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Institutional Framework and Poverty

A Transition Economy Perspective

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Abstract

This paper focuses on the role of ‘institutions’ in poverty alleviation, where both poverty and institutions are interpreted broadly. The broadening of the poverty notion is important at least from the policy perspective. Even if one were convinced that higher growth would reduce *income poverty* to an acceptable margin, there appears to be little concrete policy measures that one may offer so as to harness greater growth. Besides, the weight of the empirical evidence to date, if not squarely founded on the transition economies of the EEFSU region, is that reducing *average poverty* is not enough. Existing and possibly rising inequality would ensure that a great many would fall through the cracks, and not benefit from high growth, even if that was achievable. The non-income elements of poverty, on the other hand, are more directly open to influence by policy interventions such as the easing of microcredit and other public and private ventures in health, sanitation, literacy and numeracy fronts. Finally the modest amount of information available at our disposal indicates that the underlying strength of the institutions (economic, political and social) is possibly the single most agent of significance to bring about the alleviation of non-income poverty. There is a further possibility that the same institutional forces would also materially affect the income measure of poverty as well in a discernible fashion.

Keywords: institutions, poverty reduction, growth

JEL classification: H1, O1, O2, P5, Z1

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1. Motivation

This study focuses on the interface between economic growth and the institutions of governance especially as these relate to poverty alleviation. In other words, we discern and evaluate the *process* by which economic growth leads to poverty alleviation, and attempt to identify the role of governance institutions in that process. Do institutions matter in determining the poverty performance of economic growth? Within this broad theme, we ask a further question, namely whether history (as specified by the concept of ‘path dependence’ à la Douglass North) matters. In the transition context, the latter focus would relate to the evolution of institutions going in to the command system following the Second World War.

The term ‘institutions’ is being referred to in the present context is broad. It centres on the idea of *institutions* as ‘rules of the game’—as in Williamson (1984 and 1998), North, (1990, 1997). We shall argue that social capital, e.g., as developed by Arrow (1970), Coleman, (1988) and Collier (1998), is an important category of the rules one requires to carry out exchanges among individuals and groups. Further, we note that the somewhat diffused notion of governance mostly relates to institutions that a society must possess in order to monitor the ‘plays of the game’. Finally NGOs and civil society groups may be viewed upon as facilitating exchanges either in the ex-ante sense or in the ex post (i.e., monitoring) role, acting directly or reinforcing the existing stock of social capital. Indeed one of the theoretical advances of the paper would be in laying out a unified framework where all these concepts will be seen to be capable of being arranged and explained in a hierarchical order, such that all components fit in as special cases (or subcategories) of more general ideas. The resulting construct would serve as a general framework of ‘institutional capital’ (IC) as relevant for analysing the process of economic development and of economic activities in general.

The topic proposed here dwells on several broad themes. The continuing decline in output since the beginning of economic reforms following the overthrow of the command system has led to widening poverty in practically all the transition economies of Eastern Europe and former Soviet Union (EEFSU). Ordinarily one examines how countries which differ in growth (slow versus rapid), perform in their attempt at poverty alleviation (e.g., see Dollar-Kraay, 2001). In contrast, what we are faced with is degrees of persistent decline in output. Thus it would be of interest to compare the poverty performance of positive and negative growth across regions (or groups of countries). Secondly, it explores how the selected countries¹ (all drawn from EEFSU) differ in the design, delivery and endowment of ‘institutions’. We thus measure how the differences in the ‘institutional capital’ have affected the growth trend as well as poverty profile of the countries in question. In particular we would attempt to test a hypothesis implicit in North’s thesis (1990a) that history matters, i.e., the growth response to market reforms would depend on the legacy of informal institutions inherited by the country in question prior to the socialist rule.

¹ The essential methodology behind the selection of countries is that comparable data exist for the entire set. In the present case, we seek poverty data both during the immediate phase of transition (taken to be 1988-93) and over the longer horizon that allows taking the fuller consequence of economic reforms. The latter period is taken to be 1988-98/99. Fourteen countries from EEFSU were thus selected, which also had a comparable measure of initial inequality (say as of 1988), the GINI coefficient generally varying between 20 and 26.

The global growth experience (possibly disproportionately influenced by the Asian experience) point to some key features of the linkage between growth and poverty that are worth perusing.² Some of these elements may be viewed as a series of interrelated (by a feedback process, often occurring after a lag) hypotheses.

1.1 Relative labour intensity (RLI) hypothesis

For the overall employment growth to accelerate one needs rapid growth in sectors where the labour intensity is relatively high; experience shows that the high labour intensity sector is indeed the non-farm (small scale) consumer goods and services sector, typically located in small towns and rural areas.³ The latter sector may primarily serve the domestic non-urban market, though an export potential may exist, which may vary substantially among countries. An implication of this hypothesis is that possible growth momentum originating in manufacturing is unlikely to propel widespread gains in employment in the primary or non-farm sector, and thus unable to pull up the country by the former's bootstraps.

1.2 Agriculture led growth (ALG) hypothesis

To the extent, the output of the local non-farm sector is destined for the domestic (non-urban) market, the primary sector of the economy must provide the bulk of the growth leadership. To quote Mellor 'it is the expenditure of this increased (primary sector) income on locally produced, labour intensive, non-tradable goods and services that drives the employment creation, that in turn, explains the poverty reduction' (2000:18).

1.3 Lagged urban growth (LUG) hypothesis

Growth of local non-farm sector has the added benefit in alleviating poverty in more ways than one. We have already noted the direct effect on own sector employment growth. Secondly, there is also the indirect effect via stemming the flow of migration from rural to urban areas. The latter process would lead to a tightening of the urban labour market (especially, the informal and service component), and consequently lead to rising productivity and real wages in the urban sector. We have now come a full circle, namely that growth spurt in the key non-farm sector, itself fuelled by steady agricultural growth, would lead to growth of the urban sector as well. The implication is that no sustainable chain of events ensue if one tried to jumpstart the urban manufacturing sector.

However, the above stylization describes the relatively faster growing economies over the past several decades. The reality in the EEFSU context since the launch of the transition process has been markedly different, namely that of persistent decline in output. The pattern had of late (since 1994 or later) been abated in several countries, but not universally. What have been the major causes of economic decline?

² See for example the studies by Mellor (2000), Ravallion and Datt (1996), Timmer (1997) and others.

³ Evidently some portion of this sector may reside in urban areas too, but the focus in this study is in the potential of the rural and semi-rural areas to attract such enterprises. Hence the latter component will be referred to as the 'local non-farm sector'.

1.4 The inequality-poverty nexus

One added dimension here is that transitional countries experienced both a severe economic decline as well as a steep rise in inequality of incomes over the 1990s. In an attempt to identify the factors contributing to this process, Ivaschenko (2001) presents some preliminary results based on a panel data for 24 EEFSU countries covering the period 1989-98. Since rising inequality would worsen the poverty outcome of growth even if the latter were distribution neutral (à la Dollar-Kraay), it is imperative that one look at the process of the propagation of inequality. Recall that the original research on the topic dates back to the tests by Kuznets (1955), which revealed an inverted U-shaped relationship between economic development and inequality. Econometric tests performed by Ivaschenko indicate that variables that explain the rise in inequality include the Kuznets' duo, namely:

- (i) per capita real GDP
- (ii) the same variable squared; in addition, plausibly he finds roles for
- (iii) inflation
- (iv) deindustrialization
- (v) privatization
- (vi) the ageing population.

1.5 The non-income poverty (NIP) hypothesis

Before we move on, it should be noted that two potentially significant elements of the poverty story have been left unattended thus far in the discussion. First is the non-income measure of poverty, such as health and educational attainment, longevity and other human development components, voice and freedom (Kanbur and Squire, 1999; Sen, 1999). These additional dimensions have been inadequately examined in the current literature. But we believe that here the institutional forces may play a significant role in shaping the poverty outcome for a given level of income growth. We may refer to this as the non-income poverty hypothesis.

The remaining element of poverty is the distributional issue (e.g., social safety net), which clearly determines the final outcome. However, the focus of the research is in discerning the contribution of economic growth itself, and whether the latter contribution is enhanced or abated by the existing stock of institutional capital. The further element shall therefore remain unexplored in this study.

In short then, our goal is first to assess the validity of the above hypotheses on the growth-poverty nexus in the EEFSU context. In the process, we explore how the selected countries differ in their institutional capital as construed here. We focus on identifying those institutions that help lower transaction costs in exchanges among individuals (or groups, as appropriate). While this is extremely broad, one may plausibly argue that the following are among the important components. Further analysis of both the conceptual and the search for specific empirical analogues of the 'institutions' would be discussed and compiled below. For now, we group all institutions that may allow expedient completion of economic exchanges in society under three broad headings.

Information and communication costs

The quality of the information regime (e.g., information technology at public's disposal and the communication/dissemination of active public intervention measures) has a direct influence on the efficacy of exchanges.

