

The Costs of Inequality: A Research Initiative¹

Pranab Bardhan and Samuel Bowles

I

Overview : Does Inequality Impede Economic Performance?

Widening gaps between rich and poor in many countries, occurring at a time when their governments are trying to cut back on programs for economic security and poverty alleviation, have prompted a renewed concern with the question of inequality and a reconsideration of the economics of differences in pay, well being, and wealth. The Costs of Inequality Research Initiative will apply new developments in economic reasoning to the problem of escalating economic differences and to the design of effective policies to counter these trends.

Economic thinking over the centuries has swung between a view that nations prosper most when the least well-off are best cared for, and a contrasting view that poverty for some is the inevitable price of plenty in the future. Adam Smith expressed the former view in *The Wealth of Nations*:

No nation can surely be flourishing or happy, of which the far greater part of the members are poor and miserable.

¹ This is a draft proposal to the Board of the MacArthur Foundation for a multi-year research project. Many of the points made here are developed more fully and technically in the papers listed in the enclosed two volumes on proposals and research papers by the members of the research group (and their associates).

The economics of John Maynard Keynes, inspired by the collapse of purchasing power during the Great Depression, supported a similar conclusion: according to Keynes, the spending of the less well-off may fuel prosperity, while the savings of the well-to-do may lead to an insufficiency of demand for goods and services.

However, the contrary view, that economic progress will trickle down to the poor if the wealthy are unimpeded in their pursuit of gain, has had far more advocates in recent decades. Until very recently liberal and conservative economists alike agreed that every society faces an "efficiency-equality tradeoff", the inexorable logic of which forces a choice between higher living standards on the average with higher levels of inequality, or a smaller pie with a larger slice for the poor. One is hard pressed to find an introductory economics textbook published since World War II in which this famous dilemma does not make an appearance. The collapse of the communist regimes in Eastern Europe and the general retreat of traditional socialist ideas in recent years have also been widely interpreted as a proof of the infeasibility of combining egalitarianism with economic efficiency.

The Elusive Efficiency-Equity Tradeoff.

In the U.S. and throughout the world, opponents of programs for poverty alleviation have made effective use of the "efficiency-equality tradeoff", claiming that progressive taxation, income support for the poor, unemployment insurance, social security, and similar programs undermine incentives to invest, work, learn, and innovate, and thus sap the economic vitality of the nation. While there is truth -- in varying degrees -- to these claims, the status of the efficiency-equality tradeoff as a guide to public policy has recently been thrown into question by two developments in economics, one empirical, the other theoretical.

First, the tradeoff has been questioned as a matter of fact. Comparisons among nations and of particular nations over long periods of time have failed to confirm that greater equality extracts a price in terms of overall economic performance. Indeed it appears if anything that less unequal nations and epochs may exhibit more rapid rates of economic growth and productivity and higher

levels of investment. The contrast between the relative stagnation of the highly unequal Latin American economies and the booming and for the most part relatively egalitarian East Asian economies over the last few decades has further dramatized the possibility that equality and economic growth might be more compatible than economists had thought. The wide dissemination of these research results by the World Bank, the National Bureau of Economic Research, and other respected bodies has prompted economists to take a second look at the reasoning underpinning the tradeoff.

This process brings us to the second reason for a more optimistic view of the possible synergy between equality and economic performance: recent developments in economic theory suggest that inequality itself may have adverse incentive effects, leading to lower levels of work effort, less on-the-job learning, restricted opportunities to undertake productive investments in both education and in business, while limiting the scope of cooperative problem-solving on the job, in resource management problems in local commons, and in residential neighborhoods.

The claimed 'disincentive effects' of egalitarian governmental programs have not been disproved; indeed new developments in the analysis of incentive problems in the economics of imperfect information have made some of the conventional arguments more, not less compelling. But the previously one-sided focus on incentive problems attending governmental redistribution have been complemented by a more balanced picture made possible by a more comprehensive view of the incentive problems facing modern economies.

Traditional debates about equality and redistributive policies, we now understand, pitted one partial and incomplete viewpoint against another. Egalitarians favored an idealized conception of government interventions, downplaying incentive problems in the public sector. Their adversaries opposed these interventions in favor of an idealized view of the private economy, overlooking the incentive problems posed by inequality in the process of private exchange. The challenge which brought the Costs of Inequality group together is to extend the new developments in economic analysis to understand the efficiency consequences of economic inequality and the constraints facing attempts to alleviate it. Given the widespread concern with the problem of poverty and its

consequences, and this opportunity to apply intellectually exciting conceptual developments in economics to these problems, we think this initiative may have a significant impact on economic thinking in critical public policy issues, particularly among younger economists.

The Costs of Inequality Research Initiative.

