. Many think so, but wrongly.

Economists inspired by standard economics and bred on welfare economics would set about finding what the rule of optimal bailout is. What course contributes the maximum to society's welfare? They would weigh carefully advantages and drawbacks, favorable and harmful effects, including delayed malign effects as well. They would establish, at least on a theoretical plane, when bailout was necessary and when forbidden.

Those familiar with my work will not be surprised when I say I cannot endorse this line of thinking. I am among those who say that no welfare function expressing "public interest" exists. Different values cannot be measured and confronted to each other by any magic trick of calculation. How many forints' benefit is gained in saving a thousand families from eviction? Or on the other hand,

21 The statement reflects data given earlier on mass exits among Hungary's small and medium-sized firms.

how many forints' damage is done if a bank, believing in rescue and suffering under the SBC syndrome, lightly and irresponsibly provides housing loans not to one, but to many thousand families? I see such cost-benefit calculations as empty self-importance or eyewash.

I am convinced we cannot draw up any set of exact rules as to when a rescue is warranted and when not. Would-be rescuers must weigh *all* political, economic, social, and moral outcomes when deciding each bailout, or group bailout, if many demands for rescue are made at once. For my part I would erect a *procedural* requirement: careful preparation, feasibility and impact studies and consideration of their findings, and attention to all opinions from those affected. And whether these requirements are met or not, let those deciding do so on their *own responsibility*.

If asked for advice on a specific bailout, I would often approve it. Let me give one example. I would join those who see it as a catastrophic mistake to leave Lehman Brothers to its fate.[22] The first big failure had a domino effect, with mass failures and catastrophic consequences in the United States and throughout the world.

It is an art to choose the bailout operations that are necessary on economic grounds or those of social solidarity, while striving also to minimize the appearance of SBC phenomena. The selection can never succeed perfectly. Inevitably SBC effects will occur to some extent.[23]

When a decision has to be made on a specific bailout, it is essential for the decision-maker to weight the following factors. The useful effect of the bailout appears *immediately*, but the harmful effect of frequent bailouts only after a *long delay*. The effect of a bailout is of a targeted, tangible nature, easily sensed; it brings marked feelings of relief to specified people. Employees are glad their jobs are saved; doctors and patients that the hospital stays open. The harmful "educational" effect of frequent bailouts, on the other hand, affect *everybody*, and lurk intangibly in people's minds. Most bailouts are politically popular, so that populist politicians find them especially hard to resist.

Specific single bailouts may be desirable: each may help the organism of the economy to operate in a healthy way. But that statement is still compatible with the next: the SBC syndrome is a *disease*, which is one reason why I chose to call it a syndrome. The SBC syndrome is an *innate*, genetically coded disease of the spheres considered under points 1–9 in the previous section. We have to acknowledge and live with it.

Medicine and clinical practice do not idly observe a patient's innate disease. They strive to

---

22 Of course anybody might add that it is easy to be wise after the event.

23The lasting behavioral effects accompanying the favorable immediate ones are described concisely by noted researcher into behavioral economics who deals with the financial sphere, Werner de Bondt: „Many commentators give the government credit for its swift action. Soft budget constraints carry risk, however. The danger is that reckless spending becomes the norm; that entitlements replace responsibility; that subsidies replace efficiency; and that the political class, even more so than today, gets into the habit of picking economic winners and losers." (de Bondt 2010, 146).

prevent it from getting worse. They reduce its harmful and painful effects as far as possible. I would advise economists and economic politicians to take the same approach to the SBC syndrome. Let us have no illusions: the problem cannot be wholly and finally cured. It will recur time and again. But that does not mean we have to stand idly by and watch its harmful effects. Its harmful tendencies can be restrained at every level with *legal measures*, for instance to encourage caution and more careful risk assessment by those deciding whether to extend credit (Feld *et al.* 2013). The scope for *regulating* the banking sector has by no means been exhausted. The bodies empowered to regulate intervene in financial processes if there are strong reasons for doing so. At the level of national fiscal decision-making, there are notable experts who advocate upper limits on the budget deficit and indebtedness, codified in laws, or even embodied in the constitution (Kopits 2004).[24]

One typical symptom of the SBC syndrome is *bargaining* between applicant for help and potential provider of it. Think here of the position of *chronically* loss-making state infrastructural enterprises (rail, public transport, utilities) and budget-funded institutions (hospitals, educational establishments). The state rescues them periodically before financial disaster sets in. Then it all starts over: an unending nexus of [consolidation → debt accumulation → consolidation → debt accumulation...]. Clearly these bodies cannot escape from the vicious circle under the present revenue structure (the state-controlled tariffs for their goods or services). It is often impossible to apply the obvious solution: to bring in prices that allow income to cover expenditures. The artificially low prices are justified on various economic and social grounds.[25] In that situation, the problems might be greatly lessened if a well-grounded *stable formula* were used to set the state contribution to each organization's costs. This would provide orientation for the enterprise or budgetary institution as to what it could expect without pleading for it. The procedure would not stamp out the SBC altogether. However much effort went into stabilizing the contribution formula, conditions would change and changes would have to be made in it, so that bargaining resumed, if more rarely.

For my part I look on these efforts with interest and (if I can talk myself into it) with hope. But I have to admit I cannot quell my doubts. They are suggested to me by experiences of the socialist system, with its governance of regulation, commands, and prohibitions to the ultimate degree. If a regulator introduces a regulatory weapon, those to be regulated soon discover a counter-weapon. The lawyers and financial experts devising the rules believe they have arrived at a wary enough regulation,

24 Strong counter-arguments are also heard. It is to be feared that the numerical limit enforced by the constitution is unrealistic. The relevant passage in Hungary's Basic Law, introduced in 2011, soon had to be amended to accommodate Hungary's actual indebtedness. Here the budget constraint proved soft even at Basic Law level.

25 It is another matter how far it is justified to go in lowering the tariffs artificially. There is no space here to analyze that difficult question.

but those on the ground – in the enterprise, NGO, or LGO – are busy too, far more conversant with the specific conditions, at least as wary, and able sooner or later to evade the regulation. The next step at the level above is make the fabric of prohibitions and regulations denser, to "refine" it and make it more detailed.[26] It is to be feared that this becomes a self-generating tendency that leads to over-regulation.

The idea is often raised that the hard budget constraint will punish the *organization* for its wrongdoings, excessive spending and irresponsible indebtedness. It is not the organization that should be punished but the *individuals* responsible for the wrong decisions. The system of incentives should be built so that the troubled organizations are rescued but the managers responsible for the trouble pay a heavy price, losing their jobs and privileges and breaking off their careers. There is a need at state legislative and internal regulatory levels for rules that establish a clear relation between bad management and individual atonement.

This line of thought is logically free of error and in line with the recommendations of publications in economics and management studies that deal with incentives. I would add that this type of sanctioning is endorsed with satisfaction by people with a healthy moral sense. In some cases the irresponsible managers do receive the punishment they deserve. Even if they have not broken the law, so that the sanctions are not applied in court, the sentence is carried out by the "invisible hand" of the official apparatus and the business world: managers making serious mistakes lose their jobs and reputations, and their career chances sharply decline. News of it spreads and acts as an important barrier to deepening of the SBC syndrome. Unfortunately, there are frequent counter-examples. Some bank, stock-broking firm, or corporation got into serious financial difficulties and was rescued, and meanwhile the managers were still getting their fat salaries and extra bonuses. Or they were dismissed from their jobs but the terms of their contracts guaranteed them generous golden handshakes – "golden umbrella" provisions in managers' employment contracts ensure them. Such contract terms are perfectly legal and enforceable through the courts. For all these reasons, it becomes doubtful whether *legal* or *administrative* means can be used at all to apply with full consistency the principle of individual financial responsibility for financial failure.

One grave problem in this respect is that to impose legally a system of individual financial responsibility goes against the *major historical current in the transformation of capitalist ownership relations*: the limitation of personal liability toward paying debts. Capitalism begins with a rock-hard

26 "Is centralization a solution to the soft budget constraint problem?" is the expressive title of a study by Ben-Bassat, Dahan, and Klor (2013), who put the question in relation to fiscal decentralization. Based on the authors' experience in Israel the answer is no.

budget constraint. (See my 1993 article "The Evolution of Financial Discipline under the Postsocialist System", which reappears as Chapter 7 in this volume.) Originally there are tough laws to back loan contracts: debtor, pay, or we will lock you up in the debtors' prison![27] From the beginning of the nineteenth century, however, there appeared a great institutional innovation: the *limited liability* company, whereby the owners are liable for the company's debts only up to the amount of their investment in it; their private fortunes cannot be touched. This new legal institution developed further as the joint stock company and other limited liability forms. Thereafter came a rapidly accelerating demand from limited liability companies for credit. Far more entrepreneurs were prepared to use credit to try out innovations, which brought huge profits if successful but with a high risk of failure. The supply of credit grew in parallel to the demand. Creditors, in setting their terms (interest, term, security, etc.), allowed for the fact that some debtors would fail to meet the conditions. They set aside contingency reserves and so on, as the well-known history of capitalist development relates. Without such limitation of personal liability, the rate of growth in past centuries and the innovation process radically altering people's life would not have occurred, or occurred so fast.

But once it had happened, the favorable effects on growth and innovation were associated with the appearance of the SBC syndrome, as a harmful side-effect of the limitation of personal liability for debt. In fact this is one of the deepest roots of the SBC syndrome. This is the main reason why the syndrome can be seen as a genetically coded disease of modern capitalism.

