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The Soft Budget Constraint: An Institutionalist Approach¹

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Abstract

In this paper, we reconsider the concept of the BC in the light of an institutionalist approach. Kornai's interpretation of the concept provides the basis of such an approach. He defines the BC as a conditional empirical fact regarding the specific behavioural regularity of agents that is determined by particular institutional setups. Different degrees of budget constraint (ranging from a SBC to a HBC) are thus considered as empirical facts exogenously given in different institutional contexts. In this perspective, the BC is related to the survival behaviour of boundedly rational (satisficing) agents. It implies neither market equilibrium nor optimality.

Classification JEL : B1, D2, D5, L2, P2

Keywords: Soft budget constraint, hard budget constraint, institutions, Say's Principle, Walras' Law

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Introduction

The purpose of this paper is to formulate a coherent institutionalist interpretation of one of the fundamental concepts of microeconomics, namely the budget constraint. Our starting point is that the strategy to explore the microfoundations of macroeconomics is in a deadlock and this is due to the axiomatic and hypothetico-deductive nature of neowalrasian equilibrium theory as the core of both micro and macroeconomics. Alternatively, we suggest to deal with economics as an inductive science and develop an empirically based microeconomics on the basis of an institutionalist approach. This line of inquiry allows us to reconsider the budget constraint as a fundamental **postulate** of standard microeconomics regarding the household's behaviour. Clower (1965) interpreted this budget constraint (BC) as Say's Principle and distinguished it from Walras' Law².

An institutionalist approach of the concept was first initiated by J. Kornai (1979, 1980). Kornai's main contribution was to reconsider the budget constraint as an **empirical** fact describing the behavioural regularity of agents. In this perspective, different degrees of budget constraint should be distinguished according to the institutional setups. A socialist economy is characterized by the soft budget constraint (SBC) of state enterprises, especially by *ex post* bailouts of loser enterprises by a paternalistic rescuer state. A pure market economy is marked by the hard budget constraint (HBC), while mature capitalism is characterized by state intervention and monopoly structure and hence subjected to a softer budget constraint. The SBC of socialist enterprise as a microeconomic phenomenon is determined **exogenously** by a particular vertical relationship, namely the paternalistic relationship between the state and enterprises. Kornai's SBC includes two ingredients: 1) asymmetrical information between agents with the possibility of moral hazard and adverse selection; 2) the politico-judicial or institutional aspect.

The Contractual, Monopoly as well as Public Choice theories tried to **endogenize** SBC as market imperfections or externalities. Hence, a vast literature which tries to capture SBC as a phenomenon resulting from **strategic behaviour** has been developed during the last decade. Kornai's intuition is formalized and developed further in two directions: its pure economic ingredient (asymmetrical information) has been developed by the contractual theory; its political ingredient by the Public Choice theory. The first orientation endogenizes the SBC as a non-commitment and time inconsistency phenomenon. The decentralization is frequently advocated as a solution to devise an optimal self-enforcing contract (Dewatripont and Maskin, 1995). However the formal authority relationship, i.e. the vertical or hierarchical relationship cannot be captured in this perspective. The second orientation endogenizes the political aspect through lobbying activities and interprets the SBC as a rent-seeking phenomenon (Shleifer and Vishny, 1994). In this perspective, bribery as well as legal obligations are identified as solutions to the SBC. The new microeconomics in its different versions (Contractual Theory, Monopoly Theory, or Public Choice) does not treat budget constraint as a postulate. It tries to endogenize the BC as a particular type of strategic behaviour in the presence of market imperfections.

Despite their differences, all strands of new microeconomics maintain the **maximizing behaviour** assumption, whereas in Kornai's approach, the SBC is closely related to non-maximizing behaviour. For Kornai, the SBC should be analyzed as a **survival behaviour**. He contends that as survival behaviour SBC can shed some light on the Schumpeterian process of creative destruction. Although

²What "Say's Principle" or "Say's Law" means is an old subject of controversy among economists. Schumpeter (1954, vol. 3, chapter six) and Sowell (1972) summarize Say's Law in six propositions. Quoting at length Say's writings, Baumol (1977) tries to show that at least eight different "laws" or formulations can be derived from Say's works. Lange (1942, p. 64) contends that Say's Law applying to a barter economy is a particular case of Walras' Law which applies to a money economy. This contention has been criticized by Clower and Leijonhufvud (1981, pp. 97-98). For our purpose what really matters is not the historical clarification between different versions of Say's Principle (SP) or Say's Law, but whether SP (as equivalent of BC) is describing a **bookkeeping identity** or a **rational postulate** of an individual transactor's behaviour. In this perspective, the distinction between Walras' Law and SP becomes crucial.

Kornai's conception of the BC is irreconcilable with the new microeconomics, it should be noted that Kornai's standpoint with regard to the HBC and his efficiency analysis are in tune with the recent formalized literature on the soft budget constraint.