Ours, of course, is not the first attempt to wed the objectives of greater economic security and poverty alleviation on the one hand with superior economic performance of firms, families, communities and nations on the other. Earlier attempts, however, focused either on the possible connections between inequality and depressed levels of aggregate demand or on impediments to the accumulation of physical and human factors of production. While we recognize the importance of these attempts and build on them, our approach is distinct in its emphasis on the possible relationships between inequality and the perpetuation of economically dysfunctional institutional arrangements at the community, firm, and national level, in bringing out the special implications of incentive structures in the context of limited and asymmetric access to information, and in exploring new and more rigorous ways of quantifying the allocational distortions caused by wealth constraints.

Our research and group discussion since our founding meeting in early October 1995 has yielded three working hypotheses which unify the initiative. These will be explored through the more narrowly defined research projects to be described in section II.

First, inequality may impede economic performance by obstructing the evolution of productivity-enhancing governance structures in firms, farms, communities, and nations, in part because institutional structures supporting high levels of inequality are costly to maintain, and because inequality is an obstacle to the shared values and trust essential to efficient bargaining and cooperative decision-making.

Second, where hard work, innovation, maintenance of an asset and other behavior essential to high levels of economic performance cannot be specified in costlessly enforceable contracts, some

distributions of property rights are more efficient than others, and there may therefore exist a class of redistributions of property rights which in conjunction with other policies (such as insurance) yield outcomes both more efficient and more egalitarian than the status quo in most economies.

Third, redistributive policies are both the effect and the cause of the manner in which citizens understand and react to the sources of inequality as well as the desirability and costs of alleviating its hardships. To be politically viable redistributive and poverty alleviation policies have also to keep in mind the broader political alignment of forces that can sustain them and the various complementarities between production and social systems which tend to block the escape routes out of the low-level equilibrium. Ignoring these insights in policy design is a prescription for failure.

As preparation for identifying the concrete questions we wish to investigate, we sought first to pinpoint the methodological pitfalls to avoid in pursuing research in this area. Literature searches, commissioned papers, and extensive discussions with scholars in the relevant fields during the planning period have helped us identify two debilitating disjunctures in the current state of knowledge in this area. The Costs of Inequality Research Initiative has been designed to address, first, the inadequate engagement of recent economic theory with the inefficiency effects of inequality, and, second, the hiatus between theoretical and empirical research in the related fields.

- First, the flourishing literature in the economics of information and the related literature on communities and economic institutions has thus far not addressed the question of inequality in great depth, and particularly the way that inequality might exacerbate the problems of contractual incompleteness and other sources of allocational distortions associated with information asymmetries. The vast majority of the research proposals making up the Costs of Inequality Research Initiative address some aspects of this issue.
- Second, theoretical and empirical work in related areas has been pursued substantially in isolation. For example, the sophisticated theoretical models of cooperation recently

developed by game theorists and others have been at best minimally informed by the rich fieldwork on cooperation in real-world communities. With a number of exceptions, fieldwork in this area has been conducted by scholars either unaware of or uninterested in the relevant work in economic theory. Similarly, the burgeoning theoretical literature on wealth constraints and empirical studies of credit limitations, micro-lending institutions and the like have for the most part proceeded autonomously. Remarkably, most empirical studies of the potential benefits of new forms of governance of firms such as employee-ownership have ignored the relevant literature concerning principal-agent problems in credit and labor markets. The Costs of Inequality Research Initiative will address this hiatus between empirical and theoretical work by supporting field and other empirical studies by some of the leading contributors to the theoretical literature, and through ongoing group discussion of the diverse empirical projects as they evolve.

Over the past year we have been able to recruit an outstanding group of (mostly younger) researchers to work on these issues, and have begun the process of knitting together a research team. In addition to clarifying the current methodological weaknesses of the field and developing our guiding hypotheses, our three primary objectives in the group formation process over the last ten months were :

- to identify the most important knowledge gaps impeding a clear understanding of the relationship of inequality to economic performance as well as inhibiting the formulation of more effective policy approaches in this area;
- to secure the participation of the best economists and other social scientists willing to devote their creative energies to a collective effort on these questions, and
- to familiarize team members with the ways of thinking of other members so as to identify and foster possibilities for both informal cross-fertilization of ideas and in some cases more explicitly collaborative research.

While the eventual results of long-term research cannot be anticipated, we are delighted with the results so far of our efforts in these three areas. When we started in October 1995, many of the members did not know one another; it is gratifying to note that already several members are either intensively involved in one another's work or drawing upon the insights provided by other members, as we specify below in our description of individual research projects. However, we do not think it either realistic or desirable to encourage all members to work on one common analytical model or one shared data set. The subjects we are exploring are sufficiently new so that the need for creativity is paramount; if we are successful, greater consistency in approaches and data sets will be an eventual result. The level of spontaneous cooperation and fruitful interchange among differing approaches that we have already observed in our group suggests the promise of this approach.

Our three-year strategy is to build from particular (some quite narrowly defined) research projects to more synthetic work integrating the findings of the individual projects and considering possible policy applications. It would be premature, of course, to anticipate the findings of these projects or the precise nature of the resulting syntheses. But by deepening our conceptual and empirical knowledge of the complex relationships between inequality and economic performance we hope to replace the simplistic efficiency-equality trade-off with a set of understandings less hostile to the objectives of poverty alleviation, economic security, and distributive justice. Possible outlets for our findings will be a series of workshops, working papers, and publications on such topics as "Inequality and the Commons Problem", "Asset-based Redistribution", and "The Political Economy of Redistribution".