Those thinking over how to ease the SBC syndrome should look not only at suitable legislation, regulation, and financial incentives, but at *moral incentives* as well. This side of the question is discussed in detail in my 2013 article "Breaking Promises" (Chapter 13 in this volume). Many still take the view learned from their parents, schoolteachers, and literary readings that honest people should keep their word. If you have promised to pay back a loan, do so.[28] Of course, moral preaching often elicits a derisive smile and a cynical shrug from some people. I count myself among the idealists who are not prepared to accept this silently. Though I concede that the weight of moral conviction is limited,

---

27 Dickens' superbly drawn character Wilkins Micawber in *David Copperfield* reiterates what is still known as the Micawber Principle: "Annual income twenty pounds, annual expenditure nineteen pounds nineteen and six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery." Poor Micawber departs widely from his own strict principle and finds himself in a debtors' prison, from which he is luckily rescued.

28 An article in an influential periodical for the American intelligentsia (Kuttner 2013 reviewing Graeber 2012) quotes a conversation Graeber had with a lawyer at a garden party on the legitimacy of the IMF imposing austerity on third-world nations: "'But,' she objected as if this were self-evident, 'they'd borrowed the money! Surely one has to pay one's debts.'" Robert Kuttner, a noted economic journalist, quotes Graeber's comment that the statement "is so persuasive because it's not actually an economic statement: it's a moral statement," and adds himself: "A debt, by definition, is something you owe that must be repaid." Also revealing about how this piece will strike a non-economist reader is its title: "The Debt We Shouldn't Pay."

I still count it among the tools for curbing the harmful outcome of the SBC syndrome.

Contacts with other approaches

The three previous sections of the Introduction sought with varying success to describe *reality*: what the SBC syndrome is and what can be done against its harmful effects. Let us now move to the sphere of *ideas*, to analyze the notions, models, and research directions connected with the SBC phenomenon.

Institutional and behavioral economics

All the questions treated in the studies in this volume and reviewed in this Introduction are not just compatible with the outlooks of institutional and behavioral economics, they clearly belong to them.

The SBC syndrome offers an illustrative example of the basic context in which the two schools touch on each other, although differ in many other respects, or more precisely, in which they overlap. This basic context is that the specified lasting conjunction between certain institutions give rise to well-defined behavioral patterns. Indeed there is more to it than that: shedding light on the SBC syndrome adds to our understanding when the causal relation [institution → behavioral pattern] is placed in a political environment and embedded in some great historical system – the socialist or the capitalist system.

Moral hazard

Let us think over the following experiment in our minds. We conduct individual interviews with some economists whom we assume to be conversant with the SBC, because they have read about it and perhaps even applied its conceptual apparatus. We recruit the interviewees mainly from the post-socialist region, but some may never have lived in our parts, just come here on EBRD or World Bank business, or they may be university people who have specialized in comparative economics or research into the socialist system. We say the expression “soft budget constraint” and then ask them for free associations with it, whatever springs to mind.

Then we conduct another series of interviews, this time with well-qualified Western economists, who have never had a work about the SBC in their hands before. To them we give the expression “moral hazard,” and ask them also for the free associations that spring to mind.

Nobody has conducted such an experiment, but I am certain of this: there will be a high degree of overlap between the two sets of ideas that spring to the groups’ minds.

Can it be concluded that this is really just a case of two kinds of terminology? Are “soft budget constraint" and "moral hazard" synonymous? Did first I then others do nothing more than find new names for long-known phenomena? Or as the ironic saying puts it: new wine in old bottles? In my view the distinction is much greater. I would like to recall first of all that although the idea was sparked by socialist experience, "soft budget constraint" does not derive from Soviet or East European terminology, but from the vocabulary of mainstream economics. The budget constraint on a household comes up in the first lesson of any course of microeconomics, along with a textbook graph with a line representing the constraint. Later, when the same course reaches the general equilibrium theory, there is no budget constraint on the firm: traditional theory has it that its behavior is adequately represented by the objective function of profit maximization.[29] One reason why many Western-trained economists accepted the expression easily was that the usage was very familiar.

The first section of the Introduction dealt with the expression "soft budget constraint" in detail. Here I will attempt only to interpret the expression moral hazard (MH). It appeared originally in insurance terminology.[30] The knowledge that the insurer will cover any damage prompts the insured to be less careful about avoiding it. Furthermore, once the damage has occurred, the insured is less concerned about the consequences of it, which the insurer is expected to cover as well.[31]

The expression was adopted and interpreted more widely in economics (see Arrow 1963 and 1965). For instance, bank deposits have long been insured in various ways in case the bank should be unable to repay them due to unexpected events (e. g. a run on the bank). The knowledge that it is insured encourages the bank to be less careful in placing credit and even to take dangerously high risks. To put it more generally, MH describes a situation in which an actor is inclined to take risks whose costs will be borne by another actor.

As the economics of information developed, the interpretation of MH expanded further. Under the new concept it becomes a type of *asymmetric information*. Take a transaction in which one party (the insured, say) knows more than the other (the insurer). The former is protected from risk (fully or partly) while aware of its own decisions. The other party does not have information about the former's doings, but pays for the consequences of them. This approach to the problem provided fruitful inspiration high-level, intellectually stimulating works (Bolton and Dewatripont 2005).

Theoretical literature on MH relates closely to contract theory and principal–agent theory.

---

29 In this respect introducing the budget constraint can be seen as innovation in the model of a firm's behavior.

30 Quite early in my writings on the SBC there appeared the simile: "The state is acting like an overall insurance company taking over all the moral hazards with the usual well-known consequences: the insured will be less careful in protecting his wealth." (See the article "The Soft Budget Constraint," which appeared first in the Swiss journal *Kyklos* in 1986 and forms Chapter 5 of this volume.) Sadly I did not go beyond the simile for a long time, to explore the literature on MH closely enough.

31 The word "moral" may have appeared here because a moral insured would not handle carelessly assets in its charge even without financial incentives not to do so.

Moral hazard rests on the fact that no contract is "perfect," it cannot cover the tiniest details. One party (the supplier, say) may abuse that by counting on the other party fulfilling their obligations (in this example by paying the contract price), because they are unable to check every detail. Even in this outline example the question of monitoring arises. This is one of the central issues in the principal–agent relationship. No principal can ever monitor the agent perfectly. So what incentive does the agent have to serve the principal's interests well? (Bolton and Dewatripont 2005, Eisenhardt, 1989).

Again I am only introducing in outline a rich and ever-expanding field of MH research working at the level of *pure theory*. The questions raised by these researchers touch upon problems that also occupy researchers into the SBC phenomenon. They do not embrace the whole subject of the SBC, just some important aspects of it, analyzing mainly those to do with information and incentives.

Meanwhile many researchers have been applying the concept of MH to practical economic policy. "Moral hazard" appeared in the title of the 2007 *Financial Times* article by Larry Summers that I mentioned earlier. This evoked strong reactions for and against, with the MH system of concepts as the "native language" of the debate. In content it overlapped with the questions of most concern in the literature on the SBC: Should the troubled big companies and banks be rescued? Is it right to make taxpayers pay for the results of harmful acts by poorly operating micro-level units? What are the dangers if some important micro-level unit collapses and a domino effect ensues? Will the outcome of such interventions be long-term ill-effects on the thinking of decision-makers? There appeared numerous empirical studies, not only in the business press, but in academic journals, which applied the concepts and arguments of MH theory to analyzing the latest financial crash. A good example is an article by Chang (2000), whose title says much: "The Hazard of Moral Hazard: Untangling the Asian Crisis." There is conspicuously much in common between the empirical literature employing the MH ideas outlined here and works that analyze the SBC syndrome.

Though I do not wish to appear immodest, I risk the following assertion: Despite essential overlaps between MH and the SBC syndrome, the literature of the latter has contributed and will contribute *substantial extra knowledge* to that introduced by the MH literature.

There is food for thought in the contrasting starting points of the two descriptions. MH starts from the dilemma of the insurer, the rescuer, the bailer out, and what effect there will be on its behavior. Moral hazard arises as a consequence of its decisions. With the SBC sphere of ideas the approach is through the behavior of troubled (or potentially troubled) micro-level units. Think of those Western economic advisers who arrived for the first time in the countries behind the Iron Curtain in 1989–90. It was as if the concepts of moral hazard had been erased from their vocabulary. They immediately adopted the parlance of SBC when confronted with the low-efficiency *enterprises* of socialism. In almost all cases their economic policy proposals involved hardening the budget constraint. In other words, the MH line of argument derives from observation of the *financial sector*: how decisions made by the finance ministry, the banks, the stock exchange, and in the offices of the financial managers of firms have an effect. Analysts thinking in terms of the SBC syndrome look first at the *real* economy and the behavior of firms providing goods and services.

Even the term "moral hazard" reflects that it focuses primarily on risk-taking and risk-sharing. The problems of risk are important also in the SBC outlook, but the syndrome may also be manifest in institutional configurations and behavior patterns unrelated to risk-taking.

MH literature, whether taking a theoretical approach or one of empirical economic policy, looks at matters mainly from the side of information and incentives. SBC literature shows much wider interests: *the deeper social and institutional roots* of incentives, their relation to political institutions, and to the general nature of socialism and capitalism. In this respect it exceeds the traditional study area of economics to include fields normally belonging to sociology and political science. The SBC syndrome builds *a specific social relation* between rescuee and rescuer (both actual and potential in both cases). Those below are at the mercy of those above. And those above make use of those they exploit, if possible so shaping matters itself that there appears and persists a relation between defenselessness and power.

The *diversity* of SBC literature can prove productive. MH literature, especially that on empirical, economic-policy matters, concentrates largely on the financial sphere. Of course, enterprises and banks appear in SBC literature as well, but we can read in it also about the SBC problems of LGOs, hospitals, sports clubs, and agricultural lobbies.