Section 1 discusses the need for developing an empirically based microeconomics on the basis of an institutionalist approach. Section 2 studies Kornai's interpretation of the BC as an empirical fact and investigates its incoherencies. We finally conclude an institutionalist interpretation of the BC by resolving the basic tension of Kornai's theory of the SBC, viz the one between the survival criterion on the one hand, and the efficiency analysis, on the other hand.

1. Institutional approach and empirically based microeconomics

The crisis of neo-classical synthesis, based upon the Keynesian macroeconomics and the Neowalrasian microeconomics led to an inquiry about the **microfoundations of macroeconomics** during the sixties and seventies. The search for microfoundations of macroeconomic processes has been conducted by two different strands of modern economic thought, namely the New Classical School and the New Keynesian theory. On the one hand, the New Classical solution to this problem may be interpreted as the absorption of macroeconomics into microeconomics. The core of this new macro literature, inspired by the rational expectations approach and developed further by real business cycles, consists of representative agent (or social planner) models, in which the motion of the entire system is given by the solution to a single optimization problem. This approach, assuming that every agent knows the good model of economic functioning, and behaves as a walrasian "commissaire priseur", ignores the **coordination** problems among agents and considers economics as a sort of **rational choice** theory. In this respect, the New Classical theory not only challenges the Keynesian macroeconomics, but also undermines Arrow-Debreu's general equilibrium theory. The latter focuses on the coordination problem though under numerous restrictive conditions, whereas the New Classical School concentrates on the rational choice of a maximizer representative.

On the other hand, the New Keynesians share the rational expectations and optimizing behaviour assumptions of the New Classical School while claiming a link with Keynes because involuntary unemployment, monetary non-neutrality, and sticky wages and prices are acknowledged to exist (Mankiw, 1992, p. 565)³. In our opinion, neither the New Classical School nor the New Keynesian theory have addressed the central question of coordinating mechanisms among agents. Our intuition is that this problem cannot be treated by looking for the microfoundations of macroeconomic processes and that our endeavour should be oriented towards an analysis of **institutional foundations of macroeconomic processes**. The latter would provide solid basis for an empirically based economics.

Our intuition relies upon a critical appraisal of the axiomatic and hypothetico-deductive nature of equilibrium theory as the core of contemporary microeconomics. Drawing upon Clower, this type of microeconomics may be dubbed as "pure theory": "By pure theory I mean the axiomatically-based **neowalrasian** analysis of Arrow-Debreu, Debreu, Arrow and Hahn and closely related offshoots that serve as a standard of 'economic correctness' in all modern teaching not only in microeconomics but in macroeconomics, money and banking, finance, and econometrics." (1994, pp. 805-6). Clower's reference to 'economic correctness' corresponds to what Peter Howitt (1993) calls "The Neowalrasian Code": "Adherence to an increasingly complex code of formal ideas has become the overriding criterion of success, rather than fruitful modelling of observed phenomena. The code of modern economics has become for the most part that of neowalrasian analysis, with its rules for modelling all behaviour as the outcome of rational choice...But accounting for some phenomenon in a discipline dominated by an elaborate code consists not of telling stories designed to convince others that this is why the phenomenon exists, or why it appears the way it does, but of telling stories, no matter how ad hoc, that incorporate

³ Stiglitz also contends that Mankiw and other New Keynesians have "reincarnated" Keynesian Economics "...into a body with firm microeconomic muscle" (1993, p. 560).

some aspect of the phenomenon, no matter how trivial, without violating the code...Economists building “rational models” to account for things not found in conventional theory think of themselves as seeking explanations in the usual sense, whereas in fact they are addressing purely semantic questions that don’t even arise once one ventures out of the neowalrasian cloister. Only by the rarest fluke could someone working under such a delusion come up with a convincing scientific explanation of anything.”⁴

It was also against this Neowalrasian Code that Kaldor (1972) as well as Okun (1980) used the method of proceeding by collecting “stylised facts” and then constructing a hypothesis that could fit them (Kaldor, 1985, pp. 8-9). In other words, contrary to the Neowalrasian Code, one should subordinate deduction to induction, and discover the empirical regularities first, either through a study of statistics or through special inquiries that include informal conversations with economic actors. One should equally seek the most reasonable explanation capable of accounting for “stylised facts”, whether they fit into the general framework of received theory or not. This contrast between the two types of cognition -the one derived from intuition and developed by means of *a priori* reasoning and the other derived from observation, the discovery of empirical regularities or associations that yield hypotheses that can be refuted- summarizes one of the major differences between mainstream economics and non standard economics. It is on the basis of the latter approach that non standard economics endeavours to develop economics as “an inductive science” (Clower, 1994), or as Simon (1997) puts it, “an empirically based microeconomics”.