Market competitiveness

A great many institutions are conducive to market competition. Elements such as (i) the quality of the political decision making process at both central and the local level (e.g., level of decentralization of political and fiscal authority, accountability and transparency); (ii) the legal/regulatory framework, bureaucracy and the justice system (e.g., corruption and law enforcement), and (iii) access to human and physical capital (e.g., as indicated by the quality of public expenditures in health, education, and in physical infrastructure, and the availability of credit) are widely recognized. Governance institutions—over and above those implied by (ii)—are also central to the expedient completion of exchanges.

Social capital

The informal institutions (e.g., as measured by trust, public spirit, and the range and depth voluntary activities within the community) have long been recognized as relevant to or even substitute for the market mechanism.

Given the empirical evidence at our disposal, we would explain the observed EEFSU growth experience (1988-98/99) in terms of the apparent growth-poverty linkages exhibited by the recent history of economic decline since the period of liberalization began in the late eighties. We would seek an explanation of the country differences in terms of institutional capital. The latter factor may directly impact the non-income poverty performance of a nation, but the premise remains that it may also affect the income poverty profile (directly and via inducing additional growth).

The rest of the paper proceeds as follows. In section 2, we provide a brief outline of the recent literature on growth and poverty. Section 3 is devoted to an examination of the conceptual construction of institutional capital (IC) as an integral factor that allows economic (and other) exchanges to take place, thus alleviating market failure. We also explore the scope of differing level of IC among countries in explaining the observed difference in their performance over time and contemporaneously. In section 4, we discuss methodological issues of measurement, especially in light of data availability. Section 5 reviews the empirical findings, while section 6 concludes.

2. Growth and poverty

The received theory of growth and poverty has been outlined very briefly above. However, this is only a partial, if stylized, part of the diverse global experience (World Bank, 2000, Ch3). Significant country specific differences exist, which are often explained away by the initial inequality level (both in income/expenditure dimension and in terms of non-income attainments of health and education, gender aspects etc). Most of the latter are again analysed as weaknesses of the public policy tools at play. The important point however is that in spite of the anomalies of individual (even small groups and regions) experiences, growth in the long run appears (witness the period 1981-2000) to have led to declining poverty on a global scale. The former claim is true both in money terms as well as in

human development components. In other words, growth appears to be necessary in order to attain poverty alleviation, though by no means sufficient. Indeed Ravallion (2001) finds that persistent (and rising) inequality may dampen the poverty elasticity of growth.

The extant literature is generally silent on governance or more broadly the idea of institutional capital except to note some obvious, perhaps significant, elements, such as decentralization. Even Mellor's extensive review does not identify a single contribution dealing with the interface between development and institutions in over one hundred references. He does in the concluding stages however, note without elaboration that 'democratization at the village level opens up far greater potentials for raising local resources and managing them better' (p.27). Likewise in terms of the institutional issues, most authors refer to transaction costs, but by that they essentially mean transportation costs. As we shall see below, transaction cost (TC) is a much wider phenomenon than has been appreciated in the mainstream writings in economic development.⁴

2.1 Measuring poverty

The literature on how to define and measure poverty is extensive. While for poor countries, many agree with Sen (1976) that absolute poverty is what matters. Accepting the latter view leads to the idea of expenditure (or income) required to maintaining a socially minimal level of nourishment, which in turn leads to the benchmark of a *poverty line*. Thus all those who fall below the line are declared poor. Indeed this logic has led the World Bank to popularize the metric of 'dollar (or two) a day' per person as being a rough and ready poverty line. Indeed the acceptance of this view of poverty measurement provides a foundation for the logic that economic growth matters.

That the concept of a socially acceptable minimum nourishment would vary from location to location and indeed over time, and that so even within a country is well understood. Consequently the necessary cost-of-living adjustment may be easily made given any starting benchmark. Accounting for intra-household differences is another matter, however (see Kanbur, 1999). The present paper focuses on the headcount method as well as developing a non-income version of measuring poverty. The former measure is taken from estimates made by Chen and Ravallion (2000) and is regularly updated and posted in the World Bank research site on poverty monitoring (World Bank, 2001a). We use both the dollar-a-day as well as the two-dollar version of the headcount estimates (indeed the true figures being 1.08 and 2.15 USD in 1993 international prices).

Note that current thinking on poverty highlights non-income dimensions as well. Starting from human development indicators, we have the conceptual construct of the capability approach à la Sen (1999), whereby poverty implies the limited capability to enjoy freedom such as the basic health and education, longevity, quality of life, and the freedom to generally function within society. This reasoning finds echoes in the theme in Kanbur and Squire (1999). The latter authors document the progressive broadening of the definition and measurement of poverty beyond the usual indicators of human development to the more recent concern with risks and vulnerability, powerlessness and the lack of voice. The latter authors argue that a broader definition of poverty not only expands the set of policies

⁴ The view of institutions as mitigating transaction costs and thus making economic exchanges possible is the domain of new institutional economics (NIE). The economic development literature does not yet appear to have integrated the advances of NIE in describing growth and development.

that are relevant to poverty reduction but also requires that the interactions among such policies be recognized. It argues that the various dimensions of poverty interact in important ways, such that ‘policies do more than simply add up’ (p.2). For example, improving health of people increases their income-earning potential, and increasing their education leads to better health outcomes, and so on. Thus poverty-reducing strategies must recognize the interactions among policies.

To digress a bit along the preceding line, it may appear that in adopting a broad interpretation of poverty, one is unwittingly led to confound inputs and outputs of the growth process. Surely if education were always to lead to income gains (via the human capital route), counting both as the product of growth would have been tenuous. Likewise, health attainment may result from quality public investment, without necessarily yielding much of an income gain over the period in review. To conclude therefore, the rationale for a separate role of NIP exists at least on account of market imperfections (especially at the input level).

2.2 Institutions and growth

The new institutional economics makes it very clear that institutions (say, economic and political ones) are generally incomplete in any setting, which implies that transactions are costlier than they ought to be under the full efficiency paradigm. North makes a further point that the structure of transaction costs vary between political and economic markets in any society whereby ‘high transaction costs issues gravitate to the polity’ (1990b:362). To the extent countries (e.g., in transition or developmental mode) suffer from incompleteness of their democracies, the following quote from North is a useful reminder, ‘It is political markets in non-democratic polities that urgently need such transaction cost analysis. The far greater imperfections of such markets ..are the root cause of their economic performance since it is polities which devise and enforce the property rights that are the incentive structure of economies’ (1990b:364). One may extend this further to advance that extensive public control (e.g., via SOEs), cumbersome regulatory framework and possibly weaknesses of the judiciary all combine to render the TC structure obtaining in the developing and the transition world, a fertile ground where the stated pattern of selection (from economic to the political arena) becomes a dominant process. From our perspective, we agree with one of the central tenets of the NIE that low-cost transacting is essential for economic growth. And the cost of transactions, as we shall see in the next section, varies a lot between alternative system of institutions that prevail across societies.

Note that the conceptual aspects of institutional capital would be explored fully in the next section. While the mainstream papers on poverty and growth have largely ignored the ‘institutional’ issues, there are attempts within the political economy literature that addresses selected aspects of the phenomenon, chiefly democratization and corruption. For example Persson and Tabellini (2001) examine the effects of the democracy type on the fiscal outcome (e.g., size of the public sector and the nature of fiscal interventions). Rodrik (2001) finds that the extent of political participation (as measured by political rights and civil liberties) does make for a more stable pattern (i.e., reduced volatility) of output growth. However, we have not so far encountered any direct evidence on the role of institutions on the specific issue of poverty and inequality.

3. Conceptual framework: institutional capital

The concept of institutional capital developed here is of crucial importance to this study. In this section we focus on the conceptual construction of the idea, while the Operationalization is discussed under the ‘methodology’ section. As noted already, our construction of institutional capital is one that encompasses the existing notions of its constituent parts, with some unavoidable overlap. The principal elements are taken up in turn.

3.1 Costs of transactions

In this paper, we shall refer to all human interactions of an economic nature, i.e., an economic exchange, as a ‘transaction’. Given this primary notion, the central focus of ‘new institutional economics’ (NIE), is that transactions are costly to execute.⁵ Recall that the standard general equilibrium analysis in the Arrow-Debreu fashion embraces the parable of the Walrasian auctioneer, a device that smoothes the co-ordination of economic exchanges in a timeless and costless manner. Market failures are viewed as sort of exceptions created by large externalities and/or by significant non-convexities in production technologies (Arrow, 1970). NIE makes a clear break from the tradition by asserting that co-ordination of transactions are never as easily accomplished as in the Walrasian fable. Why?

