

UC Berkeley

Other Recent Work

Title

Some Reflections on the Use of the Concept of Power in Economics

Permalink

<https://escholarship.org/uc/item/4kd9k7bt>

Author

Bardhan, Pranab

Publication Date

1988-11-01

UNIVERSITY OF CALIFORNIA, BERKELEY

Department of Economics

Berkeley, California 94720

Working Paper 8896

SOME REFLECTIONS ON THE USE OF THE CONCEPT
OF POWER IN ECONOMICS

Pranab Bardhan
University of California, Berkeley

November 1, 1988

Key words: bargaining power, credible threat, authority relations

Abstract

This is an overview paper with a critical assessment of the ways the concept of economic power is applied in various fields of economics.

JEL Classification: 020, 026, 036, 112, 611

SOME REFLECTIONS ON THE USE OF THE CONCEPT OF POWER IN ECONOMICS*

By Pranab Bardhan
University of California at Berkeley

1. I share the intuitive feeling of many social scientists that the idea of power is central to an understanding of socio-economic processes, but I also share the frustration of many analysts in closely examining this vague, slippery and multi-faceted concept -- as the political scientist, Robert Dahl, once put it, it seems like 'a giant glob of oily ambiguity.' Walrasian competitive models, of course, ignore it altogether. Radical economists, on the other hand, talk about it all the time but are often methodologically careless. The concept of power is sometimes used by them in a question-begging way: differences in outcome are explained by blanket references to differences in the power of the dominant class without an independent quantification of the latter.
2. Unlike in economics there is a large literature on power in sociological and political theory. I shall occasionally refer to it but my concern here is much narrower, concentrating on some aspects of economic power. Although they are overlapping, it is in this context useful to distinguish different kinds of social power, not by what it is used for but by the means that gives one the capacity to exercise power. For example, the power to tax is political, not economic, power, even though the tax revenues may be used for economic purposes. Economics is, of course, not confined to the exercise of economic power and is often concerned with the consequences of other forms of power, particularly political and ideological.

* I am grateful to Clive Bell, Sam Bowles, Jon Elster, John Harsanyi, John Roemer, Nirvikar Singh and Philippe van Parijs for valuable discussion.

3. Most economists implicitly subscribe to the Simon-Dahl behaviourist view of power: A has power over B to the extent to which the former can get the latter to do something that he would not otherwise do. I shall comment later on the narrowness of the behaviourist interpretation. For the moment let me note that it can also be too broad a definition of power. If I draw your attention to the undone lace on your shoe, I shall probably get you to do something you would not otherwise do, yet it is hardly an exercise of my power. This shortcoming is avoided in a definition due to Taylor: A has power over B if A can affect the incentives facing B in such a way that it is rational for B to do something he would not otherwise have chosen to do. The incentives of B are affected by A mainly through the offer of a reward or the threat of a penalty or some combination of a threat and an offer, which Taylor calls a throffer (a chilling example of the latter can be cited from Marlon Brando's famous words in the film Godfather: 'I shall make him an offer he can't refuse').
4. In Dahl's view the 'amount' of power can be quantified as the net increase in the probability of B's actually performing some specific action x, due to A's using his power over B. To this Harsanyi added two other quantitative aspects of a power relation: (1) the opportunity costs to A of exerting power over B; (2) the opportunity costs of B in refusing to do what A wants him to do. Other things being equal, A's power over B is greater the smaller is (1) and the larger is (2). From these two opportunity costs it is a small step to the idea of threat points or disagreement payoffs in a bargaining game. Harsanyi uses the Zeuthen-Nash solution to cooperative bargaining games to characterize the equilibrium in such reciprocal power situations. An alternative but related (to Nash bargaining) approach to defining each player's value in a game is involved in the idea of the Shapley value in n-person games, where a person's power is measured by the probability that he is the pivotal member of a winning coalition, a pivot being one who can convert a losing coalition into a winning one.

5. In the more recent game-theoretic literature the Nash bargaining solution is usually motivated by the construction of a non-cooperative game in which the details of the negotiation procedure are spelled out. In Rubinstein's model of a multi-stage non-cooperative bargaining process under complete information using the notion of 'perfect' equilibrium (i.e., where only credible threats have an effect on outcomes) time plays a significant role: bargaining power depends on time discount rates. The more impatient a player, the smaller is his share of the pie. Power here is associated with the ability for strategic delay, which clearly the asset-poor can afford (or credibly make) less often. It is important to note that in this sequential non-cooperative bargaining model the disagreement pay-off plays a somewhat different role from that in the standard cooperative bargaining model. Let me elaborate following an example by Elster.