Of equal importance for the long-term impact of our research, starting next year we plan to associate with our network promising doctoral candidates and postdoctoral scholars. Through the mentoring relationships that these associations will allow and by inviting leading scholars to participate in our meetings on an occasional basis, we will seek to build a permanent research community around our topic areas.

In the next section we describe our projected research in some detail in the context of the integrating themes. We then briefly describe the organizational structure, composition, and mode of interaction in our research group. (Throughout group members are denoted by their names in bold types, in contrast with those of their associates). Appendix 1 provides the bio-bibliography of the group members. Appendix 2 gives a list of the sixteen Data Collection and Field Survey Projects proposed by various members. Appendix 3 lists the agenda of the two group meetings held so far this year, as well as the tentative agenda for our next meeting in October. Two bound volumes accompany this project proposal; one presents the individual theoretical and empirical research proposals of the group members, the other contains the fourteen new papers concerning the Costs of Inequality project produced by group members and associates during October 1995-June 1996 of the current 'planning grant' period (given the short time span, many of these papers are only preliminary drafts). Appendix 4 provides a list of these fourteen papers.

II

Knowledge Gaps and Research Priorities

Through a series of field work, statistical, theoretical and other studies we will attempt to provide answers to the following question:

how do inequalities of holdings, economic rewards, or status foster institutional failures which impede economic performance, and how might these inequalities and failures be feasibly rectified?

Preliminary exploration of this question over the last year has convinced us that our research should focus on four integrating themes:

- inequality as a possible impediment to cooperation in local communities and the associated impact of inequality on local environmental degradation and the paucity and poor quality of local public goods;

- the costly allocational distortions arising from inequalities in wealth, pay, and governance rights and the way in which these impede the effective functioning of organizations, firms, farms, and other productive entities;
- the ways in which inequality may militate against efficient national-level bargaining and policy-making thus impeding macroeconomic performance; and
- the evolution, efficient design and political viability of policies and governance structures to alleviate poverty, and secure greater economic opportunity for the less well off.

Inequality and cooperation in solving local commons problems.

While in recent years there has been a great deal of work on the management of local environmental resources (on which the daily livelihood of the poor in many countries depend in crucial ways), there has been surprisingly little work, either theoretical or empirical, on how inequality helps or hinders cooperative management on the local commons. (For example, the remarkably extensive data set on the local commons compiled at the University of Indiana by Elinor Ostrom from different parts of the globe does not contain any evidence on the impact of economic inequality ; as the enclosed papers by **Baland** and by **Bardhan** make clear in their introductory sections there is very little theoretical literature on this either). A major objective of our research is to carry out intensive field work in different parts of the world on issues arising from theoretically informed hypotheses with a view to building a bridge between empirical and conceptual work in the area. The complexity of the relationships involved and the multiplicity of social norms concerning cooperation make it imperative to study the problem in diverse field situations.

We hope to enrich this project drawing upon the ongoing work on norms and preferences and neighborhood interactions in other research networks. We are particularly interested in Ernst Fehr's work on the relationship between the structure of contracts and the viability of norms of reciprocity in experimental situations and Robert Boyd's work on how group selection pressures might favor the

evolution of cooperative individual norms. The relevance of both insights to cooperation in local commons interactions as well as in the employment relationships of large modern firms is apparent. Work proposed by the MacArthur research cluster led by Arrow and Durlauf may clarify how the sorting of individuals in housing and labor markets leading to the formation of neighborhoods and other associations may have an impact on the possibility of productivity-enhancing cooperation in local commons, residential communities, and workplaces, as well as the relevance of inequality in initial asset distribution to this process. We will also explore the possibility of networking more broadly with other scholars and practitioners working on enhancing effective community governance. The following studies make up our research agenda in this area.

Jean-Marie Baland will conduct three field work based projects concerning (a) the way sharing rules are set by a community of Japanese fishers and the consequences for cooperation, (b) how urban slum dwellers in Kenya manage to cooperate in the provision of public goods despite their transience and ethnic divisions, and (c) how inequality has an impact on effective resource preservation among Senegalese fishermen. A central issue in these projects is to understand the impact of inequality on the concept of fairness held by different members of a community and how this affects rule setting, rule violation and social sanctions. (In this the insights drawn from the theoretical work of group member **Rabin** will be useful, especially the hypothesis that inequality may militate against shared conceptions of just division and thus lead to breakdowns in cooperation). Another issue is to explore the process by which people with different asset endowments may self-select into separate solidarity groups. Some of these questions cannot be probed in depth without active involvement or continued relationship with the respondents. Somewhat unusually for an economist, **Baland** will draw upon his extensive participant observation over the next year in the Kibera slum in Nairobi; similarly, his research associates will be participant observers in the Japanese and Senegalese fisheries.