MH literature examines the phenomenon through two disciplines: economics and to an extent political science. SBC literature takes a more inclusive, *multidisciplinary* approach, calling on the explanatory aids not only of economics and political science, but the outlooks, concepts, and methodologies of disciplines such as political and economic history, sociology, individual and social psychology, jurisprudence, and ethics.

The next section of the Introduction will return to how this gap between the two approaches occurred and what can be done to narrow it.

Time inconsistency

One popular subject in pure theoretical researches employing mathematical models is time inconsistency: how to explain that rational decision-makers, who should behave with strict consistency according to the postulates of theory, manage still to be inconsistent in their decisions over time.

Something is promised seriously at one moment, yet the promise is not kept. If the promise embraced a threat and the threat is not carried out, reputation is lost and the credibility of the threat is weakened (the *credible threat* problem).[32] Following the renaissance in the application of game theory in economics, time inconsistency also came to concern researchers working in the field of pure theory.

The problem shouts out to be examined by modeling with the tools of game theory. The first to devise such a game-theory model was Schaffer (1989). A few years later came a study by Mathias Dewatripont and Eric Maskin (1995) that made a big advance by examining the time inconsistency of the SBC phenomenon through a model that used a clear, transparent example. (See our joint 2004 study "The Soft Budget Constraint," republished as Chapter 11 of this volume, which includes a short account of the Dewatripont–Maskin model.) The financing center issues a call to observe financial discipline and not exceed the budget constraint: units should not count on a bailout – it will not rescue them if they get into trouble. Trouble ensues despite the warning and the center breaks its word by resigning itself to a bailout after all. It can be shown in terms of the theoretical model that the state, under certain conditions, is acting rationally in reneging on its threat and performing the bailout. Similar relations may develop between a bank and its creditor. The bank initially sets hard terms, but later shows itself open to renegotiating them after all.

The Dewatripont–Maskin study aroused great interest. Only then did many economists realize that the SBC was not a transient metaphor, but something serious. The problem *could be modeled*: that recognition lent it authority.[33] Several studies appeared that applied the model either to a practical field or as a basis of further development. The large number of references in Chapter 11 includes pre-2003 works that used a similar approach. These were followed by further studies employing a similar methodology.

Applying the models of time inconsistency was of great profit to SBC research. I do not wish to detract from that recognition in the least when I warn of a need for caution. I have met with interpretations that construe time inconsistency as the *essence* of the SBC phenomenon, its central idea. Some go still further, to equate the explanatory model of the center that breaks a promise to withhold a bailout as the SBC theory itself. That interpretation I cannot agree with. Time inconsistency is one element in the explanatory theory of the SBC syndrome, one panel in a complex theoretical edifice – an important panel, but not the whole edifice. SBC theory is a far more comprehensive and complex

32 The dynamics of the SBC was first studied in an article by Judit Szabó, 1988, comparing it with a prior and continual softness of the budget constraint.

33 In fact mathematical models of other SBC subjects had been designed before. See Chapter 4 of this volume (Kornai and Weibull 1983) and the works of Goldfeld and Quandt (1988, 1990 and 1993). But the Dewatripont and Maskin study marked the real breakthrough with theoretical economists.

construct than that.

I cannot conceive of a mathematical model of which anyone could claim it was *the* SBC model. The SBC is too complex and multifarious for any manageable mathematical model to represent it comprehensively. I would be content if a succession of theoretical researchers were to devise various models, each reflecting different features of the syndrome.

I have discussed at two separate points the overlap of the SBC sphere of ideas with the literature on moral hazard and on time inconsistency. These are indeed treated as distinct in the literature using mathematical models. (See, for example, one of the books offering the best theoretical account: Bolton and Dewatripont 2005.) While two different model groups have developed in the realm of theoretical models, in the SBC syndrome of the real world the two kinds of phenomena (and a good many others) are intertwined.

Fiscal decentralization

The tasks that involve budget spending are split in some way between central and local government, and so are the revenues from taxation and other compulsory levies. What are the existing divisions and what the desirable ones forms an important chapter in the study of *public finance* (e. g. Stiglitz 2000, part 6).

The SBC syndrome appears, as mentioned, in the relation between central government and LGOs. If an LGO meets serious financial trouble, there is no cause for it to cease activity, which would lead to anarchy. Should central government leave such LGOs to worm out of trouble as best they can? Or should they cover the debt and on what terms? Much rewarding work has gone into embedding the SBC findings into the wide research field of fiscal decentralization (such as Qian and Weingast 1997, Qian and Roland 1988, Goodspeed 2002, and Jin, Qian and Weingast, 2005). A short review of these appears in Chapter 11 of this volume). The appendix to this Introduction looks at the SBC syndrome as exemplified in the fiscal decentralization of Hungary and the great central rescue acts performed in 2010–2013.

Entry and exit

Entry and exit in the business sphere are studied in microeconomics in the theory of market structures. Also involved, somewhat separately, is the developing field of business economics.

Many interesting observations have been made toward identifying the regularities of *entry*, fewer toward the analysis of *exit*. The SBC syndrome opens up a new side to the question. Bailout, particularly serial rescue, can be seen as keeping a firm alive artificially. The SBC syndrome stands in the way of natural corporate death.

At this point our subject-matter impinges on *theories of evolution* applied in economic activity. The population of firms undergoes processes of natural selection, which are modified by the SBC, when the failure of doomed firms is slowed down or halted.

Examination of the SBC syndrome also ties in with Schumpeter's theory of creative destruction (Schumpeter [1942] 2010). He and many later economists saw creation, building, and innovation on the one hand and dismantling and the termination of stalled organizations on the other as two parallel, interlocked processes. What the SBC syndrome does is to impede or halt the second while retaining the old, so that the crises only clear the way in part for technical development. Arguments against bailouts based on a Schumpeterian line of argument are sometimes heard in theoretical and policy debates on handling the crisis.

The points of contact and overlap are clear from what has been said: there are many references to them in the literature on the SBC. But the researchers into entry and exit, theories of economic evolution, growth theories that developed in the wake of Schumpeter, and the listed phenomena have yet to admit into their field of examination the subject-matter of the SBC syndrome and its conceptual system and methodology.

Political clientelism

Here I refer to quite a recent research field in political science, only a decade or two old (Piattoni 2001, Roniger 2004). It was mentioned in the first section describing the SBC syndrome, among the motives behind it: bailout is one benefit that political "patrons" can bestow on clients. (See the Appendix to the Introduction.)

As far as I have managed to follow the political-science literature on the subject, the researchers have yet to realize how well political clientelism can be captured by observing where and which economic unit is rescued from grave financial trouble by various political forces, and which social groups receive regular financial support. There is significant overlap of content between the SBC syndrome and the instances of political clientelism.

The research program on the SBC syndrome

The last section reviewed several themes and lines of research developed within various disciplines that can be shown to have subjects of examination that not only tie in with the subject of the volume, but partially overlap with it. I must stress that the overlap is partial. They are not *identical* with it. The measurement and explanation of the SBC system is a separate subject. To use a phrase of Imre Lakatos (1978), there is a distinct *research program* running its own course here.

The present situation – good news

There may be scientific researchers quite aloof from the reception their work receives and concerned only with the actual performance, but my hunch is that most are not indifferent to their reception, shy though they may be to admit it. For my part I declare interest in the reception I get, from colleagues and fellow economists and beyond them from a wider public. So I have tried to collect information on how widespread the ideas connected with the SBC are. This means assessing the reception not only of my publications but of those of others, for as time passes, more and more people join in the research, and I would like to gauge the reception of the common work of all of us. Let me begin by presenting the positive side.

The commonest measure of the influence of scientific publications is the number of *citations* they receive. Of the many sources I could utilize, I have chosen just one: the search engine Google Scholar. This records that the English versions of Chapter 1 of this volume received 685 citations, Chapter 5 1065 citations, and Chapter 11 658 citations.[34] This Introduction drew attention to two other important works: Dewatripont and Maskin 1995 on game theory models received 1224 citations, and the article Qian and Roland 1998 on fiscal decentralization was cited in 1035 publications. These also appeared in other languages, so that their aggregate numbers of citations are substantially greater.

The number of works whose *subject* was theoretical analysis of the SBC phenomenon or which explore experience with it in some sector reflects a deeper influence than citations counts do. Those who go beyond referring to SBC writings by others and themselves examine it can be counted as having joined in our research. We have no kind of statistics on this at our disposal. Some impression of the thematic *structure* of the research can be had like this:[35] Entering “soft budget constraint” in the Google search engine on March 4, 2014 brings up 134 mentions in the writing of others.[36] Since I

34 It must be remembered when interpreting the official statistics that as this Introduction makes clear, the readers of my book *Economics of Shortage* were the first to pay much attention to the SBC, although the idea had been aired in an earlier publication. The English edition of the book (1980) received 2638 citations, most often to the chapter on the SBC. To this must be added the citations of the other six language editions.

35 The count was done by Ádám Kerényi. His report appears on my website, www.kornai-janos.hu/Kalligram4_hatter.html, among the background materials that follow this article.

For a proper interpretation of the above analysis let me add that entering the expression “soft budget constraint” into Google will return over 300,000 hits. Experts on Google warn that the number of hits presented are not reliable estimates. Therefore our analysis is based on the Google hits (51 altogether) that return actual publications. In reality there are considerably more (but probably considerably fewer than 300,000) texts to be found via Google.