Take the case of wage bargaining between management and a trade union. If they fail to reach an agreement and the firm is shut down indefinitely, the disagreement pay-offs of the two parties are given by what may be called their outside options: alternative income or reservation wage on the part of workers, and return from alternative deployment of capital for the owners. If, however, in the bargaining process the production on the firm is only temporarily disrupted by a lock-out or a strike, the relevant fall-back alternatives until an agreement is reached are given by inside options: strike funds of the union or, more often in poor countries, income of relatives on the part of workers, and inventories, credit and internal finance on the part of the owners. Now both inside and outside options are relevant for the outcome of bargaining, but in different ways. Non-cooperative bargaining theorists point out that outside options constrain the outcome by providing floors to what the parties will get, but have no role beyond that. Inside options, on the other hand, influence bargaining power (the distance from the floor) and, in particular, determine whether threats are credible. If the reservation wage (outside option for the workers) goes up, for example, the non-cooperative theory predicts no change in the bargaining outcome (as long as

it still satisfies the constraints), but a larger strike fund may raise the equilibrium wage.

This argument about what Elster calls 'the irrelevance of outside options' is related in spirit to the condition of independence of irrelevant alternatives used in Nash bargaining models: changes in options or alternatives that would not be realized anyway should not matter for the outcome. This is, however, not very plausible in real-world bargaining situations where 'irrelevant' alternatives and outside options often do make a difference, largely on account of the operation of some social norms. In this connection one may note that Kalai and Smorodinsky have replaced the Nash condition of independence of irrelevant alternatives with that of monotonicity (which implies that if, for a given level of utility obtained by one player, the maximum feasible level attainable by the other is increased, then the solution should be such that the second player's utility will also be greater). Under this condition wage bargaining is sensitive to the maximal feasible gain: a rise, for example, in the worker's reservation wage (reducing the maximal feasible profit of the employer) always strengthens the bargaining power of the worker in the Kalai-Smorodinsky solution.

6. Apart from time, the other aspects of the bargaining process which have clear implications for power have to do with commitment and information. As is now standard in game-theoretic oligopoly models of market power, the ability to credibly pre-commit is the essential ingredient of power. If such commitments involve burning one's bridges to make it look credible, this is obviously a part of the costs of power. Examples abound in the literature in terms of strategic overinvestment by an incumbent firm to pre-empt or deter entry by competitors or predatory below-cost pricing to eliminate or deter rivals. If the necessary temporariness of price-cutting by the predator is known to the prey, the latter's inability to wait it out ultimately turns on the differential access to capital of the predator and the prey. The extent of power flowing from pre-commitment or how far it succeeds in inducing timid behaviour by the rivals

will, of course, depend on the slope of the reaction curves of the latter.

7. One of the main ways in which commitment in strategic environments is achieved is through reputation effects. (Remember Hobbes in Leviathan: 'Reputation of power, is power; because it draweth with it the adherence of those who need protection.') In recent models of dynamic games with incomplete information reputation for 'toughness' plays an important role and the need to maintain one's reputation for the future enforces pre-commitment. Aggressive pricing is often a part of reputation-building predation and the imperfectly informed potential entrant makes inferences about the incumbent's type from the observed history of his predatory behaviour. Power in this context ultimately flows from asymmetric access to information and capital. In the literature on sequential bargaining games with imperfect information, for example, one can identify oneself as a 'stronger' player only by making offers and responses which it could not pay a 'weaker' player to mimic. Attempts to establish one's 'strength' in this way usually necessitate the 'stronger' player's holding out for some time in order to achieve a settlement superior to an early agreement that his 'weaker' counterpart would have reached.