In a theoretical paper co-authored (with J.P. Platteau) written for the project (chapter 2 in the enclosed Research Papers volume) **Baland** shows how inequality can have an ambiguous effect on the feasibility of an efficient outcome in management of common property resources and how in

designing and enforcing conservation measures inequality may raise particular problems. In proposed theoretical work (jointly with P. Francois) **Baland** will study the effect of differing initial endowments in a model of evolutionary cooperation in the commons, and in another project (jointly with F. Bloch) will examine the impact of inequality on the voluntary provision of local public goods when such goods have outside effects on non-participating agents. This last work will draw upon the analysis of neighborhood effects studied by **Benabou** and **Hoff** in our group, as well as the related research of the MacArthur research group working on neighborhood interactions.

Pranab Bardhan will collaborate on two field survey projects on the management of water resources at the local level, one in central Mexico and the other in South India. Both concern the ways in which unequal assets of farmers influence the process of cooperation. These studies will provide an assessment of the importance of inequality as an impediment to cooperation, relative to other measurable factors. The South Indian study (to be carried out in collaboration with N. Sengupta of the Madras Institute of Development Studies) will be a large-scale household survey of members (and potential members) of irrigation groups that is expected to provide statistically valid estimates on the covariates of participation and water management performance in such groups. The Mexico study to be carried out in collaboration with Jeff Dayton-Johnson will survey about sixty self-governed irrigation systems with a similar purpose.

Bardhan and Dayton-Johnson have just completed a draft of a theoretical paper (chapter 3 in the enclosed volume on Research Papers) where they show the complicated nature of the impact of inequality (in assets and in outside earning opportunities) on conservation efforts in the local commons, and how increasing inequality may restrict the range of implementable schemes of community regulation.

Abhijit Banerjee (in collaboration with K. Munshi) will study a booming South Indian garment exporting town whose success appears to be based on a network of informal cooperation among small producers. He will conduct theoretical and empirical research on the impact of wealth limitations and imperfect credit markets on industry structure for this town. While the "commons"

in this case is not a natural resource, there may be many parallels between the types of cooperation present in this case and those studied by **Baland** and **Bardhan**.

We also expect to gain some insight on inequality and local level cooperation from the research of **Kremer** (particularly his field work in Vietnam, described below.) We will devote one of our forthcoming day-long topics meetings to a discussion of many of these issues of community cooperation with presentations invited from political scientists active in this area, notably Elinor Ostrom and Michael Taylor, as well as others.

Asset Inequality and Coordination Failures.

Economists have recently developed models which show that inequality restricts the kinds of contracts and exchanges open to people, and in this way may impede some -- especially the poor -- from fully engaging in productive activities. Furthermore, those with few assets fail to avoid taking risks and may thus resist holding assets even when they could make productive use of them, preferring less risky holdings. While these abstract points are now uncontroversial, their application to concrete cases and specific institutional forms and to public policy application has lagged. As a result many economists doubt their practical importance, and there is little guidance about the policy implications of this new theoretical development. We seek to fill a part of these gaps through a series of related studies concerning the effects of low wealth levels on productive activities, the extent and functioning of credit constraints, and insurance.

Karla Hoff will study why poor communities are often plagued by low levels of social capital. She starts with the view that members of a community are co-producers of trust and other aspects of social capital that affects the well-being of children who grow up in that community. Drawing upon the socio-economic stratification models of **Benabou**, another group member, she explores the ways in which poverty leads to insecure forms of residential tenancy which contribute to a lack of commitment to the social control and community enhancement aspects of neighborhood social capital. She will also explore proposals for limited equity ownership that would increase the stake of the poor

in their neighborhoods. An attractive feature of this proposal is that it recognizes the limited ability of governments to know the true wealth status of potential beneficiaries, but can nevertheless be "self targeting," allowing housing subsidies to be effectively directed to the poor.

Hoff's paper (see chapter 6 in the volume on Research Papers) examines the effect of initial wealth distribution on some forms of informal insurance arrangements (to which poor people turn when they do not have access to insurance markets) and shows conditions under which such arrangements may lead to a poverty trap.

Dilip Mookherjee is engaged in both theoretical and empirical studies of the way inequalities shape the types of contracts in use, and the effects of these on productivity with particular reference to agrarian economies. His theoretical work concerns the effects of concentrated land ownership on farm productivity, savings and innovation activity in the agricultural sector, as well as the impact of inequality on the development of human resources. His empirical work (jointly with group member, **Banerjee**, and with K. Munshi and D. Ray) will focus on the effect of land inequality on the organization and functioning of a large number of sugar processing cooperatives in the state of Maharashtra in Western India and (in collaboration with **Bardhan**) on the effects of land distribution on farm productivity, using farm management data in West Bengal in East India.

In a co-authored (with D. Ray) theoretical paper (chapter 11 of the volume on Research Papers), **Mookherjee** provides a draft of his current year's research on a dynamic model of tenancy and credit contracts under wealth inequality, which take into consideration their implications for incentives over time and therefore their effects on future wealth and effort levels. This model yields important implications for anti-poverty transfer programs or credit policies.