Perhaps we should at this stage define what transactions costs (TCs) are, before exploring why they arise. Matthews interprets these as ‘the costs of arranging a contract *ex ante* and monitoring *ex post*, as opposed to production costs, which are costs of executing the contract’ (1986:906). There are various ways of accounting for the rationale for the non-trivial costs of co-ordination, which are necessary to the realisation of mutually beneficial transactions. Williamson (1984) enumerates the following as important. First, ‘the Organizational man is cognitively less competent (being subject to bounded rationality) but motivationally more complex (being given to opportunism) than his economic man counterpart’ (p.200). These behavioural attributes in turn demand that one ‘Organize transactions so as to economise on bounded rationality while simultaneously safeguarding them against the hazards of opportunism’ (ibid).

Douglass North (1997), on the other hand, cites *four* variables that make for costliness in exchange. To us these seem to corroborate the above. First he cites ‘the cost of measuring the valuable attributes of goods and services or the performance of other agents in exchange’, which can be seen as a consequence of bounded rationality à la Simon, as already cited above. Second ‘is the size of the market, which determines whether personal or impersonal exchange occurs’, where those based on kinship would be an example of personal exchanges. Third is the absence of a ‘third party impartially (and costlessly) evaluating disputes’. The latter two may be viewed as primarily arising out of opportunism. The fourth element offered by North deals with ideology that ‘individuals possess to explain and evaluate the world around them’, which matters in exchange due to the costs of measurement and enforcement. While North appears not to elaborate further, presumably ideological differences may call for different responses from different agents in a given environment, with the consequence that certain exchanges may be difficult to complete.

⁵ Coase (1984) attributes the origin of the term ‘new institutional economics’ to Oliver Williamson.

Interpreted in this manner, the tenets of bounded rationality and opportunism combine to allow a role for ideology in the economic exchanges.

3.2 'Institutions' and co-ordination

Practically all scholars in the NIE mode of analysis argue that 'institutions' evolve so as to enable co-ordination of exchanges. It is therefore implicit that 'institutions' must minimize the costs of exchange to render them viable. Matthews had observed that transaction costs may affect economic exchanges individually (hence incremental in nature) or may appear in the form of altering the overhead (i.e., the fixed cost). Further, the choice of institutions (as well as the choice of technique) may affect both the TCs and production costs, where agents would seek to minimize the sum of the latter two, and thus trade-offs may arise. In this set up, efficiency of an economic system (i.e., a system of institutions) is gauged by the efficacy with which the rules at play succeed in minimizing the transaction costs for given technologies. What are these institutions?

Matthews conceives of institutions rather generally as a 'set of rights and obligations affecting people in their economic lives' (p.905). To North, institutions are the 'rules of the game'. Indeed he goes farther: 'institutions must not only provide low-cost enforcement of property rights, bankruptcy laws, but also provide incentives to encourage decentralized decision making and effective competitive markets' (1997:4). Among 'formal rules', he enumerates the polity, the judiciary, and the laws of contract and property. These are complemented by what is generally referred to as 'informal rules'. For North, the latter are 'extensions, elaborations and qualifications of rules that 'solve' innumerable exchange problems not completely covered by formal rules...Routines, customs, traditions, and culture are words we use to denote the persistence of informal constraints' (1997:4). Williamson defines the concept of 'societal embeddedness' as 'antecedent to the polity and refers to societal features (norms, customs, mores, religion) which differ among groups and nation states and operate as societal supports, or lack thereof, for credible contracting' (1998:77). Indeed Von Hayek (1945) collectively described conventions, 'as part of cultural evolution of mankind'.

To us the informal rules are what in a related branch of literature are known as *social capital*, SC (à la Putnam). It would appear that Kenneth Arrow (1970) might have been the first economist to highlight the role of informal rules as facilitating economic interactions. In a rather illuminating, though short, section of his 1970 paper on the choice of market vs. non-market allocation, Arrow remarked that 'norms of social behaviour, including ethical and moral codes', may be interpreted as, 'reactions of society to compensate for market failures' (p.70). Arrow singled out the norm of *mutual trust* as one capable of serving the non-market allocative power alluded to above. He noted that 'in the absence of trust, it would have been very costly to arrange for alternative sanctions and guarantees, and many opportunities for mutually beneficial co-operation would have to be foregone' (ibid:70). In this context, one may recall the focus given by Putnam (1993) and others on trust as a primitive but powerful example of social capital.

It must be clarified here that Arrow focused on only an essential aspect of the benefit of social norms, namely that relating to 'improving the efficiency of the economic system (in the broad sense of satisfaction of individual values) by providing commodities to which the price system is inapplicable' (p.71). Indeed, he believed that 'there is a whole set of customs and norms' which would allow a similar interpretation.

Civil society, we note, are voluntary associations of individuals (much like Putnam's amateur choirs) designed to interact socially, which may have an avowed mandate to seek certain economic or political benefits (e.g., fair local elections) for the benefit of its members (and due to externality, other non-participants). The chosen means of behaviour is non-market, typically lobbying and networking. These may well be activist groups. But essentially, while the nuances vary, it is *civil* social capital (see Collier) by another name. Hence our view of informal institutions would also encompass the civil society.

3.3 Properties of formal and informal rules

First note that discussion by both Arrow and North suggests that formal rules by themselves may not suffice. Leibenstein, who also contributed to this literature echoes: 'the market exists as a powerful co-ordinating mechanism, but only when supported by other co-ordination mechanisms of a non-market character' (1984:75). Matthews (1986) points out why this is a plausible view; playing by social norms do not typically incur formidable transaction costs.⁶ By contrast, to focus on formal institutions, Coase (1960) had maintained that any *complete* system of rights was in principle capable of leading to Pareto efficiency. Here completeness is defined where all rights and benefits are attributed to someone, and these rights were fully tradable. Clearly transaction costs (chiefly in political markets) may render the observed system of rights incomplete. Hence the norms and conventions may be seen as alleviating market failure; in their absence, market failure would have been a more pervasive phenomenon than it already is.

It is therefore interesting to observe that the norms of society, while costly to achieve and perhaps to modify, provide for low-cost transacting once these are in place. Arrow had observed that 'the arrangement of these agreements and especially their continued extension to new individuals entering the social fabric can be costly' (p.71). Kaufer (1984) notes a likely rationale for the costs; norms and conventions arise as the result of human action but not of human design. And, perhaps as a way out of the costly co-ordination mechanism, 'as an alternative, society may proceed by internalisation of these norms to the achievement of the desired agreement on an unconscious level' (Arrow, *ibid*).

The emphasis by Collier and sociologists that social capital arise out of non-economic interactions is not of consequence when one judges the efficiency of an allocative device. The benefit of social interactions, an economic externality, fulfils a hitherto unsatisfied demand. Thus it is now abundantly clear that SC does help in overcoming market failure, and hence it is very much a part of the institutions that lower transaction costs (à la North) either by rendering market transactions feasible (as in Leibenstein) or by providing a non-market medium of exchange. At one level, therefore, this is a rather interesting dimension of the externality issue, albeit with a happy outcome, namely that a non-market allocation may become feasible (and thus overcome market failure).

3.4 Governance

Williamson (1998) offers the following interpretation of the linkage between the concepts of 'institutions' and 'governance'. If institutions are seen as laying down the rules of the

⁶ If all agents perceive their personal gain from following a convention, then compliance would not require any monitoring.

game, governance, on the other hand, conducts the 'play of the game'. However, the plays must also be governed by means of rules or institutions, hence the usage of the term 'governance institutions'. Not only are rules needed *ex ante*, one also has to monitor the *ex post* performance, and make up for any necessary restitution. We have already noted the incompleteness of the system of property rights, a source of tension in an exchange. Another area of potential conflict is that the allocation of authority embodied in a contract, and consequently the distribution of payoffs need not be symmetric (chiefly due to asymmetric asset specificity) among the parties involved (Matthews).

Williamson expands on this theme. He views governance as 'the means by which order is accomplished in relation to which potential conflict threatens to undo or upset opportunities to realise mutual gains' (p.76). Conflicts in exchange may occur due to asset specificity of agents ('bilateral dependency') or wherever contractual hazards may arise. He goes on to elaborate that 'most of the governance action works through private ordering, with courts being reserved for purposes of ultimate appeal...Contracts albeit incomplete, are interpreted in a farsighted manner, ...economic actors...perceive potential hazards, and embed transactions in governance structures that have hazard mitigating purpose and effect' (ibid).

The scope of 'governance' as construed by Williamson is both broad and specific. The broadness is in the inclusion of all means of keeping the ball in play, private and coercive. The notion is restrictive in that it accords to conflict resolution among private parties to an exchange contract. For instance, firms are viewed as a 'governance structure' here. In the more applied context, say economic development, the term virtually focuses on actions within the public domain and those carried out by the processes and institutions deliberately designed by the polity to safeguard the rights and obligations of individual and groups in private as well as other exchanges. Examples of the latter would include exchanges between private parties on the one hand, and government bodies (including the state-owned enterprises), corporations, NGOs and civil society, on the other. Consequently, the domain of governance for our purposes is extremely broad and would cover all that the polity has committed to deliver (from provision of law and order to regulation of monopolies, basic rights and freedom, including rights to information relevant to private decisions as in health matters). The quality of the governance then has to be measured by how well the polity has performed in the execution and monitoring the institutions and remedying the losses appropriately.