In traditional cultures sometimes a person's reputation for some kind of 'irrationality' or blind adherence to some social norm of retribution (following, say, the code of honore in Sicily or of izzat in Punjab) may enhance the power of a strongman by lending credibility to threats that would not be believable on the part of a 'rational' agent. On the other hand, it may be noted that in small face-to-face village communities what anthropologists (like Bailey) call 'the politics of reputation' may provide some modest measure of protection for the weak against the strong: as long as all parties belong to what is perceived to be the same 'moral community' in terms of which the reputation is defined, there are some accepted limits and symbolic sanctions against the kind of ruthless exercises of power which are sometimes observed in the cut-throat aggressiveness of impersonal marketplaces. Such sanctions in the

village context ultimately act towards what Pierre Bourdieu has called the 'euphemization of power,' and the legitimization of compliance by the weak. Even in the corporate culture of industrially advanced countries sometimes it has been observed that a firm may not find it worthwhile to exploit its power over an employee on grounds of protecting its reputation (for example, IBM's well-known policy of not laying off employees or similar policies of some Japanese firms.) In models of repeated games there can exist equilibria in which agents do not use short-run market power to default on implicit contracts.

8. In a world of bounded rationality and asymmetric information contracts which are necessarily incomplete (i.e., cannot possibly take into account all contingencies) may transform even large-numbers competitive cases into power relations of bilateral trading. This is particularly the case when, as Williamson has emphasized, relation-specific investments (i.e., where the investments the parties make have a much greater use inside the relationship than outside) are large and post-contractual opportunistic behaviour is common. Once such relation-specific investments have been made, one party may 'hold up' the other and the ex post division of surplus may be out of alignment with ex ante decisions. In this division of surplus an agent's bargaining power will be sensitive, as Hart and Moore show, to who owns and controls the assets that the agent requires access to in order to be productive.

In non-market transactions the hold-up problems may even take the form of extortion or blackmail. At this point it may be useful to distinguish between (a) monopoly power (b) power of extortion or blackmail and (c) power of robbing someone with threat of violence. The difference between (b) and (c), following Liebermann and Syrquin, is that in case (c) there is an invasion of well-defined property rights, whereas in case (b) no violence is involved but there is an abuse of rights implied in the threat to perform an otherwise legitimate act unless paid not to. The extortionist demands compensation (beyond his foregone income) for abstaining from doing something which

he may be legally entitled to do, for example, making some information public or imposing some other unpleasant externality on a second party. If this eventuality was anticipated by the latter, contracts could have been designed ex ante to take this into account. But it is the incomplete nature of contracts that gives rise to the possibility of ex post extortion. As for the difference between (a) and (b), Demsetz claims that from the point of view of economic analysis extortion not involving violence does not differ from monopoly. But this is not quite correct. In a standard bilateral transaction with a monopolist (even a perfectly discriminating or 'all-or-nothing' monopolist) one can refuse at no cost to take part in the proposed transaction, whereas in the case of extortion the choice set of the 'victim' actually shrinks: he would be better off were the extortionist to disappear.

9. Williamson rationalises vertical integration of firms as an institutional device to reduce the scope for post-contractual opportunistic behaviour, by altering the claim structure, from an arms-length transaction to an internal one. But integration itself acts as a barrier to entry (more capital, for example, is required to enter the arena than at one production stage alone) and adds to market power of the firm (particularly when economies of scale are substantial). In the recent development literature the institution of interlocking of transactions (in labour, credit and land relations) has been similarly rationalised as a device to save transaction costs and to substitute for incomplete or non-existent credit and insurance markets. Again, such interlocking itself may act as a barrier to entry for third parties and be a source of additional monopoly power for the dominant partner (usually the employer-creditor-landlord) in such transactions. Interlinked contracts may also substitute for open non-linear pricing (which may create socially unacceptable invidious distinctions) or as in the 'commodity bundling' literature, the landlord may 'bundle,' say, credit and labour transactions in order to discriminate between (and squeeze the surplus from) workers with differential credit needs. Personalised interlocking of labour commitments and credit transactions (involving

selective exclusion of others) also divide the workers and reduce their collective bargaining strength vis-a-vis employers, who use this as an instrument of control over the labour process.