As Professor Roy Weintraub once wrote at the end of a survey on the development of the theory of competitive equilibrium, “The ‘equilibrium’ story is one in which empirical work, ideas of facts and falsifications, played no role at all.” (1983, p. 37). It should be emphasized that the reasons for our discontent with neowalrasian analysis concern not its lack of “realism” (that is inherent in any theory), but because it inhibits coherent intellectual analysis, that is to say serious theorizing about observable events. In fact as Kaldor rightly notes, in neowalrasian analysis “There are axioms that, though non-tautological, are incapable, in practice, of being verified or refuted; for example, that the action of all agents is guided solely by the criterion of “optimization” by which is meant that producers maximize their profits or consumers their ‘utility’.” (1985, pp. 11-12).

These axioms derive from a substantive rationality which focuses on finding what action maximizes utility in a given situation, and hence is concerned with analysing the situation but not the decision maker or the **process** through which s/he arrives to a decision. The neowalrasian analysis is a theory of decision environments (and utility functions), but not of decision makers. Simon’s bounded (procedural) rationality is concerned with how the decision maker generates alternatives of actions and compares them. It deals with the **process** of decision making. Bounded rationality opens the door to a systematic survey of empirically based microeconomics: “A theory of bounded rationality focuses attention, as neoclassical theory does not, on the need for economics to strengthen and to greatly extend its procedures and practices for gathering empirical data.” (Simon, 1997, p. 90). In fact, what is actually required is a radical reconstruction of economic theory to inject **process** into formal models so that economic theory can be confronted with empirical evidence.

The study of the economic system as a coordinating process brings us to put the **disequilibrium** and the **institutional** set up at the center of the stage. The Neowalrasian Code fails to come to grips with both of them. First, the Neowalrasian equilibrium theory of Arrow-Debreu restricts itself to a statement of the properties of equilibrium, and it analyses the effects of changes by comparing the new equilibrium (resulting from a particular change in the “data”) with the previous one, with little systematic analysis of how the markets behave under conditions of disequilibrium. The New Classical school of rational expectations and real business cycles considers even equilibrium as the normal state of market economy and not just a possible or ideal point as advocated in Arrow-Debreu’s theory. Yet it is evident that on any

⁴ In another contribution, Robert Clower and Peter Howitt name the “Neowalrasian Code” a “quasi-religious academic catechism” and ask whether in the next half century economics may convert into “a solid (even respectable and respected) empirical science.” (1997, p. 31).

rigorous meaning of the term, economies are always in a state of disequilibrium, since the underlying conditions change too rapidly to permit full adaptation to any particular constellation of the “data” (Kaldor, 1996, pp. 9-13).

Second, the Walrasian general equilibrium theory is a non-institutional theory. This theory is built upon two fictitious institutions : 1) the commissaire-priseur; 2) the compensation chamber. The first institution is devised to avoid bilateral contracts and to organize the “tâtonnement” procedure. The commissaire-priseur contributes to the formation of common knowledge with regard to prices, and guarantees the symmetrical information structure among dispersed agents. The second institution is devised to avoid monetary transactions, since a compensation chamber enables transactions without using money as a means of exchange. Hence, these two fictitious institutions have been provided for, neglecting real institutions such as regulations regarding contractual relationships and money.

Arrow-Debreu’s general equilibrium theory implicitly assumes certain institutions. For instance, the atomicity assumption implies the existence of an anti-monopoly commission supervising the fulfilment of the perfect competition requirements. In the same vein, the equal initial endowments of agents presupposes the existence of a certain kind of institution similar to a welfare state that guarantees this equal access to resources. Nonetheless, in the theoretical framework of Walrasian general equilibrium, institutions⁵ are either **fictitious** or given **exogenously**. To put it differently, “Neo-Walrasian analysis cannot accommodate money because it cannot accommodate any kind of endogenously sensible institutional set-up. Patinkin’s ‘synthesis’ of value and monetary theory through introduction of a non-consumable stock of fiat money into an otherwise standard lockstep Hicksian model is thus (and obviously unintentionally, as in numerous similar instances) an intellectual fraud.” (Clower and Howitt, 1997, pp. 29-30).

Contrary to the search for the microeconomic foundations of macroeconomics, economics as an inductive science builds up on the institutional framework of macroeconomic processes. In our viewpoint, an institutionalist approach is not necessarily inductivist. Nonetheless, in opposition to an axiomatic approach, an institutionalist one integrates into theory specific institutional contexts and does not treat institutional environment as an exogenous factor. Institutional setups characterize social reality as a set of stylized empirical facts. This explains why a coherent institutionalist approach may be adopted to develop an empirically based microeconomics. The institutional set-up defines the behavioural regularities as empirical facts and hence contributes to our understanding of the specific forms of disequilibrium forming the macroeconomic processes.

The budget constraint (or Say’s Principle in Clower’s terminology) is one of the basic concepts of microeconomics. Our contention is that a reconsideration of this concept in the light of an institutionalist approach may bring us to a closer understanding of the behavioural regularities of agents.