36 First all writings of which I was author or co-author were eliminated, then the multiple references found in the same article in 51 cases, and finally the mere passing references. The SBC problem is the major topic or a substantially discussed sub-topic of the remaining 134 papers.

entered the phrase in English, the result does not include the references in Hungarian, or in Chinese, Russian, Polish and other languages. Of the 134 papers, 61 can be classed as theoretical in nature and 73 as empirical. The numbers of the latter according to area of study are administration (fiscal decentralization) 31, the financial sector 25, the health sector 7, industry 3, agriculture 2, and other fields in 5 cases. The empirical studies concerned the following countries: China in 22 cases, Italy in 7, Germany in 4, Japan in 4, Ukraine in 3, and Brazil, Czech Republic, United States, Russia, Romania, and Sweden each in 2 cases. A further 21 publications dealt with a European, Asian or African region, or with several countries comprehensively.[37] Also considered separately were the pages found by the Google search engine for the Hungarian phrase for SBC: *puha költségvetési korlát*. Of these empirical works, 12 dealt with Hungary itself.

Analysis of the Google results showed a *broadening* of approach (theoretical or empirical) in the SBC research, in terms of the sphere or sector and of the countries examined. This broadening was examined with another methodology, by counting how many papers had appeared in the twenty leading English-language economics journals that not only mentioned the SBC phenomenon in passing, but discussed it throughout, or at least made use of its system of concepts or analytical apparatus.[38] The most articles, 30 in all, appeared in the most influential title of all, the *Journal of Economic Literature*. (Of these I wrote two, one alone and one with co-authors; the other 28 were by other hands.) I would also emphasize the *Journal of Economic Perspectives* (22, of which I wrote two), the *American Economic Review* (20, of which I wrote one), the *Journal of Financial Economics* (13, all by other authors), I have specified the authorship in each case to point out *how many* have joined the program, and on a high level, which underlines that journals known to be very selective were accepting them. Writings to do with the SBC are appearing not only in generalized journals, but in those dealing with sub-disciplines as well. The appearance of articles concerned with the SBC in leading journals covering finance, environmental economics, growth theory, or economic geography is important evidence of the broadening of the research program.

Turning to lexicons and encyclopedic treatments, among the many with an entry on the soft (or soft and hard) budget constraint are the *Oxford Dictionary of Economics* (Black 2002), the *New Palgrave Dictionary of Economics* (Eatwell, Millgate, and Newman 1987) and the *Palgrave Dictionary of Law and Economics* (Newman 1998).

---

37 To avoid duplication, the empirical works dealing with Hungary were omitted from the list of works written in English, as they would usually have appeared in Hungarian as well. These will be covered separately.

38 The examination was conducted by Miklós Rosta, whose account can be read on my website www.kornai-janos.hu/Kalligram4_hatter.html, among the background materials that follow this article. We classed the periodicals with the greatest five-year impact factor as "leading." A list of these and other information on the examination can be found on my website.

Many references to the SBC do not mention my name, which suggests the expression became part of the *public domain*.

In 2000, one of the most influential organs of the economics profession, the *Journal of Economic Literature*, placed at the disposal of myself and co-authors Eric Maskin and Gérard Roland a large amount of space in which to present the SBC syndrome and researches relating to it. (The study is republished as Chapter 11 of this volume.) This publication opportunity could be construed as an important step toward the *canonization* of SBC theory by the profession.

At this point I could conclude the report and record the spread of the idea of the SBC as one of the greatest successes in my professional life. I am not doing so because I wish to add objective information on the unfavorable side of the situation.

The present situation – bad news

The expression "soft budget constraint" and its related theoretical and empirical work have gained professional currency mainly among a circle whose members specialize in studying the socialist system and postsocialist transition. I place in this circle such members of the profession in the postsocialist region who retain interest in the socialism/capitalism comparison and the postsocialist transition. It includes also economists living outside the region once surrounded by the Iron Curtain, who dealt with the region as advisers, analysts and academic researchers.

It is another matter with the rest of the profession, which actually forms the vast majority. They include many who were induced to notice the SBC research prorgam and join in it, as financial or health-care economists or those dealing with information or contract theory. Several mentions have been made of them in the Introduction. But however imposing the "good news" may be, the SBC research program has *not* broken through to most of them. Let me mention three fields as examples to support this negative statement.

1. The economics profession divides into numerous groups and partial disciplines; many schools exist side by side. The research on the SBC syndrome has to break through primarily where the intellectual kinship is strongest. I pointed out in an earlier section that there is the greatest overlap with two such: institutional and behavioral economics. This provides enough grounds to examine a few prestigious English-language journals about the two. Altogether five journals were examined for the period 2010–2013.[39] These journals include altogether only five contributions where the expression

39 The examination was done by Eszter Rékasi, whose report appears on my website www.kornai-janos.hu/Kalligram4_hatter.html, among the background materials about this article. It includes, for instance, the names and figures for the journals examined.

"soft budget constraint" occurs.

2. Let us look at another highly important field of publications: the world's financial and economic-policy press. The two weightiest titles, the *Financial Times* and *Economist*, were examined for the period 2010–2013. Economic politicians, economic journalists, and academic economists publishing there often concern themselves with questions relating to the SBC syndrome and its concepts and analytical apparatus, yet such writings seldom appeared there.

3 The question was examined separately in relation to analyses of the last financial crisis. Western literature, from dailies through the economic press to academic journals, made little use of the SBC approach, with some notable exceptions.[40]

Typical are the study Boone and Johnson (2010) and the book Blinder (2014), both of which analyzed the last financial crisis thoroughly and from many angles. They touched on many phenomena discussed also in the writings in this volume, without using the experience recounted in the SBC literature or any arguments or methods of analysis belonging to the SBC sphere. To take another example, I read two studies *concurrently* on the Asian crisis while preparing this Introduction. One was written by distinguished exponents of SBC research (Huang and Xu 1999) and the other by a mainstream economist (Chang 2000). The latter drew nothing from the apparatus of the SBC research program. Yet the works that avoided the SBC apparatus could also have gained by employing the findings and methods of the analysis of the SBC syndrome while retaining their own battery of methods in full. It would have helped them to delve deeper into the problem of the crisis.

How come the SBC, as a developing, broadening research program dating back several decades, has still not penetrated the thinking of the majority of economists?[41] Only an attempt can be made here to answer the question, and hard though I strive to be dispassionate, complete absence of bias cannot be guaranteed due to my personal involvement. I think it might be an attractive topic for those involved in the sociology of science to study what makes the spread of a scientific idea easier or more difficult.

I must look first for an explanation in myself, and, although not entitled by them to do so, in the colleagues of mine who joined early in working on the SBC sphere of ideas. We have not done enough to spread our ideas. I will give just one example. I reported a few lines above that the subject-matter of the SBC does not feature at all in the respected journals of institutional and behavioral economics. I have to admit that neither I nor my immediate colleagues have ever tried to place an article on the

---

40 The exceptions include Prof. Hans-Werner Sinn, president of the prestigious IFO institute in Munich (see Sinn 2010) and Prof. Willem Buiter, a former member of Britain's Monetary Council, now chief economist with Citigroup (see Buiter 2009), whose writings expressly use SBC theory in their arguments.

41 Lakatos (1978) draws a distinction between developing and degenerating research programs. All that has been said in the "good news" section confirms that this program is in a developing stage.

subject in these journals; we have not attended their conferences in order to spread the SBC ideas in lectures.

The expressions “institution,” “behavior,” and “conduct” are among the basic words in my professional vocabulary.[42] They are natural components of the mode of thinking that has guided my research from the time of writing of my first book in 1955 to this Introduction, written in March 2014. Yet I have to admit I was slow in examining publications from workshops of institutional and behavioral economics. I cited them only now and again and did not join their professional organizations. Perhaps it was a kind of tit-for-tat feeling that kept me back, sorry though I am to have to say it. Had they not noticed I had been an institutional economist and a behavioral economist for a long, long time? What could I learn from them? It is a shame it turned out like that.

Looking back on how my thoughts and writings evolved, the reluctance I just described may also have appeared in the scant attention I paid to the literature on moral hazard. I have mentioned an early paper of mine that referred to a similarity between the SBC phenomenon and insurance. Although I was familiar with the concept of moral hazard, introduced in insurance theory, I did not adopt it in my own vocabulary, make use of available analogies, or delve into the interesting literature on the subject – sadly, as my work was the loser. Had my colleagues and I been more open to this tradition of concepts and ideas, we might have broken down the barrier there to the ideas and concepts of the SBC.

I could even end my search for causes here. I have said what depended on me and might expect others to write what depended on them. But I will not stop yet. Balanced objectiveness obliges me to express a view on what explains the disinclination to notice the research into the SBC syndrome. Let me move from narrower relations with the institutional and behavioral schools to a few comments on a broader scale: why the majority of the economics profession did not accept and embrace the findings of the research program into the SBC.

It is a well-known trait of the intelligentsia to insist on certain *words* and accustomed expressions deeply embedded in them. They do not move to other words or expressions even if they would be more comfortable. For example, economists trained at Western universities learnt and grew accustomed early to the phrase *moral hazard*. They followed a routine in broadening its original meaning to apply to problems of the moment (e. g. analysis of the recent crisis). They have no inner urge to seek another mode of expression.

However, there is a deeper, more salient reason than terminological conservatism why the research apparatus of the SBC syndrome did not spread more widely: it arose originally in relation to

42 To quote the summary remarks at the end of my *Economics of Shortage* (1980), “definite social relations and institutional conditions generate definite forms of behavior, economic regularities and norms." (p. 583).

state-owned enterprises under the *socialist* system. If anyone in an American university economics faculty or in the offices of an international economic weekly ever heard of it, it was saved in his memory this way: SBC is something associated with a socialist state-owned firm. Why should it be noteworthy if it occurs in such a distorted, absurd, scarcely workable economic system?

The truth is that the most Western economists had no interest in what happened behind the Iron Curtain, neither as a citizen nor as an intellectual concerned for the fate of the world. As the latter, of course, all focused on the arms race, the Cold War, and the fall of the Berlin Wall. But as specialists they were not much concerned with the workings of a centrally directed economy, the ties between the center and the institutions subordinate to it, or what profit or loss meant to an enterprise. So the idea of the soft budget constraint did not catch their attention.