Thomas Piketty will adopt a direct approach to understanding the way lack of capital obstructs peoples' productive activities. Trying to answer the question indirectly by looking at aggregate data on investment behavior (the favored method among economists to the present) makes it difficult to estimate the key micro parameters at work and the efficiency consequences. To avoid

these difficulties Piketty will look at what financial institutions actually do. He has approached financial institutions in France and it appears that he will be able to acquire data on bank actions concerning small business loan applications and student loans, along with a rich data set on the characteristics of the applicants.

Michael Kremer will use a randomized evaluation to determine the way that the lack of wealth affects economic behavior, possibly reducing productivity. Many empirical studies of the effects of wealth on economic behavior are flawed because those without wealth differ in so many ways from those with wealth; disentangling the effects of lack of wealth *per se* is generally impossible. **Kremer** has secured the cooperation (and substantial funding) from NGOs in Kenya and Vietnam to conduct a randomized experiment which will involve simply giving a substantial sum to randomly selected families (in Vietnam) and materials like textbooks to primary schools (in Kenya) and determining what difference it makes (in both cases there are substantial baseline studies against which subsequent developments may be measured.) In collaboration with **Banerjee**, **Kremer** is also planning a similar study to examine the effect of school feeding programs on the health and education of poor children in Rajasthan in Western India.

As a background to the empirical work of **Piketty** and **Kremer** on wealth constraints, we commissioned a paper by P. Malherbe (see chapter 8 in the Research Papers volume) to survey the available U.S. evidence on the effects of wealth constraints on self-employment. He confirms that while the existence of such constraints on the entry, scale of investment, and exit in small business operations is undeniable, its actual importance needs to be convincingly established on the basis of more solid and rigorous empirical studies.

Abhijit Banerjee (in collaboration with M. Ghatak and P. Gertler) will explore the productivity effects of security of tenure among Bengali sharecroppers. We know a lot about the relationship between farm size and productivity, but surprisingly little about the effect of the form of the contract (e.g., insecure tenancy, secure tenancy, or outright ownership) on farmers' behavior, including saving and investment. But it is this latter information that we need to make policy relevant

judgements concerning such issues as tenure reform. **Banerjee** will use detailed data collected from tenants and landlords in the context of an unusual natural experiment (a drastic change in the West Bengal tenure laws in the late 1970s) to measure the part of farm output growth that may have resulted from the consequent realignment in the bargaining power of tenants. Though the focus of **Banerjee's** work is quite different from **Hoff's** (advanced country residential tenure versus agrarian economy land tenure) we expect a considerable overlap of insights on the incentive effects of tenancy when the proposed studies are completed.

Samuel Bowles, in collaboration with Herbert Gintis, has begun an investigation for the project (see chapter 4 in the volume on Research Papers) where they model the interaction of allocative efficiency and risk taking behavior in production by wealthy and poor agents when there are contract enforcement problems in labor as well as credit markets. He suggests how insurance policies might be developed to enhance the risk-taking behavior of poor agents, and thus to mitigate the adverse productivity effects of suboptimal risk-taking and capitalization that an egalitarian redistribution of control rights and residual claimancy in a firm may bring about.

This research is clearly relevant to one of the fundamental questions in the theory of economic organization, why external investors, rather than workers, usually own and manage the firm. In a short paper (see chapter 5 in the Research Papers volume) G. Dow and L. Putterman have provided for us an overview and critical assessment of some of the general answers offered in the literature to this question. They will considerably extend their research in preparation for our next group meeting.

Inequality, bargaining, and macroeconomic outcomes.

Since the founding of the discipline, economists have attempted to understand the relationship between inequality and macroeconomic performance in a number of ways, but until recent years little attention was given to the ways that inequality influences the institutional structures within which macroeconomic outcomes are determined. We seek to illuminate the inequality-institutions-macroeconomic outcomes nexus.

Philippe Aghion will undertake an ambitious set of projects exploring the macroeconomics of the growth/equality relationship. These include trying to provide a unified theoretical framework for studying the effect of accelerated technical change in an open economy on wage inequality (both across and within educational cohorts), on the evolution of organizations (like the process of deunionization) and of social norms (on matters like unemployment and labor turnover), and for analyzing the relationship between productivity growth, unemployment and inequality, and the effects of wealth constraints on both growth and macroeconomic instability. The result of this research will be a book on the subject which we are convinced will command attention in the profession.

In collaboration with **Banerjee** and **Piketty**, **Aghion** has produced a draft of a paper (see chapter 1 in the volume on Research Papers) investigating various mechanisms through which more inequality (for example, in the access to certain kinds of financial assets or consumption goods) may translate into more output (and/or interest rate) volatility and an increased vulnerability to inflationary spirals.

Jean-Marie Baland (in collaboration with D. Ray) will study in a theoretical model how a disequalizing change in income distribution may affect, through demand composition effects, the pattern of economic growth in a way that increases income inequality in subsequent periods.