2. The budget constraint as an empirical fact

J. Kornai borrows Clower’s interpretation of the budget constraint (or Say’s Principle) as an *ex ante* behavioural regularity and does not confuse it with the bookkeeping category of the balance sheet of the firm. The latter is an *ex post* identity, whereas the BC is an *ex ante* constraint “related to the firm manager’s **expectations**” (Kornai, 1979, p. 807, emphasized by me). Nevertheless Kornai rejects

⁵ The purpose of this paper is not to provide a clear-cut definition for “institutions”. Thus we will not treat this subject in detail. In this paper, we adopt Geoff Hodgson’s definition of the concept of institution : a social institution “is here defined as a social organization which, through the operation of tradition, custom or legal constraint, tends to create durable and routinized patterns of behaviour” (1988, p. 10). Hodgson’s definition is inspired by the Old institutionalists’ works, notably that of Commons and Veblen (see Mäki, 1993, p. 14). This definition is consistent with an evolutionary approach in which “routinized patterns of behaviour” play a key role. Hence institutions do not necessarily represent some kind of optimizing procedure and do not satisfy efficiency criterion (see Hodgson, 1993).

Clower's definition of BC as an *ex ante* **rational** behaviour⁶. Because BC as a rational postulate should always hold true for describing the behaviour of transactors except for the very exceptional cases such as "a thief or a philanthropist" (Clower and Due, 1972, p. 65). For Kornai, the BC is not an **axiome** but an **empirical** fact (Kornai, 1980, p. 320). Its existence as well as its intensity (or degrees) depends on the institutional matrix which forms agents' expectations or **attitudes** in a particular economy. In other words, the BC as a "decision rule" is determined by the particular institutional setup of an economy and not by the unconditional rationality assumption. More generally, macroeconomics cannot be founded on the assumption that there exist patterns of micro behaviour valid for any social and historical conditions. For instance, Kornai (1979, 1980) introduces the concept of the soft budget constraint (SBC) in the context of socialist economies referring to the phenomenon that socialist firms are bailed out persistently by state agencies when revenues do not cover costs. A competitive capitalist economy may be characterized by the hard budget constraint (HBC), where the BC (in Clower's sense) is systematically applied in decision-making.

2-1. The soft budget constraint and Walras' law

It is noteworthy that Kornai applies the concept of BC not only in case of households or individuals but also in case of **enterprises**. In standard microeconomics, enterprises maximize profits subject to transformation function (technology constraints). Only households are subject to a BC. One of Kornai's theoretical inventions is to broaden the application of the concept of BC as an *ex ante* behavioural regularity in case of firms. The soft budget constraint (SBC) describes the attitude of firms in a socialist economy where a paternalistic state never lets any firm go bankrupt and always bails out a loss-making firm. The paternalistic relationship between the state and firms is the institutional matrix that explicates the lack of responsiveness of socialist enterprise to price fluctuations (Kornai, 1980, chapter 14; 1985, pp. 50-52; 1992, p. 146). Kornai's definition particularly underlines the *ex post* bailouts or *ex post* state intervention⁷. However, an *ex ante* state intervention may equally lead to the SBC. If an economic unit obtains some subsidies, tax reliefs, preferential loans, etc. before the start of the financial period, its BC is soft in a preliminary sense. This observation brings Szabó (1988) to distinguish between a **preliminary** (*ex ante*) and an **incremental** (*ex post*) softness of budget constraint. Although Kornai considers the dichotomy between *ex ante/ex post* state intervention as rigid (Kornai, 1998a, p. 14), it is

⁶ Walras intimated the "rationality" version of the budget constraint. He imposed a restriction of "zero value of (planned) trade" for the individual trader, but this was quid pro quo (Say's Principle), not income constrained utility maximization (see Jaffé, 1954, p. 165). According to Jaffé, Walras considered his equations of exchange which were "budget constraints" as part of the requirements for justice in exchange. This interpretation has been contested by Walker (1996, p. 47-48) who denied any normative implication for budget constraints in Walras. While the budget constraint is implicitly present in Walras, as Costa (1998, p. 137) rightly argues, the concept of budget constraint cannot be found in Walras. Allegedly Vilfredo Pareto (1909/1927) first formulated the concept. Hicks acknowledged primarily Pareto, and Slutsky (1915), and all later users of the budget constraint concept apparently drew on the same source (see, for example, Kornai, 1980). The budget equation in Hicks (1939, p. 305) bears a close resemblance to Pareto's "budget of the individual" (1909/1927, p. 160; 1911, p. 90) and Costa (1998, p. 137) conjectures that constrained utility maximization entered standard price theory by way of Pareto. The modern versions of the concept were first developed by Hicks (1939) and Samuelson (1948); it was then introduced by Arrow-Debreu (1954), Debreu (1959), and Arrow-Hahn (1971) in the general equilibrium theory. Patinkin (1956) integrated it in his monetary theory of general equilibrium.