The ideas related to the SBC syndrome (with many other valuable ideas and findings) was consigned to the intellectual ghetto of social science to do with the socialist world. Nobody of course said openly that what interested us within socialism might be important to us but to them was intellectually irrelevant. But if I cannot quote the statement from some published work, let me affirm that this opinion is quite widespread in Western academic circles. That is why most professional economists in the world show no interest in the literature on the SBC syndrome. It does not occur to them that it could be relevant to the world in which they live or problems that intrigue them. They do not even pick such writings up, and so have not noticed what was underlined from the outset: the SBC syndrome may appear under capitalist economic conditions as well. (See the first, 1980 edition of *Economics of Shortage*, pages 311-322.)

I recorded it as a success that the SBC theory was "semi-canonized." I now list it as a failure that the "canonization" did not reach what could be the more important remainder. The key issue is *education of future economists*. It has not been included into economics courses. One pertinent piece of evidence is to measure what is treated and heard in textbooks for advanced courses for doctoral students. Eight textbooks were examined.[43] It was found that none said a single word about the SBC concept or its theoretical and empirical literature.

Here I must return to self-examination, the first point in the causal analysis. I and other participants in the program are convinced that the ideas illuminating the SBC syndrome and methods developed to examine it provide extra knowledge that helps in understanding many important problems of our times, but our conviction did not influence the authors of the textbooks. The ironic remark of McCloskey (1998) that the key question is whether or not you convince your colleagues applies also to

43 The textbooks were examined by Eszter Rékasi, whose report, with a list of the examined works, appears on my website www.kornai-janos.hu/Kalligram4_hatter.html, among the background materials after this article.

this case. One group has been convinced, the other, presumably larger group has not.

Research tasks

Here I list what in my view are the most important lines of future research under the program.

1. I would put first the expansion of empirical work. There are already many studies that back its statements with impressive econometric analysis; many good ideas have appeared on how to measure softness and hardness of the budget constraint and quantify their effects (e. g. Josselin, Padovano, and Rocaboy 2012). Processing the experiences may inspire theoretical work as well.

2. I conjectured in the second section of the Introduction how soft or hard the budget constraint is in various present-day spheres of the economy. These conjectures need thorough empirical research to check, clarify, and quantify them. I tried twenty years ago to initiate a comparative international survey on these lines, but it soon ran aground. Perhaps some day there will be an international body prepared to organize such a survey.

3. There are huge gaps in the theoretical research into the SBC. The reactions to the first studies were positive, especially for the ones that placed the SBC problem into a game-theory context. But the pioneers, if I am not mistaken, have stepped aside and started on other topics. There hardly seem to appear any new attempts, even though the SBC syndrome has so many sides to it that it cries for mathematical modeling.

4. Modeling of relations between the SBC syndrome and the theory of microeconomics remains unprocessed. There are several explanations in this volume that point to that possibility (see the 1980 article "'Hard' and 'soft' budget constraint" in Chapter 2 and the 2004 article written with Maskin and Roland). To give a couple of examples, the usual models of the firm, the household, the market, and general equilibrium rest on the unstated implicit assumption that the decision-maker's budget constraint is hard. What happens if that assumption is lifted and the model allows the decision-maker's budget constraint to be soft as well? What can be said of the demand function if the budget constraint is not hard? New questions are posed not only in microeconomics but in macroeconomics too if the effects of hardness and softness of the budget constraint are introduced.

   I did not have the strength to give a rigorous answer to these questions. I can only hope that researchers working on the filed of pure theory will turn to the subject sooner or later.

5. I tried to show at several points in this Introduction that the SBC syndrome is not just a phenomenon of economics in the strict sense. It has essential political, legal, social, and psychological features as well. Yet so far it has been examined almost exclusively by economists. There is a great need for political scientists, lawyers, sociologists, and psychologists to join them in interdisciplinary

research on the subject.

The tasks are legion. I trust that research into this important and intellectually stimulating problem will continue to broaden and speed up.

Budapest, March 2014

János Kornai

References

Alexeev, M.–Kim, S. (2008): The Korean financial crisis and the soft budget constraint. *Journal of Economic Behavior and Organization*, Vol. 68. No. 1. 178–193. p.

Anderson, J.–Korsun, G.–Murrell, P. (2000): Which Enterprises (Believe They) Have Soft Budgets? Evidence of the Effect of Ownership and Decentralization in Mongolia. *Journal of Comparative Economics*, Vol. 28. No. 2. 219–46. p.

Andreff, W. (2011): Some comparative economics of the organization of sports: competition and regulation in north American vs. European professional team sports leagues. *European Journal of Comparative Economics*, Vol. 8. No. 1. 3–27. p.

Arrow, K. (1963): Uncertainty and the welfare economics of medical care. *American Economic Review*. Vol. 53. No. 5. 941–973. p.

Arrow, K. (1965): *Aspects of the Theory of Risk-Bearing*. Yrjö Jahnson Foundation, Helsinki.

Baskaran, T. (2012): Soft Budget Constraints and Strategic Interactions in Subnational Borrowing: Evidence from the German States, 1975–2005. *Journal of Urban Economics*, Vol. 71. No. 1. 114–127. p.

Baskaran, T.–Hessami, Z. (2013): Monetary Integration, Soft Budget Constraints, and the EMU Sovereign Debt Crises, Working Paper Series, 2013–03. University of Konstanz, Department of Economics, www.wiwi.uni-konstanz.de/econdoc/working-paper-series.

Becker, G. S. (1983): A Theory of Competition Among Pressure Groups for Political Influence. *The Quarterly Journal of Economics,* Vol. 98. No. 3. 371–400. p.

Ben-Bassat, A.–Dahan, M.–Klor, E. F. (2013): Is Centralization a Solution to the Soft Budget Constraint Problem? Social Science Research Network, 18 Oct. 2013.. Social Science Electronic Publishing. ssrn.com/abstract=2163475.

Bergstrom, T. C. (1989): A Fresh Look at the Rotten Kid Theorem – and Other Household Mysteries.

Journal of Political Economy, Vol. 97. No. 5. 1138–1159. p.

Black, J. (ed.) (2002): *A Dictionary of Economics*. Second edition. Oxford University Press, Oxford–New York.

Blinder, A. S. (2014): *After the Music Stopped. The Financial Crisis, the Response, and the Work Ahead*. Penguin Books, London.

Bolton, P.–Dewatripont, M. (2005): *Contract Theory*. MIT Press, Cambridge, MA and London, UK.

Boone, P.–Johnson, S. (2010): Fiscal Disaster from Financial Crisis: Case Studies. In: Turner, A. et al: *The Future of Finance: The LSE Report*. LSE, London, 256–288. p.

Boot, A. W. A.–Thakor, A. V. (2009): The accelerating integration of banks and markets and its implications for regulation. Megjelent: Berger, A. N.–Molyneux, P.–Wilson, J. O. S. (ed.): *The Oxford Handbook of Banking*. Oxford University Press, Oxford, 58–90. p.

Bordignon, M.–Turati, G. (2009): Bailing Out Expectations and Public Health Expenditure. *Journal of Health Economics*, Vol. 28. No. 2. 305–321. p.

Brekke, K. R.–Siciliani, L.–Straume, O. R. (2013): Hospital Competition with Soft Budgets. CESIfo Working Paper No. 4073. Center for Economics Studies and Ifo Institute, http://www.cesifo-group.de/portal/page/portal/DocBase_Content/WP/WP-CESifo_Working_Papers/wp-cesifo-2013/wp-cesifo-2013-01/cesifo1_wp4073.pdf.

Buiter, W. (2009): After subverting bank insolvency, our leaders are now about to make a mess of liquidity. *Financial Times*, Maverecon, 6 Oct. 2009. http://blogs.ft.com/maverecon/2009/10/after-subverting-bank-insolvency-our-leaders-are-now-about-to-make-a-mess-of-liquidity/#axzz2w1XDv6Lh.

Chang, H-J. (2000): The Hazard of Moral Hazard: Untangling the Asian Crisis. *World Development*, Vol. 28. No. 4. 775–788. p.

Chow, C. K. W.–Song, F. M.–Wong, K. P. (2010): Investment and the soft budget constraint in China. *International Review of Economics and Finance*, Vol. 19. No. 2. 219–227. p.

Crivelli, E.–Leive, A.–Stratmann, T. (2010): Subnational Health Spending and Soft Budget Constraints in OECD Countries. IMF Working Paper WP/10/147. International Monetary Fund, Fiscal Affairs Department, http://www.imf.org/external/pubs/ft/wp/2010/wp10147.pdf.

De Bondt, W. (2010): The crisis of 2008 and financial reform. *Qualitative Research in Financial Markets*, Vol. 2. No. 3. 137–156. p.

Desai, R. M.–Olofsgĺrd, A. (2006): The political advantage of soft budget constraints. *European Journal of Political Economy*, Vol. 22. No. 2. 370–387. p.

Dewatripont, M.–Maskin, E. (1995): Credit and Efficiency in Centralized and Decentralized

Economies. *The Review of Economic Studies*, Vol. 62. No. 4. 541–555. p.

Dietrichson, J.–EllegÍrd, L. M. (2012): Assist or Desist? Conditional Bailouts and Fiscal Discipline in Local Governments. Working Paper 2012:24. Lund University, School of Economics and Management, Department of Economics.

Eatwell, J.–Milgate, M.–Newman, P. (eds.) (1987): *The New Palgrave Dictionary of Economics*. Macmillan Press, London, Stockton Press, New York and Maruzen, Tokió.