It is important to recognize that governance as construed here must extend to the role of norms and conventions, namely social capital. Clearly some of the latter institutions may not be formally coded in the laws of society and hence unenforceable by the polity. However, human interaction may evolve in delivering an informal structure of governance that, for example, carried out by a village arbitration body (however loosely defined). The latter would work so long as both parties in a conflict agree to abide by the verdict or face social sanctions, even whence none of which (the verdict nor the consequent sanctions) may be part of the formal legal statutes of the land. Again the adequacy of these informal governance structures may be judged in similar terms as they apply to the case of governance of the formal nature (either stipulated in private contracts or in the public domain).

To further illustrate the scope of governance as to formal institutions, take the case of property rights. These rights (e.g., relating to arable land) are generally coded in the legal

statutes, an example of a formal institution. The governance elements would include the bureaucracy in charge of keeping all original records of such titles to property and subsequent transactions thereof. The bureaucracy itself may well resolve any dispute concerning the records between a private individual and the polity, or between or among private parties themselves. Recourse to intermediation of the judiciary is always the last resort, the latter being a further but important element of the monitoring institutions. Legal titles to assets, or changes thereto, are usually drawn up in the presence of witnesses, a process that may be aided by social norms (including sanctions), which in turn may also help in sustaining the legal rights of members who may not contest titles to property frivolously. The latter phenomenon may illustrate the scope of private ordering à la Williamson. Governance would also involve in evaluating how well any restitution imposed by the bureaucratic/judicial process has been carried out. Here again enforcement with of the edict may be aided by both the formal intermediation of the police and/or social norms and sanctions. Adherence to informal institutions, namely social capital, does not typically require costly monitoring. The spectre of social sanctions may on occasion be sufficient to ensure compliance with local norms.

It may be noted that North's characterisation of the institutional requisites of low-cost transacting calls for a large menu. From transparent lawmaking as well as its enforcement, one may articulate the need for political (and fiscal) decentralization, intervention in factor and capital markets to make them perform more efficiently (i.e., competitive), and seek means of weakening the rent seeking interest groups. Was one to embrace these all as equally desirable, both the range of institutions (rules) and of governance mechanisms (conduct of the game) widen considerably. By contrast, much of what goes under the rubric of 'governance' in current economic development parlance is clearly selective. In principle, however, the performance of the entire set of institutional elements aimed at lowering the transaction costs would be the conceptual benchmark for 'governance'. And it is this totality of institutions (both rules and conduct of the game) that we shall refer to as the *institutional capital* (IC) of a society.

We shall argue that low IC (say, due to the inadequacy of the set of rules and/or of governance thereof) can lead to a loss or weakening of the social capital embedded in various institutions, formal and informal. Or worse, it may induce the formation of a variety of social capital that generates negative externalities. Negative externalities can arise, for example, when collusion among (local) government officials, business lobbies, and their minions (including musclemen) form an alliance to control the bidding for government contracts, interfere with the delivery of social spending programs (e.g., health and education) and/or to disrupt NGO activities in health, education and microcredit. The primary goal of these alliances may be to engage in rent seeking in general and possibly further political goals in the process. Of course, the latter alliance is an extreme form of corruption, and can operate at all levels of society, if purposely patronized by elected officials along the chain. These alliances effectively endow society with social capital of a negative variety, and may even destroy 'good' social capital that may be embodied in extant alliances represented by groups such as teachers' associations, gender based activist groups (including NGOs), doctors' groups, chambers of commerce, small trade lobbies, farm lobbies, consumer groups, and others.

To recap the above discussion, let us reiterate that the notion of institutional capital of a society developed here denotes the totality of institutions (both 'rules' and 'conduct' of the game, formal and informal). These are then devices that allow co-ordination of exchanges,

which is of necessity a costly (i.e., resource using) process. The quality of a body of institutions may be gauged both by the relative level of costs, and the relative degree of the range of exchanges that become viable at a point in time. In the next section we would enumerate how precisely one may select and measure the indicators of institutional capital.

3.5 Evolution of institutions and economic growth

Given that many institutions (especially informal ones, say of the social capital variety) seem to evolve rather than being designed by man, it becomes inherently difficult to explain how changes occur over time. While the self-interests of economic agents may exert some tendencies to ‘seek out and find institutional arrangements that are mutually advantageous and to adjust old ones in light of changing circumstances’ (Matthews:912), this path need not resemble a Pareto enhancing evolution. North essentially echoes the above view. To him, not only would the real world institutions be incomplete, their adaptation over time would also remain ‘sub-optimal’. He goes on to establish ‘the incremental character of institutional change...as a preliminary to showing how such inefficient paths of change can persist through time’ (1989:665). Among reasons for such an impasse, Matthews identifies the following:

- (i) non-benign state interventions
- (ii) transaction costs (broadly interpreted)
- (iii) inertia (due to costs of co-ordinating a change)
- (iv) complexity (due to the unavoidable intertwined nature of institutional and non-institutional (e.g., technological) forces).

As a result the process of adaptation of institutions may mimic a random walk.⁷

A key ingredient in the analysis of institutional change is that of *path dependence* as used by North.⁸ The best description of his thesis is captured thus: ‘...If the process by which we arrive at today’s institutions is relevant and constrains future choices, then not only does history matter but persistent poor performance and long-run divergent pattern of development stem from a common source’ (1990a:93). In this context, North distinguishes between the concepts of ‘stability’ and ‘efficiency’ of institutions, and finds institutions to be generally stable. Stability is explained by the hierarchical nesting of institutions, where ‘each level is more costly to change than the previous one’. Viewed in the light, persistence or stability does not necessarily make for efficiency. He now gives a more complete interpretation of efficiency: ‘efficiency would entail both stability conditions and institutions that provide incentives to Organizations to become more productive’ (p.666).

However institutions do change! He cites two factors that may influence changes; one is relative prices and the other change in preferences.⁹ Moreover, the agents of change must

⁷ We may also record that Arrow had earlier talked about likely retrogression in the adaptation of social norms! However, Matthews’ remark is general, and thus would apply to all institutions.

⁸ Schotter’s (1981) observation that *conventions* that actually emerge depend on history, and that different histories will lead to different conventions appears analogous to North’s theory of ‘path dependence’, except to note that North refers to the totality of institutions not just the informal ones.

⁹ In the latter instance he cites the abolition of slavery as an example.

be political and economic entrepreneurs. If the rules and their enforcement were to minimize the payoff to opportunism, and induce economic decisions even when rationality has constraints, mode of behaviour would lead to alteration of both formal and informal rules. However, one has to stand guard against pitfalls of the process, especially in the political arena.

Matthews believes it would be hard to do a Denison type of econometrics and isolate the contribution of institutional capital to growth as distinct from the standard sources. He does note however that in spite of the inherent confounding of formal measurement, the *qualitative* question is more reasonable to pose. He argues that certain forces tend 'to make technological change more difficult than institutional change. For example, technological change may need to be embodied in expensive capital equipment'. Besides, the state's coercive powers do not extend to the laws of nature, 'so that there is every reason to suppose that the state's involvement serves to speed up and facilitate institutional changes relative to technical change. Sometimes this may be synonymous with facilitating the emergence of institutions that conduce to economic growth; but sometimes it may be the reverse.' (p.916).

A major verifiable implication of the North-Schotter view of the evolution of institutions, (namely 'path dependence') is that the past history foretells the kind of institutions one inherits at any point in time. Consequently, even if any two countries have similar formal rules (e.g., constitution, parliamentary democracy etc), the informal rules (being slow to evolve) would make a difference in the economic performance over time. Hence the claim here is that among transition economies with similar formal rules, only those who inherited a more friendly system of informal rules would perform better. The latter feature may be present in countries, which in spite of having operated under the command system (following WWII), had enjoyed political, and civil liberties earlier (e.g., Czech Republic). Indeed North has suggested that countries with a well-developed norms and conventions from an earlier epoch may do better in embracing a return to essentially the old mode of doing business. Consequently one would hypothesise that the presumed slow adjustment to reforms corroborates that the FSU republics '...without the heritage of a market economy and democracy, had no such norms to provide an hospitable foundation for the establishment of formal rules...' (North, 1997:16).

Clearly one need to reduce the concept of rules such as norms and conventions to empirically verifiable analogues which can then be measured in a quantitative as well as in qualitative terms before being able to say much. Even among formal rules, the nature of judiciary (which often depended on the colonial background of the present day developing nations) may be a relevant factor explaining differences in observed growth. It is also clear that one would ideally require a large sample of countries to make much of progress on the empirical validation of such ideas. We pursue the measurement issues in the next section.