⁷ As Schaffer (1998, p. 84) notes the *ex post* bailout definition of the SBC is allegedly more relevant to the policy-making discussions, since "Policy-makers are often encouraged to 'harden the budget constraint' of chronic loss-making firms by letting them close down, refusing them subsidies,..."

rather “incremental” than “preliminary” softness which he thoroughly analyzes⁸. This type of softness can shed some light on the problem of **survival**.

The BC is hard if grave financial difficulties drive the firm to bankruptcy. It dies of its losses. The BC is soft if the paternalistic state guarantees automatically the survival of the firm. Such an economy may be labelled as a “no-exit-economy” (Raiser, 1994, p. 1852). This institutional setup generates some particular norms⁹ or behavioural regularity which drive the firm not to adopt a profit-maximizing behaviour. Kornai and Weibull (1983, p. 166) state: “In describing the behaviour of the firm, we want to have a more general framework than the usual profit-maximizing pattern...In addition, we apply - following Simon (1959)- the satisficing model of decision-making. This approach seems to be more general and realistic, and in the present model profit maximizing appears as a special case of the more general pattern.” In his later works, Kornai rarely quotes H. Simon and his “satisficing criterion” (Simon, 1952-53, p. 26), and he allegedly ignores the relation between the “bounded rationality” assumption and “satisficing” modelling. In fact, boundedly rational agents cannot maximize due to their ignorance of all possible solutions and their hesitation to make decisions not only because of ambiguity in solutions but also for the changing character of their objectives. Agents, acting as problem-solvers, adopt some given rules of thumb and find viable solutions to assure their survival. While in his recent contributions, Kornai ignores this fundamental relation between “bounded rationality” and “satisficing criterion”, he adopts simonian conception of “satisficing” in describing the SBC as a non-maximizing survival behaviour. The *ex ante* SBC as *ex post* bailouts (incremental softness) can easily reconcile the survival attitude of the firm with its non-maximizing (non-optimal) behaviour. In this context, the “satisficing criterion” based upon the “bounded rationality” assumption is more convenient to describe the behavioural regularity of a firm functioning under a paternalistic state than Clower’s rationality postulate¹⁰.

The non-maximizing behaviour of an enterprise marked by the SBC may also be tackled from another aspect. According to Szego (1991), Kornai’s SBC notion presumes that causality runs from savings to investment, whereas savings do not constrain investment at the aggregate level. Instead, aggregate investment determines aggregate savings. Furthermore, the enterprise is not constrained by its savings and its investment is autonomous¹¹, since it is based on its ability to obtain credit and to vary its leverage ratio. “Consequently, the level of credit taken on by the firms is determined by, rather than the determinant of, the level of investment.” (Szego, 1991, p. 330). She concludes: “If credit money is truly endogenous in a capitalist system, then a hard budget constraint does not exist in capitalist or socialist systems.” (p. 330). However, as Kaldor (1982) argues, the volume of bank lending or its rate of expansion is always limited only by the availability of credit-worthy borrowers. Hence, the distinction between credit worthy and non- credit worthy borrowers becomes crucial. That explains why Kaldor (1985)

⁸ It should not be forgotten that in a socialist economy as well as a capitalist economy, there exist some **strategic** sectors or **strategic priorities** in producing some products or services that lead to a preliminary softness of BC. Hence, despite the sound remark of Schaffer with regard to the importance of *ex post* bailouts in policy-making, the relevance of *ex ante* softness in policy-making cannot be ignored. This particular form of softness is not elaborated in Kornai’s oeuvre.

⁹ For an analysis of the concept of “normality” in Marshallian tradition in general and in Kornai’s works in particular see Vahabi (1998).

¹⁰ Keren (1993) also underlines the non-maximizing behaviour of a firm under the SBC and advocates that the Nelson-Winter’s (1982) evolutionary view of the firm is more compatible in this context: “Under a SBC the assumption of a maximizing firm, be it of profits, growth, or any other objective, becomes untenable, and one has to adopt the Nelson-Winter (1982) view of the firm as an organization following certain historically determined rules of behavior, or policies. All firms may be acting according to a given ‘corporate culture’ but the financial market may act like a Darwinian disciplinarian to weed out all nonconformist firms. In a socialist system all survive, not only those fittest for the market. Consequently we must think of socialist firms as followers of given rules of thumb, designed to function well in the bureaucratic environment...” (p. 338).