Karl Moene and **Michael Wallerstein** examine the effects of wage equalization on investment and productivity growth. Unions potentially affect the distribution of wages among workers far more than they alter the functional distribution of income between wages and profits. Drawing upon the experience of union-sponsored centralized bargaining and wage equalization in postwar Norway and Sweden (up to the early 1980's), **Moene** and **Wallerstein** in their paper (chapter 10 in the volume on Research Papers) theoretically investigate the effects of wage compression through centralized wage-setting in a context where growth depends on the continual reallocation of labor from older, less productive, plants to new, more productive, plants. Although a policy of equalizing wages forces wages up in the least productive plants, it also prevents wages from rising in the most productive plants. The net result of such equalization across plants of

different productivities may increase profits (relative to the average wage) and induce investment and entry of new plants, contrary to the standard prediction about the effect of union-sponsored wage policies. **Moene** and **Wallerstein** propose now to empirically study the relationship between wage compression and investment in countries outside Sweden and Norway.

Using both psychological and economic arguments, **Matthew Rabin** starts with economic actors who do not pursue solely their self-interest, as narrowly defined, but also care about fairness and the well-being of others. In this context he explores how inequality of resources leads to differences in bargaining power and how the latter may lead to wasteful conflicts (such as strikes). In a draft of a paper written for this project by him this year (see chapter 13 in the volume on Research Papers) the basic story is that when a party having a great deal of bargaining power attempts to exploit this power, it is likely to induce efficiency-reducing retaliation by the weaker party. Apart from extending and generalizing the results of this research on the inefficiency implications of fairness-based retaliation, **Rabin** will also investigate the connection between pre-bargaining inequalities and bargaining power and the basis for a conjecture that parties which are balanced in their bargaining power are more likely to take into account the well-being of outside parties (and thus contribute more to social efficiency). The psychological and game theoretic insights of **Rabin**'s theoretical explorations have many implications for the types of bargaining and collective action situations addressed by **Wallerstein, Moene, Bardhan and Baland**.

The political economy of inequality.

Until recently economists who have studied the impact of economic policies on inequality have written little about the powerful underlying dynamics which shape the policies themselves, and the way that inequality and inegalitarian policy might constitute a self-reinforcing vicious circle, with more equal societies and more redistributive governments bringing about a converse kind of virtuous circle. Critical to rectifying this lacuna is an understanding of redistributive policies as equilibrium outcomes of systems of both electoral and market competition. We seek to address these issues looking at the broad question of the economic and political underpinnings of the policies and institutions which help to determine the degree of inequality in a society.

Roland Benabou's research is addressed to the following big question: why do nations even at similar levels of development adopt such different systems of educational structure, tax policy and social insurance, labor relations, production organization and technology, and why do these interrelated systems persist even in cases where they are demonstrably inferior from the standpoint of both productivity and equality? **Benabou** has developed an explanation for the lock-in effects which bind some countries to decades-long trajectories of inequality and poor economic performance and others to equally durable complementarities between greater equality and economic success. He will explore the complex political and economic interactions giving rise to these divergent trajectories.

In particular, he will theoretically analyze how a country's productive and education system shape each other, through endogenous technological choice by firms and investment decisions by future workers with different abilities and family backgrounds. On the one hand, firms choose their technologies and mode of organization in response to the distribution of skills which they observe or expect workers to have. (For instance, it is often said that the greater homogeneity of skills and attitudes in the Japanese workforce permits a more team-oriented, less hierarchical, organization of production than in the United States). On the other hand, the expected returns which determine the decisions of young people about investment in education reflect the nature of the jobs they can expect to find in the labor market.

In a paper presented to one of our meetings (see chapter 14 of the Research Papers volume) J. Robinson focuses on labor market institutions and macroeconomic policies to explore some theoretical mechanisms which might link different dimensions of distribution in society to the equilibrium institutional structure.

Philippe Aghion will study the way in which inequality (among individuals with different levels of accumulated and technology-specific human capital) may, through the political process, delay the pace of innovations.

Thomas Piketty in a survey paper written for our project (chapter 12 in the volume on Research Papers) reviews the existing theoretical and empirical research on the politics of

redistribution and points to future research priorities. In his research proposal he indicates how he intends to extend his current work on the relationship between intergenerational income mobility and political attitudes. He has developed some theoretical predictions about how political belief systems respond to exogenous shocks to the economy like distributive trends, and he proposes to test these predictions using survey evidence that is available for the U.S., the U.K., and France on attitudes toward inequality. (A part of his long-run objective is to put together a large international data base on redistributive politics).

He also plans to extend the theory and the empirical analysis in order to address the conflict between fiscal redistribution and redistribution through wage pressures. This conflict, which is particularly relevant for European redistributive politics, can magnify the costs of inequality (when workers do not get what they think they deserve through fiscal channels, they try to get it through wage pressures that may incur substantially higher distortionary costs).

Wallerstein and **Moene**, in related research, will explore the political stability of the welfare state. They will seek to understand why self-interested voters might support redistributive expenditures and how this support might be affected by the design of programs (for example universal payments in contrast to payments targeted on the poor).

