

Development economics and the compensation principle

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Abstract

How does development economics address the issue of gains and losses from the displacement that inevitably accompanies many development processes? This paper argues that economists have struggled mightily between the core criterion of a “Pareto improvement”, which vests individuals with infinite rights in their current standard of living, and its deeply conservative implications—both that it would prevent redistribution away from the rich, and that it would stop most projects from ever taking place. Where they have got to conceptually is a compromise, through using distributionally sensitive weights to evaluate the gains and losses of a project. In practice, however, systematic use of such weights in project appraisal or cost-benefit analysis is rare. Apart from advocating such use, which is true to the spirit of the conceptual position reached in economics, the paper argues that specific compensation mechanisms and generalised safety nets will reduce tensions between protecting the vulnerable and supporting projects that produce aggregate net benefits—including benefits for the vulnerable themselves.

Biographical note

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Introduction

Rare is the development project, policy or process that only creates winners. The displacement theme brings to centre stage the losers. One form or another of displacement is often part of the development footprint. Technological change displaces workers in traditional activities. Dams displace families from their homes and villages. Interaction with the outside world displaces, or at least threatens to displace, long established cultures. The companion papers in this volume bear eloquent testimony to the losses suffered, by those least able to bear them, in the name of development.

This paper is an examination of how economics and development economics as disciplines have come to their current position on how such losses should be evaluated. If there were only losses and no gains, the project, policy or process (henceforth, project) should not be advocated or implemented. If the losses were all suffered by the poor and vulnerable, and the gains all accrued to the rich and powerful, the argument for redress is very strong. However, if the gains and losses are more evenly spread across the socio-economic spectrum—for example if there are poor gainers as well as losers—the conceptual case for redress is more delicate. And there is the vexing question of whether the project should go ahead at all if, after having done the best that can be done in terms of redress, there are still significant losers even though there are gainers to match.

This question of whether to go ahead with a project which creates losers as well as gainers even after attempts at redress, often to those who have been displaced during the development process, has to be a central one in development analysis and policy. How do different disciplines address this question? In this paper I recount the history of how economics has struggled mightily within itself to arrive at a position. It is a position that is often critiqued by other disciplines, but is

more subtle and arrived at with greater intellectual examination than commonly realised. In highlighting the turmoil that economics went through historically to arrive at its present position, I also want implicitly to pose the question—how would other disciplines respond to the same challenge?

Economics and “Pareto improvements”

The benchmark concept in economics in discussions of gains and losses is named after Vilfredo Pareto. A “Pareto improvement” takes place when, compared to the *status quo ex ante*, at least one individual is made better off and *no individual is made worse off*, as a result of the project. So, at the core of economic thinking is the concept of protecting those who would lose from a project. If the Pareto improvement criterion were used, none of the projects, policies and processes discussed in the papers in this volume would be advocated at all.

Interestingly enough, the Pareto criterion was held by many economists to be *deeply conservative*, in two senses. First, it would prevent projects of redistribution from rich to the poor, since after such a project some individuals (namely, the rich), would be worse off.¹ Second, since projects where there were only direct winners would be rare, this was a recipe for policy paralysis—very little would be advocated or implemented if the criterion were to be followed strictly.

An approach that aggregated the gains of the gainers and the losses of the losers in some way was the answer to the second of the above problems. The first problem could then be handled through the *method of aggregation*—for example, by giving a much larger weight to the gains and losses of the poor than those of the rich. These twin features are present, for example, in the Benthamite Utilitarian tradition of adding up “utility” gains and losses to individuals as the result of a project, egalitarianism being introduced through the nature of the utility function—it being assumed that a dollar’s loss or gain meant more to a poor person than a rich one.

It should be clear, then, that there are two issues in departing from the Pareto criterion—the need to aggregate and the type of aggregation. We may differ on the second—some may be more egalitarian than others—but the first is a fundamental issue that cannot be avoided. And it is on this that a great debate took place in economics in the 1930's and 1940's.