¹¹ Knell (1988) argues that since the firm is not constrained by its savings, we should rather speak of “finance constraint” than “budget constraint”.

acknowledges the relevance of Kornai's SBC notion not only for describing a socialist system but also for "Britain in wartime and in the immediate postwar years": "Professor Kornai attributes this to the absence of effective budget constraints on business enterprises that cannot go bust or be liquidated even though they have continuing losses, as well as to an insatiable appetite for new investment, so the number of projects started, or in train, generally exceeds the volume initially planned." (Kaldor, 1985, p. 37). Criticizing Szego's article, Kraft (1993) also stresses the distinction between the credit worthy and non-credit worthy borrowers and suggests an interesting demarcation line between a "hard-finance" economy and a "soft-finance" one: "Lenders in a hard-finance economy are profit-oriented, while lenders in a soft-finance economy are not." (Kraft, 1993, p. 156). Although Kornai's formulation of the state's *ex post* bailouts relies upon exogenous money theories, Kraft endeavours to reformulate it in terms of endogenous money theories. Accordingly finance constraints can be considered as soft when banks (either commercial banks or the central bank directly) provide all the liquidity firms need regardless of repayment prospects and prospective return (Kraft, 1993, p. 159). In other words, banks (like a paternalistic state) consent to give "loans" to enterprises on a non profit-oriented basis.

One of the major implications of the SBC is that SP as a rational postulate is not valid in a classical socialist economy and together with it, Walras' Law (in the sense of Clower) is not valid either. The reason is that the validity of Walras' Law presupposes a hard budget constraint (HBC). Even though the application of BC (rationality postulate) is a **necessary** condition, it is not **sufficient** for the validity of Walras' Law. Contrarily to a classical socialist economy, in a competitive market economy, the HBC is prevalent and it determines the behavioural regularity of every entrepreneur. Accordingly Say's Principle (SP) is valid. But does it mean that Walras' Law is valid in such an economy? Kornai's answer is positive. "In the capitalist system the firm has a hard budget constraint...in a socialist economy in contrast the firm's budget constraint is soft...It follows from this that in the former system Walras's law prevails. In the latter system, however, Walras's law is not effective, at least within the firm sector." (1980, p. 558). To put it differently, in a competitive market economy, Walras' Law holds since SP is valid. However, as Clower and Leijonhufvud (1981, p. 92) demonstrate, the validity of SP does not exclude unemployment and thus does not imply automatically the validity of Walras' Law. The reason is that SP (or BC in Clower's terminology) holds that the "expected" or "planned" purchases of a household cannot exceed its "planned" or "expected revenues". Trades that Clower refer to are "theoretically admissible" and are not **actual market** trades, whereas Walras' Law defines an equilibrium situation for actual market trades. Hence, it should not be confused with the BC which refers to **theoretically** admissible trades. In this respect, prices and quantities are also conceived in the context of "mental experimentation" and hence make an allusion to "expected" purchase prices and "planned" quantities and not to quantities **actually** purchased or prices **actually** paid (Clower and Due, 1972, p. 64). Without the rationality postulate, we cannot make sense of Walras' Law, although the rationality postulate is not **sufficient** for the validity of Walras' Law. This implies that in case of the SBC (the non-application of the rationality postulate), Walras' Law is not valid. Although Kornai concedes the distinction made by Clower (1965) between SP and Walras' Law in case of a socialist economy (where a SBC prevails), he blurs this distinction with regard to a competitive market economy.

In our opinion, the demarcation line between a competitive market economy and a socialist economy cannot be made by referring to the validity of Walras' Law in the former and its non-validity in the latter. In fact, budget constraint (soft or hard) describes a **behavioural regularity** of households, firms, and state at a **microeconomic** level and not an equilibrium condition at a macroeconomic level. For instance, even in a classical socialist system not all agents are marked by the SBC. While socialist firms have a SBC (Kornai, 1980, p. 515), households are subject to the HBC (Kornai, 1980, pp. 514) since they cannot expect to cover their planned expenditures by anything except their expected revenues. The socialist state has a BC which is neither completely hard, nor completely soft. It is not completely hard, since the state budget has to cover losses of socialist enterprises. It is not always soft, since current expenditures of state agencies are usually subject to HBC (Kornai, 1980, pp. 528-29). The

macroeconomic regularities of an economic system cannot be derived directly from its microeconomic behavioural regularity. Borrowing Kornai's terminology, our contention is that the causality direction is rather from institutional setup to behavioural regularity than the other way around.

In the *Economics of Shortage* (1980), two contradictory lines of argument may be found in this respect. On the one hand, Kornai acknowledges that institutional setup explicates behavioural regularities, on the other hand, he distinguishes different macroeconomic (dis)equilibrium states on the basis of microeconomic regularities. This contradiction stems from Kornai's hesitation between a **behaviouralist** and an **institutionalist** approach¹². An institutionalist approach is quite compatible with Clower's distinction between SP and Walras' Law, since this distinction stresses the relative autonomy of microeconomic assumptions from macroeconomic (dis)equilibria.