Éber, S. (2014): Huszonkét el nem adósodott város vezetői fejüket verik a falba. (Mayors of twenty-two non-indebted towns feel stupid.) *Világgazdaság Online*, 2014. január 24. http://www.vg.hu/velemeny/jegyzet/huszonket-el-nem-adosodott-varos-vezetoi-fejuket-verik-a-falba-420179.

Eggleston, K.–Shen, Y-C. (2011): Soft budget constraints and ownership: Empirical evidence from US hospitals, *Economics Letters*, Vol. 110. No. 1. 7–11. p.

Eisenhardt, K. M. (1989): Agency Theory: An Assessment and Review. *Academy of Management Review*, Vol. 14. No. 1. 57–74. p.

Feld, L. P.–Kalb, A.–Moessinger, M.–Osterloh, S. (2013): Sovereign Bond Market Reactions to Fiscal Rules and No-Bailout Clauses – The Swiss Experience. Document de treball de l'IEB 2013/27. Institut d'Economia de Barcelona, http://www.ieb.ub.edu/files/PapersWSFF2013/Moessinger.pdf.

Fink, A.–Stratmann, T. (2011). Institutionalized Bailouts and Fiscal Policy: Consequences of Soft Budget Constraints. *Kyklos*, Vol. 64. No. 3. 366–395. p.

Gebhardt, G. (2009): A Soft Budget Constraint Explanation for the Venture Capital Cycle. *German Economic Review*, Vol. 10. No. 1. 71–90. p.

Goldfeld, S. M.–Quandt, R. E. (1988): Budget constraints, bailouts and the firm under central planning. *Journal of Comparative Economics*, Vol. 12. No. 4. 502–520. p.

Goldfeld, S. M.–Quandt, R. E. (1990): Output targets, the soft budget constraint and the form under central planning. *Journal of Economic Behavior and Organization*, Vol. 14. No. 2. 205–222 p.

Goldfeld, S. M.–Quandt, R. E. (1993): Uncertainty, bailouts, and the Kornai effect. *Economics Letters*, Vol. 41. No. 2. 113–119. p.

Gomulka, S. (1985): Kornai's Soft Budget Constraint and the Shortage Phenomenon: A Criticism and Restatement. *Economics of Planning,* Vol. 19. No. 1. 1–11.p.

Goodspeed, T. J. (2002): Bailouts in a Federation. *International Tax and Public Finance*, Vol. 9. No. 4. 409–421. p.

Graeber, D. (2011): *Debt: The First 5,000 Years*. Melville House Publishing, New York.

Gros, D. (2012): Greece's Soft Budgets in Hard Times. Project Syndicate, March 5. 2012, http://www.project-syndicate.org/commentary/greece-s-soft-budgets-in-hard-times.

Győrffy, D. (2014): Válság és válságkezelés Görögországban. A puha költségvetési korlát szerepe a gazdasági összeomlásban. (Crisis and crisis management in Greece. The role of the soft budget constraint in the economic collapse.) *Közgazdasági Szemle*, 61. évf. 1. sz. 27–52. p.

Huang, H.–Xu, C. (1999): East Asia: Miracle or Bubble? Financial Institutions and the Financial Crisis in East Asia. *European Economic Review*, Vol. 43. No. 4–6. 903–914. p.

Janus, T. (2009): Aid and the Soft Budget Constraint. *Review of Development Economics*, Vol. 13. No. 2. 264–275. p.

Jin, H.–Qian, Y.–Weingast, B. R. (2005): Regional decentralization and fiscal incentives: Federalism, Chinese style. *Journal of Public Economics*, Vol. 89. No. 9–10. 1719–1742. p.

Joffe, J. (1949): Az ipari termelés tervezése a Szovjetunióban. II. A jövedelmezőségi elv. (Planning industrial production in the Soviet Union. II. The profitability principle.) *Magyar–Szovjet Közgazdasági Szemle*, 3. évf. 3. sz. 154–158. p.

Josselin, J.–Padovano, F.–Rocaboy, Y. (2012): Grant legislation vs. political factors as determinants of soft budget spending behaviors. Comparison between Italian and French regions. *European Journal of Comparative Economics*, Vol. 10. No. 3. 317–354. p.

Kaiser K.–Taugourdeau, E. (2013): The timing of elections in federations: a disciplining device against soft budget constraints? *Public Choice*, Vol. 154. No. 3. 197–215. p.

Khwaja, A. I.–Mian, A. (2005): Do lenders favor politically connected firms? Rent provision in an emerging financial market. *The Quarterly Journal of Economics*, Vol. 120. No. 4. 1371–1411. p.

Kopits, G. (2004): *Rules-Based Fiscal Policy in Emerging Markets: Background, Analysis and Prospects*. Palgrave Macmillan, New York.

Kornai, J.–Weibull, J. W. (1983): Paternalism, Buyers' and Sellers' Market. *Mathematical Social Sciences*, Vol. *6*, No. 2, pp. 153-169.

Kuttner, R. (2013): The Debt We Shouldn't Pay: The First 5,000 Years by David Graeber. *The New York Review of Books*, Vol. 60. No. 8. május 9. http://www.nybooks.com/articles/archives/2013/may/09/debt-we-shouldnt-pay/?page=1.

Lakatos, I. (1978). *The Methodology of Scientific Research Programmes.* Philosophical Papers, Vol. 1. Cambridge University Press, Cambridge.

Li, L. (2008): Employment burden, government ownership and soft budget constraints: Evidence from a Chinese enterprise survey. *China Economic Review*, Vol. 19. 215–229. p.

Lindbeck, A.–Weibull, J. W. (1988): Altruism and time consistency: the economics of fait accompli. *The Journal of Political Economy*, Vol. 96. No. 6. 1165–1182. p.

Lizal, L.–Svejnar, J. (2002): Investment, Credit Rationing, and the Soft Budget Constraint: Evidence from Czech Panel Data. *Review of Economics and Statistics*, Vol. 84. No. 2. 353–370. p.

Magee, K. L.–Quandt, R. E. (1994): The Kornai effect with partial baliouts and taxes. *Economics of Planning*, Vol. 27. No. 1. 27–38. p.

McCloskey, D. N. (1998): *The Rhetoric of Economics.* The University of Wisconsin Press, Madison.

Mykhayliv, D.–Zauner, K. G. (2013): Investment behavior and ownership structures in Ukraine: Soft budget constraints, government ownership and private benefits of control. *Journal of Comparative Economics*, Vol. 41. No. 1. 265–278. p.

Newman, P. (szerk.) (1998): *The New Palgrave Dictionary of Economics and the Law*, Part II, E–O. Macmillan Reference, London és Stockton Press, New York.

Padovano, F. (2013): Distribution of transfers and soft budget spending behaviors: evidence from Italian regions. *Public Choice* (online), http://halshs.archives-ouvertes.fr/halshs-00911854.

Pettersson-Lidbom, P. (2010): Dynamic Commitment and the Soft Budget Constraint: An Empirical Test. *American Economic Journal: Economic Policy*, Vol. 2. No. 3. 154–179. p.

Piattoni, S. (szerk.) (2001): *Clientalism, interest and democratic representation: the European experience in historical and comparative perspective. The European Experience in Historical and Comparative Perspective*. Cambridge Studies in Comparative Politics. Cambridge University Press, Cambridge.

Pun, W. (1995): The Kornai Effect and Soft Budget Constraints. *Journal of Comparative Economics*, Vol. 21. No. 3. 326–335. p.

Qian, Y.–Roland, G. (1998): Federalism and the soft budget constraint. *American Economic Review*, Vol. 88. No. 5. 1143–1162. p.

Qian, Y.–Weingast, B. R. (1997): Federalism as a commitment to preserving market incentives. *The Journal of Economic Perspectives*, Vol. 11. No. 4. 83–92. p.

Qian, Y.–Xu, C. (1998): Innovation and Bureaucracy under Soft and Hard Budget Constraints. *Review of Economic Studies*, Vol. 65. No. 1. 151–164. p.

Quandt, R. E. (2000): The Kornai effect revisited. In: Maskin, E.–Simonovits A. (eds.): *Planning, shortage, and transformation: essays in honor of János Kornai*. MIT Press, Cambridge, MA, 209–229. p.

Reinhart, C. N.–Rogoff, K. S. (2009): *This Time is Different: Eight Centuries of Financial Follies*. Princeton University Press, Princeton.

Rizov, M.–Pokrivcak, J.–Ciaian, P. (2012): CAP subsidies and productivity of the EU farms. Poster, International Association of Agricultural Economists (IAAE) Triennial Conference. Foz do Iguaçu,

Brazília, August 18-24, 2012.
http://ageconsearch.umn.edu/bitstream/124970/2/ProductivityCAP11%20IAAE.pdf.

Robinson, J. A.–Torvik, R. (2009): A political economy theory of the soft budget constraint. *European Economic Review*, Vol. 53. 786–798. p.

Rodden, J.–Eskeland, G. S.–Litvack, J. (eds.) (2003): *Fiscal Decentralization and the Challenge of Hard Budget Constraints. Fiscal Decentralization*. MIT Press, Cambridge, MA.

Roniger, L. (2004): Political Clientelism, Democracy and Market Economy. *Comparative Politics*, Vol. 36. No. 3. 353–375. p.

Schaffer, M. E. (1989): The credible-commitment problem in the center-enterprise relationship. *Journal of Comparative Economics,* Vol. 13. No. 3. 359–382. o.

Schumpeter, J. A. (1942/2010): *Capitalism, Socialism, Democracy*. Routledge, Milton Park.

Segal, I. R. (1998): Monopoly and soft budget constraint. *The RAND Journal of Economics*, Vol. 29. No. 3. 596–609. p.