Does the addition of IC shed light into the working of the growth-poverty nexus? Note that possible linkages may work along different routes; (a) either directly, (e.g., by affecting both income and the non-income dimensions of poverty) or, (b) by materially influencing the efficacy of the traditional linkage theories, namely the hypotheses cited above as RLI, ALG, and LUG? The first linkage, i.e., part (a) above, is somewhat intuitive, though possibly poorly documented for the EEFSU region. Many believe that the peer-monitoring model of micro lending pioneered in Bangladesh succeeds due to the social capital (e.g., trust within the group, and between the group and the lender) that emerges in an NGO type

of setting. Such NGO activities, over and above direct income gains, may also allow additional benefits in health and education contributing to alleviation of non-income poverty.

As for the second part, this is complex. One may hypothesise that the growth of the RLI-sector is facilitated by the fact that the potential workers do not have to relocate far, if at all, to be engaged in high productivity (vis-à-vis alternatives in the surplus labour farm sector or in the credit constrained rural informal sector) employment. The proximity to the home base allows them to draw on the familiar network of social capital (e.g., via the civil society units). By contrast, such access would be severed were the same individuals to move to the 'city'. However, we are not aware of any detailed study corroborating such eventualities. Similarly one may also advance that growth in agricultural income may sustain the RLI sector growth, as the products are more familiar to their perceived demand, making transactions easier to accomplish. (Clearly this would hinge on the relevance of the bounded rationality arguments advanced by Williamson and North.) In other words, the rural folks do not relate as easily to the attributes of goods produced by the urban sector. The explanation here is therefore very much an institutional one, i.e., one based on the cost of transactions among different quality of goods produced by different sectors of the economy.

4. Data and methodology

Below we deal with the issues of putting the conceptual structure developed above into operation as well as the empirical questions.

4.1 Operationalization of IC

It is imperative to keep in mind that if IC is to be taken as an input that leads to poverty outcomes (both income and non-income), and hence one must not confound inputs and outputs, a pitfall one may easily lapse into once confronted with limited data availability. The empirical analogues of the elements of transaction costs may be enumerated under three broad headings as follows.

Information and communication costs

One can estimate the trend in the real costs of communication, in terms of indicators of the transportation network, especially in the rural areas and around the main market centres (e.g., major freight terminals, either by the air, road, railway or waterways). Then there is the telecommunication system, both wireless and conventional, where the penetration rates (especially rural) may be used. Spread of information technology may be gauged by factors such as the degree of computerisation in the public sector and the autonomous bodies, number of diploma holders of a certain skill level, export value of software from the country and the like. Decentralization (especially, fiscal) of government allows rural residents easier access to local public goods, and this may be viewed as lowering the communication costs than in a unitary system of government. The share of local government revenue to national revenue may be taken as a rudimentary measure of decentralization.

Often available information on the investment in the infrastructure, namely telecommunication, energy, transportation, and water/sanitation projects is relatively poor, and the paucity may only allow a limited comparability of data across different countries.

The difficulty alluded to above arises in part due to climatic-topographic differences among countries, and consequently input costs may not relate proportionately to the benefits to the citizens. Information is typically available on educational spending, however, which may be conceived as an indicator of ease of communication and the flow of information.

Effective competition

Conceptually institutions that may render markets to perform better, especially the labour market and that for credit are easy to discern. Incentives to job seeking and for training and skill acquisition, easier hiring/firing rules, bankruptcy procedures, anti-monopoly measures, extent of corruption, independence of the central bank, the judiciary and the securities commission (SC), prudent central bank supervision of the banking system are among examples. However data on many of these are hard to assemble for a group of countries. The following elements, on the other hand, may also measure the extent of market competition, on which we have available data.

Rule of Law: While this factor is cited as one of six indicators of ‘governance’ by the World Bank Institute, we treat this as part of the formal institutions as spelled out in section 3 above. The WBI information is based on survey of perceptions of the quality of governance carried out during 1997 and 1998.

Corruption: Control of corruption may be seen as helping markets to function (e.g., in the process of bidding and allocation of public contracts, allocation of public sector employment, career advancement and the like).

Energy Input: To the extent, adequate and reliable access to energy (both electricity and natural gas) is of importance for the industry and commerce to perform smoothly, the investment in energy would conduce markets to perform better. Absence of rationing and other non-price allocation devices serve to minimize the scope of corruption and rent seeking. Unfortunately independent data on rationing of energy and the related market inefficiencies is hard to come by, and thus ‘corruption’ data may be taken to serve as a proxy.

Social capital

Recently several authors have carried out surveys in order to measure the level of social capital in society.¹⁰ Typically information is obtained on the level of trust in society (among each other, among groups, and between individuals and branches of government and judiciary), extent of networking, and participation in voluntary and civil activities. While we are aware that some authors (e.g., Inglehart, et al., 1998) have compiled some measures of social capital for a number of countries, it is unlikely that an existing database would be adequate for the sample of countries in focus here. Thus in the absence of direct observation on trust, networks, and voluntary/civic activities, one may look for indirect measures. Variables such as microcredit availability (where trust and trusted networks play a critical role), density of NGO and other voluntary agency activities (e.g., NGO and voluntary workers per capita), and wireless telephony (critical to rural group co-ordination and networking) may be valuable. The stress on voluntary associations is explained by the

¹⁰ See Hjoellund, Svendsen and Paldam (2001) and additional references cited therein.

belief that civil society and NGO activities permit individuals (especially in rural communities) to harness social cohesion and engage in pursuing goals of public interest. At this time, even the latter elements (namely, microcredit availability, depth of NGO/voluntary associations, and wireless telephony) do not appear to be readily available.

To sum up the discussion on IC, let us enumerate once more the major components described above. These were:

- (i) access to information technology
- (ii) level of political and fiscal decentralization
- (iii) access to educational resources
- (iv) rule of law
- (v) level of corruption in society
- (vi) access to microcredit
- (vii) depth of NGO/voluntary association activities
- (viii) wireless telephony.

Then first three of which were argued to lead to lower costs of communication, while the next two were to promote the working of the markets, and the final three were to serve as indicators of social capital obtaining in the society. Data on all of these do not happen to be available for all countries in the sample (i.e., the EEFSU region). We are thus led to relying on secondary sources. As a point of departure, we adopt the output of the WBI project on 'Governance' (World Bank, 2001c), which compiles country data on six variables measuring governance as they define it.¹¹ Of the latter six, we have chosen to focus on a subset of four, namely:

- (i) control of corruption
- (ii) rule of law
- (iii) political stability/lack of violence
- (iv) voice and accountability; clearly the first two of these elements were cited above as conducive to market competition, while the next two reflects political/governance institutions (e.g., level of democratization, level of decentralization etc),

Respectively, we have left out of consideration the remaining two WBI indicators, namely:

- (v) regulatory effectiveness
- (vi) government effectiveness.

The latter two appear too broad in scope to yield reliable responses.

Of course, other well-known sources may easily be consulted for additional insights, namely the study of social capital by Inglehart et al. One may further complement or adapt the WBI list of factors by incorporating the Freedom House index of political and civil rights (as used by Rodrik and Persson-Tabellini in related work), as well as the Transparency International's 2001 update on the corruption index.

¹¹ Indeed two papers by Kaufmann et al.(1999a,b) elaborate on the ideas and methodology behind the selection.

4.2 Operationalization of non-income poverty

Here one would ideally measure the output of the economic game that has a bearing on poverty over and above the income/consumption aspects. It would then follow that limitations in access to physical and human capital must confront the poor with limited participation in economic activities, and would make for persistent poverty in all its dimensions. This would then suggest that availability of collateral free credit (as is typical in microcredit arrangements) and good rural infrastructure including schools, health and sanitation facilities would be indicative of freer access to productive inputs. But here we would be measuring outputs, since what matters for the well being of the poor are the benefits of efforts and spending in these ventures. Kanbur and Squire (1999) interpret NIP as capturing the broader dimensions of deprivation. Of course, we have the famous capability theory expounded by Sen (1999). However, deeper aspects of voice and freedom are harder to quantify, especially on a basis that is consistent for all countries. Wider access to inputs and information would however be consistent with the goal of maximising the capabilities.¹² In view of data availability, we focus on female literacy and health status of very young (particularly, infant mortality and birthweight) and the old (longevity). Literacy and child (or, maternity) health developments may result from deliberate public policy and formal rules of society (e.g., compulsory attendance in school to a certain age or widely available rural health facilities). Or, these may derive from civil and public varieties of social capital (social support and networking) or a combination of both formal as well as informal institutions. In any event, it may be noted that the elements cited above indicate the outcome on the human capital side, and thus the physical capital accomplishment are slighted in this construction. While it is not difficult to provide a conceptual measure of the latter (say the interest rate differential between rural credit and the urban commercial sector lending rate for medium sized businesses), observability is the dominant constraint.