10. Information asymmetry and agency costs, particularly cost of surveillance over workers, are invoked by Bowles (and also by Shapiro and Stiglitz) to explain unemployment in competitive equilibrium whereby capitalists keep control over the labour process (thus providing micro-foundations to Kalecki's view of unemployment as a worker discipline device). On account of the conflict of interest between employer and worker over work effort (extraction of 'labour power' from labourers), the wage rate offered by the competitive profit-maximizing employer has to exceed the market-clearing wage so that the threat of dismissal is a real one. As a result some workers are rationed out and these involuntarily unemployed (like the credit-rationed borrowers in the credit market) are the ones who are described as powerless in the model of Bowles. As he comments, 'if agents are quantity-constrained as well as budget- and price-constrained, the power of an economic agent is not fully expressed by his or her initial holdings and the reigning prices of all goods and factors of production: one may not have access to a good or service even if one is willing and able to pay the going price.' Powerlessness here arises from being quantity-constrained (although ultimately it is connected with the worker's lack of sufficient assets to provide bonds as a condition of employment -- collaterals in the case of taking loans --and thus to reduce the costs of contract enforcement). It is interesting to note, that in this model some workers are powerless in the sense of being involuntarily unemployed, because all workers individually have some power, that of denying the capitalist their full work effort. It is to neutralise this power that the capitalist resorts to selective exclusion of some workers and payment of wages at more than their opportunity cost to a co-opted group of workers, who derive a strategic rent in the process. The unemployed are powerless to compete away this rent.

The power of the worker to shirk is only one of a whole array of strategies of indirect power that the weak often have. Scott, for example, has referred to numerous 'everyday forms of peasant resistance': footdragging, dissimulation, desertion, false compliance, pilfering, sabotage and many other forms of Schweikian protest without confrontation.

11. In recent Marxist theoretical models in economics two distinct forms of power relations have emerged: Roemer traces the primary locus of capitalist power in unequal distribution of property, whereas Bowles traces it to the political structures of control and surveillance at the point of production, both referring to a competitive economy. Roemer reiterates the well-known Samuelsonian proposition that in a competitive model it does not matter whether capital hires labour or labour hires capital, with the important modification that in either case the wealthy 'exploit' (take advantage of) the poor. To Bowles, on the other hand, the locus of command in the production process is central to the functioning of the system. I find this distinction between domination in production and asset-based power somewhat overdrawn: who hires whom depends, to a large extent, on the capacity to be the residual claimant in production, and that in turn depends on the capacity to bear risks, the wealthy having obviously a larger risk-bearing capacity.

A somewhat related discussion has taken place in the literature on the nature of the firm that followed Coase's classic 1937 paper. Coase argued that the key difference between an employer-employee relationship and a relationship between independent contractors is that whereas an employer can tell an employee what to do, one independent contractor must persuade another independent contractor to do what he wants through the use of prices. Alchian and Demsetz criticize this view, arguing that an employer typically cannot force an employee to do what he wants, he can only ask him and fire the employee if he refuses; which is no different from one independent contractor 'firing' another (quitting their relationship) if he is unhappy with the latter's

performance. On this Hart and Moore have taken the more sensible position that B will put more weight on A's objectives (i.e., A will have more 'control') if B is an employee of A working with assets owned by A than if B is an independent contractor working with his own assets. Authority over physical assets provided by ownership thus translates into authority over human assets.

Capitalist authority relations in the internal organization of the firm and the labour process are usually described by radical economists as organizational devices to exercise power. Transaction cost theorists like Williamson vigorously contest this. They point to functions of authority as a useful governance structure in restraining 'worker opportunism' and in facilitating adaptability to changing circumstances (particularly in cases of assets that are not easily redeployable) by vesting in the asset-owners the residual rights of discretionary control. But at the same time we should not ignore, as Dow points out, that such discretionary control along with hierarchy and division of labour generate the structural pre-conditions for 'employer opportunism' by giving the employers strategic advantages of information over their employees, the ability to use fiat to resolve conflicts in self-serving ways, the opportunity for unilateral introduction of technical innovations which undercut the bargaining position of workers, and so on. In any case, since transaction costs can be as difficult to define and quantify as power, in actual empirical or historical analysis one may sometimes find it hard to unscramble the effects of one from the other.