It is noteworthy that wherever Kornai adopts a clear institutionalist standpoint (Kornai, 1984), he locates economies on a continuum ranging from entirely soft to totally HBC, depending on the degree to which market coordination of activities is replaced by bureaucratic coordination. Different degrees of BC are thus considered as **empirical** facts **exogenously** given in different institutional contexts. They provide a basis for a comparative static analysis of different economic systems or sectors. The originality of this type of comparative analysis is that it focuses on the comparison of two different systems with regard to their specific institutional peculiarities, for example socialism as a **shortage** economy is compared with capitalism as an **underemployment** economy. This excludes the comparison of socialism as a **concrete** economic system with a pure competitive market economy as an **ideal** system. The problem with Kornai's work (1980) is that we do not find only this type of comparative analysis. In fact, two contradictory lines of comparative analysis may be distinguished in his arguments. While a first line of comparative analysis suggests a study of a socialist economy as a soft budget constraint (SBC) economy with reference to a pure competitive market economy as a hard budget constraint (HBC) economy, a second line of study advocates a comparison of a socialist economy as a shortage economy with a capitalist economy as an underemployment economy. In our opinion, the second line of study is consistent with an institutionalist approach and contributes to economics as an inductive science, whereas the first line of study may be criticized for its logical inconsistencies.

2-2. The soft budget constraint : economic and political elements

In describing the SBC, Kornai refers to all kinds of situations in which a firm can obtain an income through the exercises of economic power in the market place, bargaining power in government and other offices, or simply as a consequence of the paternalistic relationship between institutions and the firm (Kornai, 1986). There are at least two conceptually separable elements in the essential SBC problem: one is related to the **pure economic power** relationships and the other is associated to the **political power relationships**. The first one includes the exercises of economic power due to the monopoly position in market, or due to the asymmetrical information between agents. The second one refers to particular formal authority relationships existing between superiors and subordinates in a vertical or hierarchical structure.

¹² Kornai's recent definition of "institutions" is also based on his hesitation between an institutionalist and a behaviouralist approach: "It (institution-M.V.) includes, for instance, the prevailing legal order in the system concerned, its moral norms and its property rights, the distribution of positions of power, the incentives working on the actors in society, and the information structure." (Kornai, 1999a, p. 9). This definition includes both formal and informal rules on the one hand, and motivational and informational structures on the other hand. While rules are compatible with an institutionalist approach (North, 1990, 1993), motivational and informational structures are inspired by a behaviouralist approach (Simon, 1991). It should be noted that chronologically Kornai first adopted a behaviouralist approach (1971) and later preferred (1980) an institutional explanation of economic phenomena (see Vahabi, 1997).

Regarding the relationship between the SBC and the monopoly position of firms, Kornai contends: "The economy is becoming highly concentrated; huge corporations being founded. They are no longer price-takers but price-makers. This is one of the basic factors from the point of view of softening the budget constraint. A large capitalist corporation is able to react to input price changes not by adapting its input-output combination, but by adjusting output price to actual costs plus the expected mark-up. By its price-making power it can almost 'automatically' guarantee its survival, its self-perpetuation." (Kornai, 1980, pp. 311-12). Compared to a competitive market economy, a monopoly economy is characterized by a softer BC since agents are price-makers. In this way, Kornai is suggesting that the SBC is a more general phenomenon applying not only in socialist economies, but also in developed market economies. However, Kornai's argument does not seem convincing and it is even contradictory with his own formulation of the SBC. This is because a monopolist price-maker tries to "maximize" its profits (and is usually motivated to gain "super-profits" or "monopoly rents") and this is contradictory with a "satisficing" behaviour under a SBC. Furthermore, contestable market theories (Baumol, 1982) aver that even in a monopoly situation incumbent firms cannot "automatically" guarantee their survival due to competitive threats by "potential" entrants. Besides, a monopolist price-maker setting a price higher than the marginal cost may be forced to reduce its production below the quantity at which the unit cost is at its minimum, simply because of buyers' reluctance to buy at that price. Thus the seller should try to win buyers over from her competitors by some other means, especially non-price ones. In other words, an imperfect competition situation does not automatically imply a sellers' market. It may be quite compatible with a buyers' market. Consequently, the SBC cannot be explained by the mere price-making capacity of agents. These possible objections may perhaps explain why this line of argument has not been followed by Kornai in his recent writings: "... (T)he producer under imperfect competition competes for the buyer, tries to learn as much as possible about his demands and adapt to them..., reversing the situation in a shortage economy, where the buyer tries to win the seller's favour with flattery or bribes." (1997, p. 17).