In a paper written for the project (chapter 9 in the volume on Research Papers) **Moene** and **Wallerstein** pose the following theoretical question: which policy, universalistic or means-tested, maximizes the welfare of the poor when the level of benefits is chosen by majority rule with self-interested voters? Voters differ in terms of whether they gain or lose from a redistributive tax and benefit policy, but, being risk-averse in the face of income shocks, they all potentially gain from the implicit insurance that such a redistributive policy provides.

In further work they propose to check the robustness of their theoretical results with more general assumptions about preferences and the distribution of pre-tax income, and to investigate the impact of policy design on the level of political support received for welfare policy, both in the way benefits are structured and the domain over which the policy is chosen.

We also asked G. Loewenstein, an expert in economic psychology, to reflect on the public attitude to income inequality: in a short paper (see chapter 7 of the Research Papers volume) he explores why inequality at the national level is often not an issue that spontaneously evokes public concern or indignation and speculates on what can be done to raise the level of (visceral) concern on the issue.

III

The Costs of Inequality Research Team

In selecting core members of the group we carefully considered a large number of social scientists, reading their works, and in many cases inviting them to meetings so that we could interact with them more closely. Three criteria guided our selection:

- exceptional research capability (on theoretical and empirical issues);
- one or more impressive research proposals in our focus areas; and
- the ability to contribute integrally to the intellectual life of the group.

We also sought a group which was diverse along a number of dimensions important for fruitful interaction and eventual impact on the economics profession. Thus, the group is cosmopolitan (half of the core are Americans, five nations are represented) and varies greatly in seniority (the youngest, **Piketty** is in his mid-twenties). Special interests in research technique range from field work and participant observation to randomized evaluations to more or less conventional econometric studies and formal modelling.

We have begun the process of putting together an interactive and enthusiastic group. The entire group has met twice, in Berkeley in early October 1995 and in Cambridge, Massachusetts in May, 1996; we will meet again in October 1996, and in May 1997. The very full agenda for the two past meetings are enclosed as Appendix 3 to this proposal. In both cases we invited some non-group members to participate, both to critically comment on our work and to provide alternative views and perspectives, apart from surveying and identifying knowledge gaps in some areas. (William Simon

of the Stanford School of Law, Joseph Stiglitz, Chair of the U.S. President's Council of Economic Advisors, **Michael Wallerstein** of the Department of Political Science at Northwestern University (he was subsequently invited to be a core member), Elisabeth Sadoulet and Alain de Janvry of the Department of Agricultural and Resource Economics at the University of California at Berkeley, George Loewenstein of the Department of Decision Sciences at Carnegie Mellon University, John Roemer of the Department of Economics at the University of California at Davis, Glenn Loury of the Department of Economics at Boston University, Richard Freeman of the Department of Economics at Harvard, Gregory Dow of the Department of Economics at Simon Fraser University, Roberto Perotti of the Department of Economics at Columbia University, James Robinson of the Department of Economics at University of Southern California, and others.) We have found this periodic interaction with non-members very fruitful and expect to continue this in future, inviting them as paper presenters and commentators in our meetings. We shall also regularly invite our co-authors and research associates to our meetings.

Additional to the group meetings, we organized (in May 1996) a mini-conference designed for dissertation-stage graduate students on the costs of inequality in Amherst at the University of Massachusetts. **Karl Moene, Michael Wallerstein, Karla Hoff** and **Jean-Marie Baland** each made presentations to well-attended meetings. In one of our future meetings we are planning to have an extra session where we interact with a group of practitioners from Central America and the Caribbean (put together by Kim Stanton of the MacArthur Foundation) on questions like that of access to credit markets for small business.

At our next meeting (in October 1996) we will draw on the expertise of scholars in related fields to explore two topics. First, as we have mentioned above, we will ask two eminent political scientists (Ostrom, Taylor) to reflect on the problem of inequality and the management of the local commons, as well as engaging them in a consideration of our own work to date (by **Baland** and by **Bardhan** primarily) on these issues. Secondly, we will explore wealth constraints as impediments to efficient governance, focusing on evidence from the U.S. We have asked John Pencavel to share with us the results of his long-term research project on the worker-owned plywood factories in the U.S. Additionally, we will consider two papers (by Gregory Dow and Louis Putterman, and by Paul

Malherbe) reviewing empirical studies of the importance of wealth constraints and other barriers to alternative forms of governance of firms in the U.S.

In our subsequent meeting (in May 1997) we are tentatively planning to center on two issues. First is the relationship between insurance, redistribution, and equality of opportunity, drawing on the work of Robert Schiller, John Roemer, Hans-Werner Sinn and others. We would like to explore the possibility that a significant level of efficient redistribution can take place through greatly expanded and redesigned insurance schemes (of the types proposed by Roemer and Schiller and studied by Moene and Wallerstein) and that initiatives of this type might also facilitate more efficient forms of governance made possible through asset-based redistribution (as is suggested, for example, in the paper by **Bowles** and Gintis).