4.3 Comparable data set

The task here is to compile a comparable data set for the sample countries. Most important data is a mix of macro and regional/sectoral/group data on GDP growth and (household survey based) poverty data. The sectoral output/employment data is also necessary along primary (agriculture, mining and minerals), manufacturing, local non-farms (small scale), as well as the informal urban segment of the economy. Presently only secondary data will be used. As noted above, the poverty data is that used by Ravallion (2001) which is described in Chen and Ravallion (2000) and are available from the World Bank (2001a). Naturally not all EEFSU countries (especially in Central Asia) carry out the household surveys, which form the basis of the work done by the World Bank poverty research group. While the present study covers the post-liberalization period (namely, 1988-98/99), and particularly the immediate transition phase, (i.e., 1988-93/94), it is necessary to have observations at several points in time. The minimal set would include the pre-democracy status (say as of 1987/88), one for 1993/94, and one that may captures the fuller effects of reforms undertaken in the early nineties, say as of 1998/99. The idea is to capture the effects of the economic and institutional reforms, both in the short and 'long-term', there being a presumption of a lag structure. These considerations restrict our sample to fourteen countries, except that in the case of Romania (included in the first sample) we have no

¹² See also Rodrik (2000).

poverty data beyond 1994.¹³ Hence some of our results are based on a smaller sample of 13 countries.

5. Empirical evidence

5.1 Growth facts

Focussing on annualized GDP growth rates (see Table 5), several observations follow. Over the reference period, 1990-99, EEFSU average growth has been negative, indeed the only region to have this distinction. Of those included in the sample, only Hungary, Poland, and Slovak republic record positive growth, which has been robust only in the case of Poland (at 4.5 percent per annum). The latter sub-group happen to be among the countries that had different histories going into the command economy than the rest of the sample.

Recall that Ivaschenko (2001) noted the pace of deindustrialization as a significant fact of the recent economic history of the region. WDI 2001 data reveals that the overall industrial decline had been at the annual rate of 6.6 percent over the decade of the 1990s for the group of countries in focus here. Of these, notably Kazakhstan, Moldova and Ukraine recorded the worst industrial decline (average of 14 percent annually), and these were indeed the countries where output decline was the steepest (annual average of 9.2 percent). Agricultural losses, while less steep, was more uniformly distributed vis-à-vis the overall GDP decline figures.

5.2 Poverty performance

As discussed above, here we use the income poverty figures based on the international measure (i.e., the World Bank guide of a dollar or two a day). The appendix (Tables 3-4) presents the basic data, while summary figures for the immediate (1988-93) and the longer term (i.e., 1988-98/99) are derived in Tables 5-6. It is clear that at the lower level there is virtually no poverty in most of the sample countries, except for some important cases, where even this low threshold poverty has worsened persistently throughout the nineties (especially Moldova and Russia). At the higher level, significant poverty persists in all but a few cases (namely Belarus, Poland, and the Slovak Republic). The high variability (the standard deviation being 11.28 close to the mean of 12) in the figures for the 13 countries for which we have data over the longer period is striking. We should note in principle that the relative prices (of non-tradables) can vary a great deal among countries, and hence the \$2.15 a day (in 1993 international prices and converted to PPP) need not adequately describe the underlying differences in poverty among countries. For the present group though such anomalies are unlikely to be serious. Hence, compared to the sample average of 12 percent, the dramatically high (two-dollar) poverty figures for Moldova (38.4 percent) and Ukraine (45.7 percent as of 1999) remain a matter of concern.

¹³ The original sample of fourteen countries consists of Belarus, Bulgaria, Estonia, Hungary, Kazakhstan, Kyrgyz Republic, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Slovak Republic, and Ukraine.

Examining poverty data early in the transition phase reveals that the population living below dollar a day increased from zero to about ten percent on average for the sample, but by the end of the nineties, most of these figures have become negligible except as noted above (Moldova and Russia). The two-dollar poverty had likewise gone up from a negligible fraction to a median figure of about 20 percent by 1993, but the worst records were found in Kazakhstan, Kyrgyzstan Republic and Lithuania. Does the path dependence theory explain this to an extent? Surely growth had faltered the most in Moldova, Russia and Ukraine, which is consistent with the persistence of poverty in these countries.

5.3 Non-income poverty

As stated above, we focus on four indicators of NIP, namely, life expectancy, infant mortality, female primary enrolment, and the incidence of low birth-weight babies. Table 7 of the appendix provides a summary of the performance of the sample countries over the reference period. On female primary enrolment, we note that there have been sizeable advances in all countries. Judging by the incidence of low birthweight babies (1992-98), we see that the Baltic countries boast of the best record (at four percent which is well below the regional average of seven). Turning to infant mortality figures, again there has been a general reduction, although the regional average is rather high. For our empirical analysis, we have devised a composite index of non-income poverty (NIP) that effectively accords equal weight to the four components cited here. Table 7 displays the aggregate index of NIP and describes the methodology involved.

Combining the information on income as well as non-income dimensions of poverty (compare Tables 6 and 7), we do observe that countries with a better income poverty measure generally also do well by the NIP measure. It would be of interest to pursue the relative performance along these two criteria in terms of underlying growth, initial inequality (which had been rather uniform as of 1988), the inequality trend, and the quality of institutions.

5.4 Institutional capital variables

Table 8 displays the data on the four selected indicators of the quality of institutions chosen for the present analysis. Each individual country observation, under each category, was given a score between 1 (best) and five (poor), by visually inspecting the distribution. These ordinals were then added up to form the aggregate measure (*'weakness of institutions'*) of IC. The latter record may, by construction vary between 4 (e.g., Estonia and Hungary and Poland) and 20. While the highest sum was actually observed for Belarus (19), this was followed by Kazakhstan and Russia, both tied at a score of 17.

5.5 Some preliminary estimates

While any econometric work with such a limited number of observations (13 or 14) must be viewed as most tentative, Tables 1 and 2 of the appendix report some preliminary results. We have tried to estimate different measures of poverty as functions of GDP growth, inequality and IC. All, save one, equations had only one explanatory variable in order to allow maximum degrees of freedom. However, we believe that meagre as it is, the tests with data as compiled, is rather informative. A brief overview of the results is in order.

Poverty early in the transition period (1988-93)

As Tables 3-5 indicate, poverty in the early years of the switch away from the command system rose fast in most of the countries in the sample. It is hard to explain the observed volatility in terms of a simple model. Of the three separate independent variables, namely the trend rate of GDP growth (1990-99), the rise in inequality or the weakness of institutions, OLS estimations reveal little of predictive value. The coefficient estimates are reported in Table 1, all of which are however of the correct sign. Nevertheless, both rising inequality (t-value of 1.32) and the weakness of institutions (t = 1.2) may have played a part in determining the incidence of dollar-a-day poverty. .

Longer run poverty (1988-98)

Estimates for both the dollar and the two-dollar poverty indicate a very strong influence of the trend GDP growth (Table 2). Both the t-values are highly significant (at 96.1 and 99.9 percent, respectively). Even the R-squared figures (at 0.34 and 0.70, respectively) are high given the sample size of 13. It is of interest to compare the present result of the importance of growth, obtained largely in a regime of negative growth, to the corresponding estimates in the literature that mostly deal with more diverse growth histories. Let us first observe that the above finding is indeed consistent with the well-known results of Dollar and Kraay (2001a) and Ravallion (2001). Using panel data (covering the last four decades) for 80 countries (developed and developing), Dollar-Kraay found that there was indeed a one-to-one relationship between annual per capita GDP growth and the income accruing to the poorest quintile, even though there was a fair bit of variation around the average relationship. Ravallion (2001) uses (dollar-a-day poverty) data for 47 developing countries (over the 1980s and 90s), which was initially compiled by Chen and Ravallion (2000), and discovers that his results echo that obtained by Dollar and Kraay (2001a). Ravallion's growth coefficient of (-)2.5 (t-value of 8.3) may be interpreted as suggesting that '...for every one percent increase in the mean, the proportion of the population living below \$1/day ...falls by an average of 2.5%' (p.9).

What is perhaps striking is that for a sample of 13 countries, we get almost as robust results for the EEFSU region. One important difference is that the impact of growth on poverty is much less pronounced at the dollar-a-day level than for the two-dollar benchmark. The estimated coefficients are (-)0.43 and (-)2.71, respectively. Quantitatively, the coefficient for the two-dollar poverty is even higher than in Ravallion (here the t-value is -5.12). The R-squared is at 0.70 as against 0.44 in Ravallion. Given that the average growth, indeed an average contraction of 3.5 percent in the present case, the growth coefficient cited above suggests that were policy reforms to fully reverse the contraction (i.e., zero growth of output on average) population below the two-dollar poverty would have fallen from the average figure of 12 to 2.6 percent. This would appear to be a dramatic decline indeed.¹⁴ The above observation is also consistent with specific experiences of the few countries that were indeed able to register positive growth over this period. Hungary which had grown at an annual average of just one percent over the period, (two-dollar) poverty still rose from nearly zero to 7.3 percent, while Poland which grew the most in the sample (4.5 percent)

¹⁴ The dependent variable in the regression line we fitted was the change in the percentage of people below the poverty line over the period 1988-98. Thus for the reversion of the contraction rate of 3.457 percent throughout the entire decade would have caused poverty to decline by 9.4 percentage points. The average \$2 poverty rate stood at 12 percent as of 1998-9.

was able to essentially eliminate all poverty (which had reached double digit rates in the early nineties). Hence Ravallion's suggestion that 'there is no sign that distributional changes help protect the poor during contractions...' appear to be confirmed by the EEFSU data.