A similar 'identification problem' arises in the literature on induced institutional innovations in the history of economic development. Neoclassical institutional economists have often shown how demographic changes altering the relative price of labour to land lead to the incentive for redefinition of property rights on land and a rearrangement of labour relations: North and Hayami-Ruttan give several examples from European and recent Asian history respectively. But they do not consider the fact that the same demographic change may lead to a redistribution of bargaining power (and of capacity for class mobilization) which may provide an alternative explanation

for the same observed institutional change. In the example of Hayami and Kikuchi from agriculture in the Philippines in the mid-1970's where the increase in population pressure on land brought about a new employer-employee relationship (the gamma system replacing the traditional hunusan system) lowering the wage rate, did it come about because the disequilibrium between labour productivity and wage induced such a change, or because population pressure on land made collective action on the part of employers easier (or that on the part of labourers weaker)? Taking another example from Hayami and Kikuchi, the rapid expansion of labour-tying arrangements like kedokan in many parts of Java in the late 1960's, which are attributed to population growth by Hayami and Kikuchi, are explained by Gillian Hart with reference to the drastic changes in the collective strength of the poor peasantry that the bloody political changes of the mid-60's in Java brought about.

12. So far we have largely discussed bilateral power relations. There are some interesting extra dimensions of power in triangular (or multiple) relations. In three-way relations it may be possible for the strong party (say, the landlord) to extract more surplus from the peasant than if they were involved in only a dyadic relation. Basu has constructed a model where the landlord can press the peasant even below the latter's reservation utility in the dyadic case, by credibly threatening that, if the peasant does not accept his terms, not merely he will refuse to employ him, but he will influence the village merchant not to trade with him; the threat is credible because the merchant, if he has to choose between a larger and a smaller customer, will opt for the former. Similarly, in the recent industrial organization literature there are models of strategic contracts made with a third party by an incumbent firm to deter entry by a potential rival: in the model of Aghion and Bolton the third party is a customer with whom the firm signs long-term contracts to discourage entry by another seller; in the model of Dewatripont an incumbent firm facing potential entry signs labour contracts which commit it to excessive post-entry output.

Akerlof has built models to show how the power of social custom (or that of the ruler over the ruled) may persist as a result of a mutually sustaining network of social sanctions when each (rational) individual conforms out of fear of loss of reputation (with third parties) from disobedience. In such a system potential members of a break-away coalition fear that it is doomed to failure and thus failure to challenge the power becomes a self-fulfilling prophecy. Kuran has a related model of collective conservatism (securing the power of the established ruler or custom) which is reinforced by the influence on an individual's private preference formation of the justifications others give for their public preferences for the status quo. In these models the presumption is that everyone who does not sanction the non-conformist will himself be sanctioned by others. Elster has questioned the plausibility of this presumption when you carry it through the chain of interpersonal reactions: do people really frown upon others when they fail to sanction people who fail to sanction people who fail to sanction people who fail to sanction a non-conformist?

13. Finally, the critique in the recent sociological literature of the behaviourist concept of power is quite applicable to its similar use in much of economics. Simon wrote: "For the assertion 'A has power over B,' we can substitute the assertion, 'A's behaviour causes B's behaviour.'" Dahl has also made an identical statement. This concept of power as an empirical regularity whereby the behaviour of one agent causes the behaviour of another is clearly limited. It does not distinguish between possession and exercise of power. It usually excludes, as Lukes has emphasized, agenda-setting power (where the powerful define the feasibility set in terms of which the agent's decisions are made and exclude potential options from the decision process). It misses pervasive instances of power taking the form of self-repression in anticipation of threats and of manipulation of perceptions and preferences of the powerless by the powerful. As Sen has emphasized, 'many of the inequities of the world survive by making allies out of the deprived and the abused.' Since preferences themselves can

be the effect of the exercise of power, Lukes suggests that 'what B would otherwise do' cannot be properly gauged by B's preferences, but rather by B's interest. He then defines power as: 'A exercises power over B when A affects B contrary to B's interest.' But, even without going into the question of how to assess one's interest, one can say, as Isaac does, that a relation of power can also exist in the absence of a conflict of objective interests. The parent's power over children may be in the latter's best interest, but the relationship is not for that reason any less one of domination and subordination. The same situation arises in some patron-client relationships in development economics.

In game-theoretic terms an inclusive way of defining power may be to say that A has power over B if A has the capacity to alter the game (preferences, strategy sets or information sets) in such a way that B's equilibrium outcome changes. But defining power may not be as interesting as finding the source of power. While power is clearly what Morriss calls a 'dispositional concept' -- a capacity which conceptually can stand by itself independently of any investigation of its structure (and should not, therefore, be identified with the latter as some structuralists and 'realist' philosophers do), there is no doubt that in reaching assessments of power, particularly economic power, the crucial evidence lies in socially structured relations rooted in differential access to assets and information (as suggested in many examples in this paper) and also skills and organization. What is, however, more difficult, and yet essential in power-based explanations, is to provide a fine-tuned discriminating analysis of the diversity of detailed outcomes, selectivity of response and of transition from one mode of control to another even in cases of similar access to assets and other resources.