Asymmetrical information structure between socialist managers (Agents) and ministries (Principal) is also regarded by Kornai as a factor leading to the SBC. "A very important element in the SBC syndrome is that external assistance is a matter of bargaining for more subsidy, tax-exemption, for permissive administrative prices, etc. Everything is negotiable-not on the market but with the paternalistic institutions." (Kornai, 1985, p. 50). This lobbying by managers for preferential treatment of their enterprises is closely related to their "private" information concerning the real capacity of their enterprise and with regard to their "unverifiable" (for their superior ministries) level of effort in realizing the directives of a taut plan. In the non-written "contract" between socialist managers (Agents) and paternalistic state (Principal), there exist a moral hazard and an adverse selection problem that partially explain the extent of budget softness as the outcome of firms' opportunistic behaviours and their bargaining power. Kornai's recent definition of the SBC (Kornai, 1997, 1998b, 1999b) explicitly incorporates the notion of "contract violation". Budget constraint is softened if 1) buyers do not pay for the goods they buy; 2) debtors do not honor their debt contracts; 3) tax payers do not pay taxes; 4) producers do not cover their costs out of their revenues (Kornai, 1997, pp. 141-42; 1998b, pp. 1-2). Although this "contractual" interpretation of the SBC has been recently emphasized by Kornai, in his previous writings he did not identify the lobbying activities of managers as the main cause of the SBC. He argued that the SBC was essentially an outcome of a paternalistic state¹³. The SBC was thus posited

¹³ Kornai depicts a classical socialist system as a "command economy" rather than a "bargaining economy". The difference is crucial, since in the former one, the emphasis is on hierarchical vertical relationships while in the latter, the focus is on the lobbying powers of large enterprises and regional party organizations. As Szamuely and Csaba (1998) note: "From our perspective, the basic strength of the analysis (Kornai's analysis-M.V.) was its presentation of the **command economy** as a logically closed system, in which all subsystems and phenomena depend upon one another... Antal gave a detailed account of the emergence of a **bargaining society** in place of the enlightened absolutism of O. Lange and W. Brus. Unlike Kornai, Antal stressed the fundamental role of the political and the institutional system in reproducing patron-client relationships in formally decentralized areas." (p. 185, emphasized by me).

exogenously as an **empirical** fact depending on particular political and institutional relationships. Kornai's main concern was to investigate the **consequences** of SBC in terms of efficiency in comparison with a competitive market economy. During the nineties, both informational and political elements of the SBC problem have been treated by several formalized versions of **endogenous** explanations of the SBC particularly by Complete (optimal) Contracts Theory and Public Choice theory¹⁴.

This recent literature has adopted a position which is in direct opposition to Clower's conception of the budget constraint, since the BC is treated as equivalent to equilibrium and optimality conditions. While for Clower the application of the rationality postulate (Say's Principle or BC) as a behavioural regularity is entirely consistent with a disequilibrium state of market economy (non application of the Walras Law), the recent literature contends that the realization of the BC as a rational choice satisfies the optimality condition and corresponds to an equilibrium state. It should be noted that the maximizing (optimizing) condition is also contradictory with Kornai's original analysis of the SBC as a behavioural regularity in accordance with the satisficing criterion. Nonetheless, Kornai's efficiency analysis, based upon the comparison of the socialist system as a SBC economy with reference to an ideal market economy as a HBC economy, may be regarded as a theoretical background for this recent literature.

Conclusion

In this paper, we tried to reconsider the concept of the BC in the light of an institutionalist approach. Kornai's interpretation of the concept provides the basis of such an approach. He defines the BC as a conditional empirical fact regarding the specific behavioural regularity of agents that is determined by particular institutional setups. Different degrees of budget constraint (ranging from a SBC to a HBC) are thus considered as empirical facts exogenously given in different institutional contexts. In this perspective, the BC is related to the survival behaviour of boundedly rational (satisficing) agents. It implies neither market equilibrium nor optimality. In fact, the normal state of any economic system is regarded as a specific kind of disequilibrium. This approach leads to a comparative analysis of different economic systems with regard to their specific institutional peculiarities, for instance socialism as a shortage economy is compared with capitalism as an underemployment economy. This type of comparative analysis precludes the comparison of socialism as a concrete economic system with a pure competitive market economy. The originality of this institutionalist approach in Kornai's work notwithstanding, it is not the only line of argument which may be found in his analysis. A second line of argument, in contrast with the first one, is formulated in his appraisal of the HBC in the case of competitive market economy. He contends that in this case, the application of the BC is equivalent to the realization of Walras' Law. Kornai then uses this ideal HBC as a normative reference in order to measure the inefficiencies of the SBC. In fact, Kornai's standpoint with regard to the HBC and his efficiency analysis paved the road for an alternative explication of the SBC developed through a vast formalized literature during the late eighties and nineties.

This literature is comprised of a number of endogenous explanations of the SBC notably by the Complete (optimal) Contracts Theory and the Public Choice Theory. It regards the BC as a matter of choice by rational agents. The BC is defined as a strategic behaviour of (hyper)rational agents. This implies market equilibrium and optimality. As rational dynamic optimization suffices to assure intertemporal equilibrium, the coordination problem between individuals is assumed to be resolved, and disequilibrium is disregarded. The SBC is thus tackled in the framework of the Neowalrasian Code.

A coherent institutionalist theory of the SBC adopts the satisficing criterion which does not require an efficiency analysis with reference to a pure competitive market economy. This theory is consistent with economics as an inductive science.

¹⁴ For a detailed survey of these endogenous explanations of the SBC, see Vahabi (2001).

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