Steps to the compensation principle

The opening salvo was launched by Lionel Robbins who, in his immensely influential 1932 book *The Nature and Significance of Economic Science*, eschewed all interpersonal comparisons of gains and losses as “unscientific”. The economist, he felt, could use her skills to follow through and lay out the consequences of a project, and could present these to the policy maker. But the economist *qua* economist was not qualified to take the final step of making a recommendation on the basis of aggregating gains and losses—unless of course there were only gains, in which case the Pareto criterion could be invoked.

This position was countered by Roy Harrod² in the *Economic Journal* of 1938, and he took as an example the great nineteenth century debate in English Political Economy on the Corn Laws: “Consider the repeal of the Corn Laws. This tended to reduce the value of a specific factor of production—land. It can no doubt be shown that the gain to the community as a whole exceeded the loss to the landlord—but only if individuals are in some sense treated equal. Otherwise how can the loss to some—and that there was a loss can hardly be denied—be compared to the general gain? If the incomparability of utility to different individuals is strictly pressed, not only are the prescriptions of the welfare school ruled out, but all prescriptions whatever. The economist as adviser is stultified, and, unless his speculations be regarded of paramount aesthetic value, he had better be suppressed completely”.

In his response, Robbins (1938, pp 636) held his ground, charting the development of his own thinking in an interesting fashion: “My own attitude to problems of political action has always been one of what I call provisional utilitarianism...[W]hen I came to the study of economics, I had the strongest bias in favour of utilitarian analysis. The delicate balancing of gain and loss

through intricate repercussions of policy...fascinated me; and I was powerfully attracted by the proposition...that recent developments in the theory of value could be invoked to demonstrate the desirability of the mitigation of inequality....But, as time went on, things occurred which began to shake my belief...I am not clear how these doubts first suggested themselves; but I well remember how they were brought to a head by my reading somewhere—I think in the works of Sir Henry Maine—the story of how an Indian official had attempted to explain to a high caste Brahmin the sanctions of the Benthamite system. ‘But that,’ said the Brahmin, ‘cannot possibly be right. I am ten times as capable of happiness as that untouchable over there.’ I had no sympathy with the Brahmin. But I could not escape conviction that...the difference between us was not one which could be resolved by the same methods of demonstration as were available in other fields of social judgement”.

It was in the midst of this standoff between the need to aggregate with normative weights if the economist was to be relevant to policy, and the view that the economist *qua* economist had no standing to choose these weights, that Nicholas Kaldor (1939, p 550) introduced a notion which proved important in subsequent development of the field, including cost-benefit analysis, and he did this once again in the context of the repeal of the Corn Laws: “But it is always possible for the Government to ensure that the previous income-distribution should be maintained intact: by compensating the ‘landlords’ for any loss of income and by providing the funds for such compensation by an extra tax on those whose incomes have been augmented. In this way, everybody is left as well off as before...In all cases, therefore, where a certain policy leads to an increase...of aggregate real income, the economist’s case for the policy is quite unaffected by the question of the comparability of individual satisfactions; since in all such cases it is *possible* to make everybody better off than before, or at any rate to make some people better off without making anybody worse off. There is no need for the economist to prove—as indeed he never could prove—that as a result of the adoption of a certain measure nobody in the community is going to suffer”.

This is the famous but perhaps misnamed “compensation principle”—it talks not about actual compensations being paid, but rather that if they could be paid in principle so as to leave

everyone better off, the project should go ahead. “Compensation in principle” might be a better label than “compensation principle”—the latter might suggest that as a matter of principle compensations should be paid, which is quite the opposite of what is intended. But I will stick with standard economics usage in what follows.

A love-hate relationship

Economists have a love-hate relationship with the compensation principle. They hate it because it makes them jump through logical hoops they would rather not jump through. If the compensation is actually paid, so that nobody is worse off and some people are still better off, then the Pareto criterion is satisfied and there is no need for the elaboration of the compensation principle. But if compensation is not paid then the compensation principle is logically equivalent to giving everybody equal weight and adding up gains and losses. Any deviation from this and there is no logical basis on which the principle can be used as a decision rule. And most economists would in principle wish to deviate in favour of egalitarian weights.