Inequality and poverty

Previous research has shown that even though growth and poverty reduction goes hand in hand, the share of income going to the poor (however defined) remains independent of the growth rate of GDP. However given existing inequality, this suggests that the rich (say the top quintile or so) must have gained proportionately more since the poor's share is about constant in any growth. While in our data set, the initial inequality (as of 1987-88 period) was about uniform (average Gini coefficient of 23.5, and s.d. of 1.63), *unlike other regional data, inequality by the end of the nineties had increased by an average of nine percentage points thus reaching a figure of 32.4*. Hence with increased inequality the poor's share of income must have declined commensurately. However regression analysis with the change in inequality as the sole independent variable does not appear to explain the changes in poverty that much (Table 2).¹⁵ Thus one may assert that the well being of the very poor are affected more by rising inequality (in the face of contraction) than for those above the extreme threshold. Looking at specific cases, we see that Russia in spite of the steepest rise in inequality, registers a large increase in the poverty rate, which is still well below those observed for Moldova and Ukraine. In the latter context, the very severe contraction (nearly 11 percent per annum over the decade) makes for the monstrous rise in poverty (38 and 46 percent, respectively). By contrast, Estonia having witnessed a sharp rise in inequality (worse than in Moldova or Ukraine) escapes much poverty due to its robust growth in the late nineties (the decade-annualized average being just a little over negative one percent).

The growth-inequality interface, given the very limited observation here, would suggest that high inequality may plausibly constrain growth, and thus lead to a worsening of poverty. But the direct and independent influence of the rising inequality on poverty appears difficult to document given the data. In other words, the above reasoning is consistent with the assertion that both the poverty outcome and inequality changes are the end result of the economic interactions, and the pathways of this process is not transparent given the information being analysed. Rodrik (2000) appears to go even farther and imply that even growth itself may be part of the puzzle; i.e., poverty outcome may well shape growth scenarios.

Institutions and poverty

Previous empirical studies generally failed to detect any discernible impact of institutions on poverty, or indeed of elements such as the openness of the economy, which may be viewed as growth friendly. Dollar and Kraay (2001b) find negligible correlation between changes in inequality and greater openness. It is of interest therefore to note that in the present study, the *weakness of institutions* matters. It appears to worsen the poverty picture, but the robustness of the estimate is less than stellar for the dollar-a-day poverty (t-value of 1.2 indicating significance at the 25 percent level). However, for the two-dollar poverty, the significance is reasonable, at ten percent (and R-squared of 0.24). We also tried to

¹⁵ The equation for dollar-a-day poverty has a slightly higher t-value than at the upper level of poverty (1.58 vs. 1.26).

estimate the two-dollar poverty model with two independent variables (namely growth and IC), which led to a reduced t-value for the IC variable, although the R-squared rose to 0.72.

Non-income poverty

As Table 2 indicates neither GDP growth nor the inequality trend was successful in explaining NIP. Interestingly, IC variable was the only one that came out strongly ($t = -2.48$), namely that non-income poverty got worse as the weakness of institutional capital became more severe. Even the R-squared value for this equation was 0.34, which is very reasonable for cross section estimation. We do not know of any previous studies that corroborates this sort of evidence, one-way or another.

Correcting for measurement errors

Clearly the small sample nature of this empirical exercise is a matter of concern. One suggestion is to use a larger number of countries, for which a similar data set can be compiled, and use a transition dummy for the EEFSU members.¹⁶ However, this leads to a significantly new initiative, which is perhaps well worth undertaking at some future date.

6. Conclusion

This paper had set two primary goals. First was to review the EEFSU growth experience (1988-98/99), for the sample of 14 countries, and attempt to discern the interface between economic growth and poverty in terms of the stylized views of growth-poverty nexus depicted above (section 1). The growth hypotheses in question relate to the significance of the relative pattern of sectoral output growth, the role of inequality, and the influence of output growth on non-income poverty. Our second goal was to focus on the observed record in both income and non-income dimensions of poverty, and to reflect on the differences among countries in terms of the underlying institutional capital and the historical path of its evolution. The latter factor, we observed, may directly impact the non-income poverty performance of a nation, but it may also affect the income poverty profile (directly and via inducing additional growth).

What does this discussion suggest for the direction of future policy insofar as poverty reduction strategies are concerned? Surely higher growth is conducive to poverty reduction, but there is little automaticity in the process, especially when growth is less than vigorous. In any event, the essential point is that progress on the institutional front is lacking in many of these countries (as elsewhere), and that indeed the latter is likely to be important in devising policies that may reduce poverty in all its dimensions. Even if one were convinced that higher growth would reduce poverty to an acceptable margin, there appears to be few policy measures that one may offer so as to harness greater growth. Besides the weight of the empirical evidence to date, if not squarely founded on the transition economies of the EEFSU region, is that reducing the average poverty is not enough. High and rising inequality would ensure that a great many would fall through the cracks, and not benefit from high growth, even if that was achievable. The non-income elements of poverty are more directly open to influence by policy interventions such as the promotion microcredit and other public and private initiatives in health, sanitation, literacy

¹⁶ Phil Keefer made indeed this suggestion at the IMAD conference in Otocec, Slovenia, July 13-14, 2001.

and numeracy fronts. Finally the modest amount of information available at our disposal indicates that the underlying strength of the institutions (economic, political and social) is possibly the single most agent of significance to bring about the alleviation of non-income poverty. There is a further possibility that the same institutional forces would also materially affect the income measure of poverty as well in a discernible fashion.

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Table 1
Poverty during transition (1988-93)

Poverty Type	Sample size (d.f.)	Coefficient Estimates for Independent Variables (one at a time)		
		<i>Trend GDP Growth</i> (1990-9)	<i>Trend Inequality</i> (1988-98)	<i>Weakness of Institutions</i>
Dollar a Day	14 (13)	Not significant	0.41 <i>(t = 1.32, p = 0.21)</i> <i>R sq. = 0.13</i>	1.18 <i>(t = 1.2, p = 0.25)</i> <i>R sq. = 0.11</i>
Two dollars a day	14 (13)	Not significant	Not significant	Not significant

Sources: Author's compilation. Regressions were run using Microsoft Excel with data discussed in tables below.

Table 2
Change in poverty (1988-98)

Poverty Type	Sample size (d.f.)	Coefficient Estimates for Independent Variables (one at a time)		
		<i>Trend GDP Growth</i> (1990-99)	<i>Trend Inequality</i> (1988-98)	<i>Weakness of institutions</i>
Dollar a Day	13 (12)	-0.43 <i>(t = -2.36, p = 0.04)</i> <i>R sq. = 0.34</i>	0.23 <i>(t = 1.58, p = 0.14)</i> <i>R sq. = 0.19</i>	Not significant
Two dollars a day	13 (12)	-2.71 <i>(t = -5.12, p = 0.00)</i> <i>R sq. = 0.70</i>	0.83 <i>(t = 1.26, p = 0.23)</i> <i>R sq. = 0.13</i>	1.29 <i>(t = 1.88, p = 0.09)</i> <i>R sq. = 0.24</i>
Non-Income Poverty	14 (13)	Not significant	Not significant	-3.53 <i>(t = -2.48, p = 0.03)</i> <i>R sq. = 0.34</i>

Sources: Author's compilation

Notes: Here the poverty variables (see Tables below) had data missing for one of the countries (Romania) thus leading to a smaller sample size of 13

Table 3
Income poverty (dollar a day) 1993 PPP prices

Country	Mean Income 1988 (Other)	Inequality 1988 (other)	HC Poverty (%)				
			1987 (other)	1990 (other)	1993 (other)	1996 (other)	1998 (other)
Belarus	203	22.8	0 (88)	-	1.1	2.3 (95)	0
Bulgaria	315 (1989)	23.3 (1989)	0 (89)	0 (92)	0 (94)	0 (95)	<2 (97)
Estonia	225	23.0	0 (88)	-	3.2	4.9 (95)	<2
Hungary	212 (1989)	23.3 (1989)	0 (89)	-	0	-	0
Kazakhstan	196	25.7	0.1 (88)	-	1.1	1.5	-
Kyrgyzstan	181	26.0	0 (88)	-	23.0	-	1.6 (97)
Latvia	408	22.5	0 (88)	-	0	0 (95)	0.2
Lithuania	382	22.5	0 (88)	-	16.5	2.5 (94)	0 (96)
Moldova	325	24.1	0 (88)	-	7.3 (92)	-	11.3 (97)
Poland	216 (1987)	25.5 (1987)	0	0.1	5.4	-	<2
Romania	191 (1989)	23.3 (1989)	0 (89)	0.8 (92)	2.8 (94)	-	-
Russia	286	23.8	0 (88)	-	6.2	7.2	7.1
Slovakia	232	19.5	0	0 (92)	0 (93)	-	0
Ukraine	310	23.3	0 (88)	0 (92)	2.1 (95)	0	2.9 (99)