REFERENCES

- G. Akerlof, An Economic Theorist's Book of Tales, Cambridge University Press, 1984.
- P. Aghion and P. Bolton, 'Contracts as a Barrier to Entry,' American Economic Review, June 1987.
- A. Alchian and H. Demsetz, 'Production, Information Costs and Economic Organization,' American Economic Review, December 1972.
- F. G. Bailey, Gifts and Poison: The Politics of Reputation, Schocken Books, 1971.
- P. Bardhan, Land, Labour and Rural Poverty, Columbia University Press, 1984.
- P. Bardhan, 'Alternative Approaches to the Theory of Institutions in Economic Development,' in P. Bardhan (ed.), The Economic Theory of Agrarian Institutions, Oxford University Press, 1989.
- K. Basu, 'One Kind of Power,' Oxford Economic Papers, July 1986.
- K. Binmore and P. Dasgupta, 'Nash Bargaining Theory: An Introduction' in K. Binmore and P. Dasgupta (eds.), The Economics of Bargaining, Basil Blackwell, 1987.
- H. Demsetz, 'When Does the Rule of Liability Matter?,' Journal of Legal Studies, January 1972.
- S. Bowles, 'Contested Exchange: A Microeconomic Analysis of the Political Structure of the Capitalist Economy,' unpublished, 1987.
- R. Coase, 'The Nature of the Firm,' Economica, 1937.
- R. Dahl, 'The Concept of Power,' Behavioural Science, 1957.
- P. Bourdieu, Outline of a Theory of Practice, Cambridge University Press, 1971.
- M. Dewatripont, 'Commitment through Renegotiation-proof Contracts with Third Parties,' Review of Economic Studies, July 1988.
- G. Dow, 'The Function of Authority in Transaction Cost Economics,' Journal of Economic Behaviour and Organization, March 1987.
- J. Elster, The Cement of Society: A Study of Social Order, Cambridge University Press, forthcoming.
- D. Fudenberg and J. Tirole, Dynamic Models of Oligopoly, Harwood Academic Publishers, 1986.
- J. Harsanyi, 'Measurement of Social Power, Opportunity Costs and the theory of Two-Person Bargaining Games,' in Essays on Ethics, Social Behaviour and Scientific Explanation, D. Reidel Publishing Co., 1976.
- G. Hart, Power, Labour and Livelihood: Processes of Change in Rural Java, University of California Press, 1986.

- O. Hart and J. Moore, 'Property Rights and the Nature of the Firm,' unpublished, 1988.
- Y. Hayami and M. Kikuchi, Asian Village Economy at the Crossroads: An Economic Approach to Institutional Change, Johns Hopkins University Press, 1982.
- Y. Hayami and V.W. Ruttan, Agricultural Development: An International Perspective, Johns Hopkins University Press, 1985.
- J. C. Isaac, Power and Marxist Theory: A Realist View, Cornell University Press, 1987.
- E. Kalai and M. Smorodinsky, 'Other Solutions to Nash's Bargaining Problem,' Econometrica, 1975.
- T. Kuran, 'Preference Falsification, Policy Continuity and Collective Conservatism,' Economic Journal, September 1987.
- Y. Liebermann and M. Syrquin, 'On the Use and Abuse of Rights,' Journal of Economic Behaviour and Organization, March 1983.
- S. Lukes, Power: A Radical View, Macmillan, 1974.
- S. Lukes, Essays in Social Theory, Macmillan, 1977.
- J.M. Malcomson, 'Efficient Labour Organization: Incentives, Power and the Transaction Cost Approach' in F.H. Stephen (ed.), Firms, Organization and Labour, Macmillan, 1984.
- M. Mann, The Sources of Social Power, vol. I, Cambridge University Press, 1987.
- P. Morriss, Power: A Philosophical Analysis, Manchester University Press, 1987.
- D.C. North, Structure and Change in Economic History, W.W. Norton, 1981.
- J. Roemer, A General Theory of Exploitation and Class, Harvard University Press, 1982.
- A. Rubinstein, 'Perfect Equilibrium in a Bargaining Model,' in K. Binmore and P. Dasgupta (eds.), op.cit.
- J. C. Scott, Weapons of the Weak: Everyday Forms of Peasant Resistance, Yale University Press, 1985.
- A. Sen, Resources, Values and Development, Basil Blackwell, 1984.
- C. Shapiro and J. E. Stiglitz, 'Equilibrium Unemployment as a Worker Discipline Device,' American Economic Review, June 1984.
- L.S. Shapley and M. Shubik, 'A Method for Evaluating the Distribution of Power in a Committee System,' American Political Science Review, 1954.
- H.A. Simon, Models of Man: Social and Rational, John Wiley, 1957.
- J. Sutton, 'Non-cooperative Bargaining Theory: An Introduction,' Review of Economic Studies, October 1986.
- M. Taylor, Community, Anarchy and Liberty, Cambridge University Press, 1982.