Second, we will also take up the relationship between inequality, property rights, and the evolution of what has come to be called social capital, drawing on the work of group members, **Karla Hoff**, **Roland Benabou** and **Samuel Bowles**, as well as Ernst Fehr and other members of the MacArthur network on norms and preferences and Robert Putnam, George Akerlof and possibly other associates of that network. As both of these topics address the multi-dimensional nature of inequality we may also explore possible inputs from the research cluster led by Deaton and Sen.

We intend also to explore ways of networking with MacArthur Foundation-supported economists and other practitioners working on community economic development, housing, employment, and related areas.

Within our group our objectives in providing research support to members are first and foremost to cover:

- research costs of field work and other data collection;
- some release time from teaching for the purposes of doing work on this project; and
- activities fostering an integrated group with high levels of intercommunication.

Apart from theoretically sophisticated analysis the group will engage in a substantial amount of new empirical work. The involvement of some major theoretical minds in our group's empirical projects is expected to be an unusual and substantial achievement of the group. For a list of the sixteen data collection and field survey projects (to be carried out by seven members of the group individually or in collaboration), see Appendix 2. The sites for these projects span different parts of the globe: Japan, Vietnam, Kenya, Mexico, Senegal, India, France, the U.K. as well as the U.S. and possibly Canada. This diversity of field sites is not just for the sake of diversity; it is more a reflection of the group's sensitivity to the issues of multiplicity of institutional equilibria and context-specificity of norms and expectations that support such equilibria. We intend to make the data sets collected in the project available to the larger scholarly community (with appropriate restrictions).

The core group consists of thirteen members. They are briefly introduced below (in alphabetical order). Appendix 2 provides their bio-bibliography.

Philippe Aghion (Nuffield College, Oxford, soon to be Professor at University College, London) has studied the implications of credit market imperfections for the growth process and its relation to wealth distribution, the theory of the firm in the context of incomplete information, the endogenous process of innovations, and the political economy of reform in the transition process in Eastern Europe. He is also the Editor of the *Economics of Transition*, a journal brought out by the European Bank for Reconstruction and Development.

Jean-Marie Baland (Lecturer at University of Namur, Belgium) has done both theoretical and empirical work on rural development (including a recent book on the economic-anthropological issues arising in the process of halting degradation of environmental resources) and on the macroeconomic implications of unequal economic growth. He has also carried out field work in economic anthropology in West Africa.

Abhijit Banerjee (Professor at Massachusetts Institute of Technology) has done theoretical work on 'herd behavior', capital market imperfections and occupational choice, income distribution and risk-taking, learning behavior, etc.

Pranab Bardhan (Professor at University of California, Berkeley) has done theoretical and field studies research on rural institutions in poor countries, on political economy of development policies, and on international trade. A part of his work is in the interdisciplinary area of economics, political science, and social anthropology. He is the Chief Editor of the *Journal of Development Economics*.

Roland Benabou (Professor at New York University) has done major theoretical research on social stratification and local school finance and community structure (and generally on the implications of inequality for growth), and on search market equilibrium and price dynamics.

Samuel Bowles (Professor at University of Massachusetts, Amherst) has worked on the microeconomics of the employment relationship, the sociology of work organization, economic democracy and political economy, the economics and sociology of education and on policies of efficient redistribution. He is a founder of *Dollars and Sense* magazine and of the Center for Popular Economics.

Karla Hoff (Assistant Professor at University of Maryland) works on the institutional issues of rural development, the economics of human resources, the economics of risk and insurance, and on the public economics of redistributive policies. With Joseph Stiglitz and Avishay Braverman she coedited (and wrote parts of) *The Economics of Rural Organization*.

Michael Kremer (Assistant Professor at Massachusetts Institute of Technology) has worked on diverse areas including growth theory, assortative matching models, long-run demographic and technological change, investment in schooling, and on reforming the institution of patenting innovations.

Karl Moene (Professor at University of Oslo, Norway) is an expert on the history and policy implications of solidaristic bargaining processes in Scandinavia, the politics and economics of redistribution, and the political economy of land reforms in poor countries. He is also the Editor of the *Scandinavian Journal of Economics*.

Dilip Mookherjee (Professor at Boston University) has worked on incentive contracts, viability of cooperative arrangements, authority and responsibility in hierarchical structures, effects of land reforms on productivity, and on incentive and organizational aspects of financial and tax reform.

Thomas Piketty (CEPREMAP, Paris, France, and Assistant Professor at Massachusetts Institute of Technology) has worked on social mobility and redistributive politics, fair allocations in public economics, and dynamics of wealth distribution and credit rationing.

Matthew Rabin (Associate Professor at University of California, Berkeley) is one of the few economists who have broadened game theory and bargaining theory to incorporate the missing psychological and moral elements necessary to explore the question of unequal outcomes. He has written major papers on fairness in repeated games and on models of pre-game communication.

Michael Wallerstein (Professor at Northwestern University), a political scientist, has worked on social democracy, solidaristic bargaining, trade union behavior, and on the structural dependence of the state on (mobile) capital.