Shi, H. (2004): On the Endogenous Nature of the Non-performing Loans of the State-owned-bank of China: An Analytical Framework Based on the Dual Soft-budget Constraint Theory. *Journal of Finance*,

Sinn, H.-W. (2010). Rescuing Europe. *CESIfo Forum*. Vol. 11. Speical issue.

Sóvágó László (2013): Aki jobban teljesít, megbüntetik. (He, who is performing better, will be punished.) *Népszabadság*, 2013. november 27. 12. p.

Stern, G. H.–Feldman, R. J. (2004): *Too Big to Fail. The Hazards of Bank Bailouts*. Brookings Institution Press, Washington, D.C.

Stiglitz, J. E. (2000): Economics of the Public Sector. W W Norton & Company Incorporated.

Storm, R. K. (2012): The need for regulating professional soccer in Europe: A soft budget constraint approach argument. *Journal of Sport Management*, Vol. 2. No. 1. 2–38. p.

Storm, R. K.–Nielsen, K. (2012): Soft budget constraints in professional football. *European Sport Management Quarterly*, Vol. 12. No. 2. 183–201. p.

Summers, L. (2007): Beware moral hazard fundamentalists. *Financial Times*, September 24. 9. p. http://www.ft.com/intl/cms/s/0/5ffd2606-69e8-11dc-a571-0000779fd2ac.html#axzz2wrydp4um .

Svensson, J. (2000): When is foreign aid policy credible? Aid dependence and conditionality. *Journal of Development Economics*, Vol. 61. No. 1. 61–84. p.

Szabó, J. (1988): Preliminary and incremental softness of the budget constraint : a comment on the Gomulka-Kornai debate. *Economics of Planning,* Vol. 22. No. 3. p. 109-116.

Tjerbo, T.–Hagen, T. P. (2009): Deficits, Soft Budget Constraints and Bailouts: Budgeting after the

Norwegian Hospital Reform. *Scandinavian Political Studies*, Vol. 32. No. 3. 337–358. p.

Treisman, D. (1995): The Politics of Soft Credit in Post-Soviet Russia. *Europe-Asia Studies*, Vol. 47. No. 6. 949–976. p.

Vahabi, M. (2011): Soft budget constraint and the parastatal sector. MPRA Paper, No. 37926. Munich Personal RePEc Archive, http://mpra.ub.uni-muenchen.de/37926/

Vasvári, T. (2013): The Financial Management of Local Governments in 2011 in Light of the Crowding-out effect of their debt service. *Public Finance Quarterly,* Vol. 58 No. 3, 307-333 p.

Wu, J. (2002): *Reform: Now at a Critical Point.* SDX Joint Publishing Company, Peking.

Wu, J. (2005): *Understanding and Interpreting Chinese Economic Reform*. Thomson Texere, New York.

Xu, C. (2011): The Fundamental Institutions of China's Reforms and Development. *Journal of Economic Literature*, Vol. 49. No. 4. 1076–1151. p.

Zhang, D.–Freestone, O. (2013): China's unfinished state-owned enterprise reforms. *Economic Round-up*, No. 2. 77–99. p.

Appendix:

A Hungarian case of the soft budget constraint syndrome at work

Bailing out local government organizations (2011–2013)

This Appendix is based on the study Vasvári˙(2013) and other publicly accessible information. It was felt we should not burden the readers of the book with statistical and methodological details of how the data in the tables were obtained; only the most important information is included in the notes to them. The detailed information on which the Appendix rests, including the methodology of the numerical estimates and the sources from which the table were compiled, can be found in the author's website[44].

The Appendix handles the financial problems of the local government organizations (LGOs) solely in terms of the soft budget constraint (SBC) syndrome. A general description of Hungary's budget decentralization and of the current legal and economic problems with this appear in the study by Tamás Vasvári mentioned and the literature referred to there.

The mounting LGO indebtedness

Hungary's state budget falls into two parts: central government, and the LGOs of 3176 incorporated communities (villages, cities, districts of the capital), 19 counties and the capital. The local government subsystem covers its expenditures from three main sources: own revenues (local taxes and fees, privatization proceeds, etc.), grants received from the central budget, and loans.

Table F1 reveals that the stock of LGO debt was already substantial in 2006. Thereafter it rose to a peak in 2010 of HUF 1257 bn in the fourth quarter. Initially the LGOs mainly took up bank credit, but they came to realize it was more convenient to issue bonds, for which their appetite increased from 2006 onward: the aggregate debt of LGOs in bond form rose 17 times over, from HUF 28 bn in the last quarter of 2006 to HUF 465 bn in the last quarter of 2010.

Table F1 The debt stock of LGOs over the 2006–10 period (data for fourth quarters, HUF bn)

	2006	2007	2008	2009	2010
Bonds	28	212	419	430	465
Loans	543	574	562	584	609
Revaluations	–2	–3	48	73	182
Total	*569*	*783*	*1029*	*1087*	*1257*

Note: Revaluations cover year-end differences attributable to conversion of items denominated in foreign currency.
Source: National Bank of Hungary.

44 See my website among the background materials for Volume IV www.kornai-janos.hu/Kalligram4_hatter.html.

What induced LGOs to increase their debt stock so fast? How did they dare to do that? And what were creditors expecting when they extended loans to them on such a vast scale? It was stated in the Introduction that the SBC syndrome derives essentially from *expectations* built into decision-makers at units potentially requiring rescue. Those raising loans expect that if unable to repay them, somebody will bail them out. That expectation had not been confirmed in the earlier experience of Hungarian LGOs, indeed it had been stated in the legal regulations that "the consequences of loss-making operations will be born by the local-government organizations; the state budget takes no responsibility for their obligations."[45] But decision-makers could figure they would not be left in the lurch: no city, county or city district could be wound up like a factory or service provider. News went round that LGO heads had been reassured: feel free to borrow. News were spreading that LGO mayors had been all but encouraged to take loans without a doubt. Those declarations were said to be aired by certain political circles so that the popularity and electability of local chiefs could be improved through LGO investments and new installations effected on credit. Our researchers found no direct evidence of encouragement to borrow, but the SBC syndrome may still appear without it, based on the logic that a bailout would be inevitable.

The indebtedness was concentrated in a relatively small number of LGOs: 82.6 percent was owed by 150 LGOs at the end of 2010, i. e. by 4.7 percent of them.

The political allegiances of the LGOs were divided in the 2006–10 between the governing MSZP (socialists) and SZDSZ (liberals), the opposition (mainly the right-wing Fidesz–KDNP and MDF), and independents.[46] The majority of mayors whose candidacy had been supported by parliamentary parties were linked with Fidesz–KDNP. The 2006–2010 increase in indebtedness was not a steady one. It also emerges from *Table F2* that although it occurred in LGOs controlled by parties across the political spectrum, it was greater in those under Fidesz–KDNP control than in those under the control of a government party.

Table F2 LGO indebtedness in the 2006–10 period

	Fidesz–KDNP	MSZP–SZDSZ	Other	Not examined	Total
	Affiliation of the mayor				
Change in stock of indebtedness (HUF thousand)					

45 Act LXV/1990 on local government, clause 90/2. The undertaking in the law (that central government is not answerable for LGO debts) and the strongly contradictory bailouts of 2011–13 serve as a vivid textbook example of the behavior pattern known in the theory as *time inconsistency* (Introduction, p.XX).

46 In 2006-2010 MSZP and MSZP were the ruling parties and Fidesz–KDNP were in opposition. That was reversed in 2010-2014: Fidesz-KDNP took over the government, MSZP went in opposition, and SZDSZ disappeared from the political scene.

2006–2010	446 107 034	223 078 512	89 282 883	–3 298 493	755 169 936
Indebtedness per capita (HUF thousand)					
2006	39.8	39.2	26.5	17.1	32.4
2010	134.3	107.7	70.9	15.5	90.2
Change in indebtedness per capita (percent)					
2006–2010	337.2	274.4	267.5	90.5	278.1
Indebtedness per HUF one thousand of budget expenditure (HUF)					
2006	116.6	196.1	127.3	94.5	140.3
2010	450.5	390	291.1	78.4	348.7
Stock of indebtedness as a proportion of budget expenditure (percent)					
2006–2010	386.5	198.9	228.6	83	248.5

Note: Figures for per capita indebtedness refer only to the debt of the LGOs. They do not include the debts of the counties or the Capital City Government. Determining the political affiliations in the case of the counties the chair of the general assembly (and the assembly majority electing him or her) was considered, and in the case of the capital city the political body nominating the chief mayor.

A database for 803 LGOs was compiled to examine the relation between indebtedness and political affiliation. It included all LGOs except those with village and large-village status. But LGOs that would have been omitted on status grounds were still included if they met at least one of three further criteria: 1. over 5000 inhabitants, 2. a mayor who had stood as candidate for a party represented in the Parliament elected in 2010, or 3. debt that rose by over HUF 20 mn in the 2006–10 period. The "Not examined" column holds data for LGOs omitted from the database. The proportion of growth in debt stock attributable to these is under 0.5 percent of aggregate growth. The proportion of LGOs examined can be taken as adequately representative.

Sources: Hungarian State Treasury; National Electoral Office.

Debt taken over

The Fidesz–KDNP government that took power in 2010 altered radically the relation of central to local government by applying strong centralization. It assumed a sizeable proportion of the tasks hitherto performed by LGOs, and reassigned resources accordingly, to the detriment of local government. This process of fiscal centralization was augmented by a big bailout for indebted LGOs. The expectations in 2006–2010 were fulfilled: there was indeed mass rescue of LGOs struggling to service their debts.