Source: World Bank (2001a); www.worldbank.org/research/povmonitor/ and World Bank (2001b, Table 2.6)

Table 4
Income poverty (two dollars a day) 1993 PPP prices

Country	Mean Income 1988 (Other)	Inequality 1988 (other)	HC Poverty (%)				
			1987 (other)	1990 (other)	1993 (other)	1996 (other)	1998 (other)
Belarus	203	22.8	0.9 (88)	-	33.4	20.4 (95)	0.5
Bulgaria	315 (1989)	23.3 (1989)	0 (89)	1.1 (92)	1.3 (94)	7.8 (95)	21.9 (97)
Estonia	225	23.0	0.8 (88)	-	21.9	17.7 (95)	5.2
Hungary	212 (1989)	23.3 (1989)	0.4 (89)	-	4.0	-	7.3
Kazakhstan	196	25.7	2.3 (88)	-	41.7	15.3	-
Kyrgyzstan	181	26.0	0 (88)	-	44.5	-	17.9 (97)
Latvia	408	22.5	0 (88)	-	5.0	6.3 (95)	8.3
Lithuania	382	22.5	0 (88)	-	63.7	13.5 (94)	7.8 (96)
Moldova	325	24.1	0.2 (88)	-	31.9 (92)	-	38.4 (97)
Poland	216 (1987)	25.5 (1987)	1.1	1.8	10.5	-	<2
Romania	191 (1989)	23.3 (1989)	2.1 (89)	7.8 (92)	27.5 (94)	-	-
Russia	286	23.8	0.3 (88)	-	19.6	24.4	25.1
Slovakia	232	19.5	0.3	1.7 (92)	0.5 (93)	-	0
Ukraine	310	23.3	0.3 (88)	1.7 (92)	14.7 (95)	23.7	45.7 (99)

Source: World Bank 2001 (www.worldbank.org/research/povmonitor/) and World Bank (2001) Table 2.6

Table 5
Poverty profile during transition and economic reforms

Country	GDP Growth 1990-9	Change in Inequality 1988-98 (other)	Change in Poverty (\$ a day)		Change in Poverty (\$2 a day) (percentage points)	
			1988-93 (other)	1988-98 (other)	1988-93 (other)	1988-98 (other)
Belarus	- 3.0	-1.1	1.1	0	32.5	-0.4
Bulgaria	- 2.7	5.0 (1989-95)	0 (1989-94)	2 (1989-97)	1.3 (1989-94)	21.9 (1989-97)
Estonia	- 1.3	12.4 (1988-95)	3.2	2	21.1	4.4
Hungary	1.0	7.5 (1989-96)	0 (1989-93)	0 (1989-98)	3.6 (1989-93)	6.9 (1989-98)
Kazakhstan	- 5.9	9.7 (1988-96)	1.0	1.4 (1988-96)	39.4	13.0 (1988-96)
Kyrgyzstan	- 5.4	15.0 (1988-97)	23.0	1.6 (1988-97)	44.5	17.9 (1988-97)
Latvia	- 4.8	9.9	0	0.2	5.0	8.3
Lithuania	- 4.0	9.9	16.5	0 (1988-96)	63.7	7.8 (1988-96)
Moldova	-11.0	10.3 (1988-92)	7.3 (1988-92)	11.3 (1988-97)	31.7 (1988-92)	38.2 (1988-97)
Poland	+ 4.5	-2.3 (1987-93)	5.4 (1987-93)	2 (1987-98)	9.4 (1987-93)	0.9
Romania	- 0.8	4.9 (1989-94)	2.8 (1989-94)	-	25.4 (1989-94)	-
Russia	- 6.1	24.9	6.2	7.1	19.3	24.8
Slovakia	+ 1.8	9.7 (1988-93)	0 (1987-93)	0	0.5 (1987-93)	0
Ukraine	- 10.7	9.2 (1989-96)	0 (1988-92)	2.9 (1988-99)	1.4 (1988-92)	45.4 (1988-99)

Source: Author's calculation based on Tables 1 and 2

Table 6
Comparative poverty profile

Country	Poverty-A 1988-93 (P1)	Poverty-A 1988-98 (P2)	Poverty-B 1988-93 (P3)	Poverty-B 1988-98 (P4)	NIP Index	Weakness of Institutions (WI)
Belarus	1.1	0	32.5	-0.4	42	19
Bulgaria	0	2	1.3	21.9	29	11
Estonia	3.2	2	21.1	4.4	40	4
Hungary	0	0	3.6	6.9	47	4
Kazakhstan	1.0	1.4	39.4	12.0	-30	17
Kyrgyzstan	23.0	1.6	44.5	17.9	-10	15
Latvia	0	0.2	5.0	8.3	57	8
Lithuania	16.5	0	63.7	7.8	84	8
Moldova	7.3	11.3	31.7	38.2	36	13
Poland	5.4	2	9.4	0.9	43	4
Romania	2.8	-	25.4	-	-26	13
Russia	6.2	7.1	19.3	24.8	18	17
Slovakia	0	0	0.5	0	56	6
Ukraine	0	2.9	1.4	45.4	15	16

Source: See Table 3

Note: The entries in this table are the summary of the poverty profile as described in columns 4-7 in Table 3

Table 7
Social (non-income poverty) indicators

Country	Life Expectancy 1999	Infant Mortality (1999)	Female Primary Enrolment, % ('97)	Low Birthweight 1992-8 (%)	Aggregate Index of Non-Income Poverty (NIP) ^b
Belarus	68	11	84	6	42
Bulgaria	71	14	91	7	29
Estonia	71	10	86	-	40
Hungary	71	8	96	8	47
Kazakhstan	65	22	-	9	-30
Kyrgyzstan	67	26	93	6	-10
Latvia	70	14	87	4	57
Lithuania	72	9	-	4	84
Moldova	67	17	-	5	36
Poland	73	9	94	8	43
Romania	69	20	95	10	-26
Russia	66	16	93	-	18
Slovakia	73	8	-	-	56
Ukraine	67	14	-	8	15
Eastern Europe & Central Asia	69	21	92	7 ^a	0

Source: Data taken from World Bank (2001b)

Notes: (a) Sample average. (b) The index is calculated with approximately equal weighting of all four components. Thus we scale up the figures in the third) and the fifth column (by a factor of four and 11, respectively so that these later figures come on average to 80, which is the average columns two and four. For missing data we have used the regional or the sample average as available

Table 8
Institutional indicators

Country	Institutions				
	Corruption Control ^(b)	Rule of Law ^(c)	Lack of Violence ^(c)	Voice and Accountability ^(c)	Sum of the Ordinals ^(d)
Belarus	26 (4)	18 (5)	34 (5)	35 (5)	19
Bulgaria	30 (4)	47 (3)	67 (2)	69 (2)	11
Estonia	78 (1)	69 (1)	78 (1)	75 (1)	4
Hungary	79 (1)	74 (1)	88 (1)	85 (1)	4
Kazakhstan	14 (5)	30 (4)	59 (3)	26 (5)	17
Kyrgyzstan	24 (4)	34 (4)	62 (3)	43 (4)	15
Latvia	49 (2)	60 (2)	68 (2)	70 (2)	8
Lithuania	63 (1)	61 (2)	61 (3)	71 (2)	8
Moldova	40 (3)	52 (3)	42 (4)	61 (3)	13
Poland	70 (1)	70 (1)	80 (1)	81 (1)	4
Romania	38 (3)	51 (3)	51 (4)	64 (3)	13
Russia	27 (4)	26 (4)	23 (5)	41 (4)	17
Slovakia	63 (1)	59 (2)	73 (1)	72 (2)	6
Ukraine	12 (5)	27 (4)	41 (4)	53 (3)	16
E. Europe and FSU	34 (3)	42 (3)	47 (4)	49 (4)	14

Source: The entries in columns 4-7 are based on data given in the WBI site on governance, World Bank (2001): (www.worldbank.org/wbi/governance/bycountry.htm)

Notes: The figures reported in these columns represent the two-dollar poverty profile as presented in Table 3. The figures in brackets are ranks accorded to the country record on a scale of 1 to 5 where a score below 20 was assigned the bottom position of 5, that between 21 and 30 was 4, that between 31 and 45 was a 3, that between 46 and 55 a 2, while a score above 56 secured the top position of unity. Here again the figures in the brackets denote the rank on a scale of 1 to 5 based on the distribution (similar to the description in (a) above). This column merely adds up the ordinal ranks given in columns 4-7