O. Williamson, The Economic Institutions of Capitalism, Free Press, 1985.

P. Zusman, 'The Incorporation and Measurement of Social Power in Economic Models,' International Economic Review, June 1976.

Oct-88

RECENT ISSUES OF THE WORKING PAPER SERIES
OF THE DEPARTMENT OF ECONOMICS
UNIVERSITY OF CALIFORNIA, BERKELEY

Copies may be obtained from the Institute of Business and Economic Research. See the inside cover for further details.

- 8880 Joseph Farrell and Carl Shapiro
HORIZONTAL MERGERS: AN EQUILIBRIUM ANALYSIS
Jun-88.
- 8881 Tracy R. Lewis, Roger Ware and Robert Feenstra
OPTIMAL EXCLUSION AND RELOCATION OF WORKERS IN OVERSUBSCRIBED INDUSTRIES
Jun-88.
- 8882 Barry Eichengreen
THE GOLD-EXCHANGE STANDARD AND THE GREAT DEPRESSION
Jun-88.
- 8883 Joseph Farrell and Robert Gibbons
CHEAP TALK, NEOLOGISMS, AND BARGAINING
Jul-88.
- 8884 Roger Craine and David Bowman
A STATE SPACE MODEL OF THE ECONOMIC FUNDAMENTALS
Jul-88.
- 8885 Barry Eichengreen and Richard Portes
SETTLING DEFAULTS IN THE ERA OF BOND FINANCE
Aug-88.
- 8886 Barry Eichengreen and Richard Portes
FOREIGN LENDING IN THE INTERWAR YEARS: THE BONDHOLDERS' PERSPECTIVE
Aug-88.

Oct-88

RECENT ISSUES OF THE WORKING PAPER SERIES
OF THE DEPARTMENT OF ECONOMICS
UNIVERSITY OF CALIFORNIA, BERKELEY

Copies may be obtained from the Institute of Business and Economic Research. See the inside cover for further details.

- 8887 Bronwyn H. Hall
ESTIMATION OF THE PROBABILITY OF ACQUISITION
IN AN EQUILIBRIUM SETTING
Aug-88.
- 8888 Richard J. Gilbert and David M. Newbery
Entry, Acquisition, And the Value of Shark Repellent
Aug-88.
- 8889 Richard J. Gilbert
THE ROLE OF POTENTIAL COMPETITION IN INDUSTRIAL ORGANIZATION
Sep-88.
- 8890 Joseph Farrell and Robert Gibbons
CHEAP TALK WITH TWO AUDIENCES: A TAXONOMY
Sep-88.
- 8891 Alessandra Casella and Jonathan Feinstein
MANAGEMENT OF A COMMON CURRENCY
Sep-88.
- 8892 Steven M. Goldman and Vai-Lam Mui
ECONOMIC GROWTH AND GENERALIZED DEPRECIATION
Sep-88.
- 8893 Roger Craine and Douglas Steigerwald
RAIDERS, JUNK BONDS, AND RISK
Oct-88.
- 8894 Barry Eichengreen
THE RESPONSIBILITIES OF A CREDITOR NATION
Oct-88.
- 8895 Richard J. Gilbert
MOBILITY BARRIERS AND THE VALUE OF INCUMBENCY
Oct-88.