The process of rescue and assumption of debts (generally termed "consolidation") occurred in several stages, not all at once. The proportions covered by the bailout differed between the categories. There was a category where the law prescribed a clear bailout proportion. With the counties and with settlements with fewer than 5000 inhabitants, central government took over not only their bank debts, but those to their suppliers. But there was a category where the law initially laid down "from–to" limits, the specific proportion of bailout being agreed case-by-case between central government and local government representatives. Such procedure applied in 2013 to the partial consolidations of the

LGOs of settlements with over 5000 inhabitants. Finally, in February 2014, the LGOs became practically free of debt, after their full debts as of the end of 2013 were taken over.

Several factors may have contributed to the degree to which debt was taken over in these categories, or where the law left leeway within a category, what case-by-case proportion applied; political affiliation was presumably not the only one, but the figures suggest it was one *(Table F3)*. This is clear also because central government several times departed strongly from its objectively set ideas on the proportions of the debt it was prepared to take over. *Table F4* compares the predetermined and actual proportions of consolidation. It appears there was hardly any difference for LGOs linked with the MSZP, but for those linked with Fidesz–KDNP, the large-scale consolidations were far greater than foreseen.

Table F3 The size and affiliation structure of debt consolidations

	Fidesz–KDNP	MSZP	Other	Total
	Affiliation of the mayor from 2010			
Size of consolidation (HUF thousands)				
Counties and capital city	369 407 161	–	–	369 407 161
Settlements with under 5000 inhabitants (to 31 December 2012)	21 475 442	1 458 056	50 960 942	73 894 440
Settlements with over 5000 inhabitants and the February 2014 consolidation	696 436 416	65 700 202	168 548 214	930 684 832
Total	*1 087 319 019*	*67 158 258*	*219 509 156*	*1 373 986 433*
Per capita consolidation spending (HUF thousand)	123.7	98.9	61.1	99.6
Consolidation per HUF thousand of budget expenditure (HUF)	594	410.3	288	498.4

Note. Figures for per capita indebtedness refer only to the debt of the LGOs. They do not include those of the counties or the Capital City Government. The basis of comparison for calculating the HUF thousand expenditure was the expenditure in 2012. Additional assumptions had to be applied to the estimates as the consolidation was effected in several stages. These are detailed on the website. As far as the counties are concerned, the chair of the general assembly (and the assembly majority electing him or her) was considered and in the capital city the political body nominating the chief mayor.
Sources: Hungarian State Treasury; National Electoral Office.

Table F4 The predetermined and actual scales of the consolidations (percent)

	Fidesz–KDNP	MSZP	Other	Total
	Affiliation of the mayor from 2010			
Average predetermined proportion (1)	48.9	47.2	52.8	50.1
Average actual proportion (2)	59.5	48.7	57	58
(2/1)	122	103	108	116

Note. The proportions of debt consolidations were estimated using a simple arithmetical mean.
Sources. Ministry of the Interior; National Electoral Office.

Table F4 supports statements made about clientelism on pages XX of the Introduction. Not only the rescuee has an interest in it passing on its debts, but the rescuer as well. The process of rescue and the differentiation in scale of consolidation help tighten the affiliations and loyalty of the rescuee, at a lower level in the hierarchy, to the rescuer at the higher level.

The "losses" of thrifty LGOs

Newspaper headlines were quoted on page XX of the Introduction intimating that heads of LGOs that had accumulated little debt could regret their thrifty use of public money later. Settlements that spent boldly and became seriously indebted received generous compensation in the form of a "national donation" paid for by the taxpayers of the whole country. *Table F5* gives estimates of scale: how much "loss" they suffered by having smaller debts that were offset by smaller compensation, or no debts at all.

Table F5 Estimate of the "lost national donation" suffered by thrifty LGOs

	Debt per capita, 2011		
	HUF 50 100–100 000	HUF 50 000 or less	No debt
No. of LGOs	218	1460	1215
HUF thousand "lost"	25 289 564	155 710 967	61 257 852
HUF "lost" per capita	18 300	46 700	48 400
HUF "lost" per HUF thousand of expenditure	85.9	214.6	238.1

Note. The database for the table does not include the counties or the Capital City Government, or settlements that had not completed their consolidation by the end of 2012. The estimates of the "lost national donation" were obtained by establishing the average per capita consolidation by type of settlement, subdivided into those with more or fewer than 5000 inhabitations. The difference between the average and actual value received was divided by the number of inhabitants of the category, and this was taken as the "lost national donation."
Source. Hungarian State Treasury.

Communities not covered by the debt consolidation are entitled to compensation, the appropriation over four years being HUF 50 billion, including HUF 12.5 billion in 2014. These consolation payments may have eased the discontent of the thrifty LGOs, but it did not repair the moral damage of the rescue campaign. The wanton spenders and the recipients under the earlier wave of consolidation were not penalized. The compensation payments went mainly to LGOs that had not received any consolidation monies, although who had received only small amounts, having managed relatively well earlier, received small amounts of compensation. Despite this, the principles of fair distribution were gravely damaged.

The rescue of debt-ridden LGOs in the 2011–2013 period cannot be called a major event in macroeconomic terms. Still, it deserves notice for the message it bore. It boosted the expectations of decision-makers inclined to spend irresponsibly: their budget constraint is soft. It supports their self-confidence: whatever they do they will survive and be bailed out. If they also possess good political connections, their chances and their slice of the national donation are still greater.

This Appendix is merely an initial attempt to describe and analyze the LGO rescue campaign carried out in 2011–2013. It would take further research and the econometric analysis and interpretation of a mass of data to gain a full understanding of the factors behind the wave of indebtedness, the circumstances in which the rescue was implemented, and the short and long-term effects of it.

Papers published in Volume IV of the Life's Work Series

1. Resource-Constrained versus Demand-Constrained Systems
Original in English: *Econometrica*, Jul. 1979, Vol. *47*, No. 4, pp. 801-819.
Also in Hungarian (1978, 1998), Japanese (1979, 1983) and Estonian (1981).

2. "Hard" and "Soft" Budget Constraint
In English: *Acta Oeconomica*, 1980, Vol. *25*, No. 3-4, pp. 231-246. Republished in: *40 Years of Research on Rent Seeking 2. Applications: Rent Seeking in Practice.* Eds. Roger D. Congleton, Arye L. Hillman, Kai A. Konrad, 2008. Berlin-Heidelberg: Springer, pp. 569-583.
Original in Hungarian (1980). Also in Portuguese (1983), French (1986) and Chinese (1987).

3. Softness of the Budget Constraint—An Analysis Relying on Data of Firms, co-author: Ágnes Matits.
In English: *Acta Oeconomica*, 1984, Vol. *32*, No. 3-4, pp. 223-249. Republished: *Eastern European Economics*, 1987, Vol. *25*, No. 4, pp. 1-33.
Original in Hungarian (1983). Also in Japanese (1984, 1986) and Chinese (1986, 1987).

4. Paternalism, Buyers' and Sellers' market, co-author: Jörgen Weibull
Original in English: *Mathematical Social Sciences*, 1983, Vol. 6, No. 2, pp. 153-169.
Also In Hungarian (1983) and Japanese (1986).

5. The Soft Budget Constraint
Original in English: *Kyklos*, 1986, Vol. *39*, No. 1, pp. 3-30. Republished in English (1990).
Also in Hungarian (1986, 1989), Japanese (1986) and Spanish (1992).

6. Gomulka on the Soft Budget Constraint: A Reply
Original in English: *Economics of Planning*, 1985, Vol. 19, No. 2, pp. 49-55.
Also in Hungarian (1987) and Japanese (1988).

7. The Evolution of Financial Discipline under the Postsocialist System
In English: *Kyklos*, Fall 1993, Vol. 46, No. 3, pp. 315-336. Republished in: *Europa und Ungarn*. Ed.: Ferenc Glatz. Budapest: Europa Institut Budapest, 1996, pp. 75-90.
Original in Hungarian (1993). Also in Russian (1994), German (1996), Slovak (1998), Bulgarian (1998), Romanian (2000) and Chinese (2003).

8. Eliminating the Shortage Economy: A General Analysis and Examination of the Developments in Hungary
In English: *Economics of Transition*, 1995, Vol. 3, No. 1, pp. 13-37 and No. 2, pp. 149-168. Original in Hungarian (1994). Also in Russian (1996), German (1996), Bulgarian (1998), Romanian (2000) and Chinese (2003).

9. The Soft Budget Constraint Syndrome in the Hospital Sector
In English: *International Journal of Health Care Finance Economics*, 2009, Vol. 9, pp. 117-135.
Original in Hungarian (2008). Also in Japanese (2009).

10. Hardening of the Budget Constraint: The Experience of the Post-Socialist Countries
Original in English: *European Economic Review*, 2001, Vol. 45., No. 9. pp. 1573-1600.
Also in Hungarian (2000) and Chinese (2004).

11. Understanding the Soft Budget Constraint, co-authors Eric Maskin és Gérard Roland.
Original in English: *Journal of Economic Literature,* 2003. Vol. 61. No. 4. pp. 1095-1136.
Also in Chinese (2002), Hungarian (2004) and Russian (2004).

12. The Soft Budget Constraint Syndrome and the Global Financial Crisis: Some Warnings from an East European Economist
Original in English, in the blog of Willem Buiter associated with *Financial Times* with the introduction by Willem Buiter (October 14, 2009) http://blogs.ft.com/maverecon/2009/10/kornai-on-soft-budget-constraints-bail-outs-and-the-financial-crisis/
Also in Hungarian (2009), German (2009), Japanese (2009), Chinese (2009), Polish (2009) and Vietnamese (2009).

13. Breaking Promises
In English in: *Альманах Центра Исследованный Экономической Культуры* (*Almanach of the Research Center of Economic Culture*), ed. by Danila Raskov, Moscow: Gaidar Institute Press, 2013, pp. 210-243.
Original in Hungarian (2012). Also Russian (2013), Romanian (2013), Russian (2013), Estonian (2014) and Latvian (2014).