But what to do if compensation cannot be designed to be complete so as to leave the losers as well off as they were before? And what to do if no consensus can be reached on weights? Might this not lead to utter paralysis on the policy front? So, despite themselves, economists keep getting drawn towards the compensation principle. Some of these tensions are seen in a famous paper by Hotelling (1938, p265), couched in terms of whether a particular investment (e.g. a railway line) should go ahead: “A less conservative criterion...is that... if some distribution of burden is possible such that everyone concerned is better off than without the new investment, then there is a *prima facie* case for making that investment. This leaves aside the question of whether such a distribution is practicable. It may often be good social policy to undertake new enterprises even though some persons are put in a worse position than before, provided that the benefits to others are sufficiently great and widespread...To hold otherwise would be to take the side of the handweavers who tried to wreck the power looms that threatened their employment. But the rule must not be applied too harshly. Where losses involve serious hardship to individuals, there must be compensation, or at least relief to cover subsistence... Where there are

many improvements, the law of averages may be trusted to equalise the benefits to some extent, but never completely. It will always be necessary to provide for those individuals upon whom progress inflicts special hardship; if it were not possible to do this, we should have to reconcile ourselves to greater delays in the progress of industrial efficiency”.

Throughout the 1930's, 1940's and 1950's this inner turmoil of economists is seen again and again. Here is Henderson (1947, p230), worrying about the financing of bridge building—whether to do it through general taxation or through tolls: “The other objection to making use of general taxation is that those who pay the taxes may not reap the benefit. To this, the answer, which runs through all economic reasoning since Adam Smith, is that if every change is made which benefits some more than it harms others, then in the end everyone will benefit more than he loses. This is likely to be so, providing the changes are numerous and the benefits and losses distributed at random among the population. But it need not be so...There is, therefore, a presumption in favour of some form of financing which ensures that the people who gain from the bridge pay the whole cost as against making the deficit a charge on the national exchequer”.

And the concerns about the compensation principle continue to the present day. Here is the discussion in a standard textbook on public economics, by Stiglitz (1999, p 114): “What happens if the total willingness to pay exceeds the total costs, but the costs borne by some individuals exceed their willingness to pay? Should the project be undertaken? The compensation principle says that if the aggregate willingness to pay exceeds the costs, the project should be undertaken. Most economists criticise this principle, for it ignores distributional concerns. Only if the compensation is actually paid to those adversely affected can we be sure that the project is desirable, for then it is a Pareto improvement...If the aggregate net benefit...is positive, and if the poor are net beneficiaries and the rich are net losers, then the project increases both efficiency and equity and should be adopted. But often, matters are more complicated. For instance, the poor and the rich may be worse off, but middle-income individuals may be better off. How do we assess such a change?...We assign weights to the net gains of different groups to summarise the impacts in a single number...Because of the concern for equity, effects on higher-income groups are weighed less heavily”.

Stiglitz's argument sees us coming full circle to the Utilitarianism that Robbins (1932, 1938) rejected because it required interpersonal comparisons and weights. Caught between policy paralysis and the illogic of the compensation principle, and unconvinced by the "law of large numbers" argument that with multiple projects distributional effects will tend to cancel out, Stiglitz's way out is the way most economists would resort to, at least in theory. In other words, they would advocate a cost-benefit analysis using weighted sums of gains and losses according to an egalitarian scale of weights. But this way of doing things does not seem to have panned out in practice, especially in the context of development projects.

Dams, displacement and development

Dams and displacement are often seen as the archetypal indictment of cost-benefit analysis (CBA) and all that it has wrought. Michael Cernea's (2000, p 47) critique is one among many: "CBA is utterly insufficient because it is only a macroeconomic tool that does not explore the distribution of either costs or benefits among project stakeholders....The cost-benefit methodology justifies project investments by determining that the aggregate of a project's benefits outweighs the sum of a project's costs by an acceptable margin".

Before discussing this statement further, it is as well to put on record a view on dams and displacement that does not necessarily see the issue as a failure of the distributional dimensions of cost-benefit analysis, in other words, of using inappropriate distributional weights on a project which however did have positive social benefits. Rather, the view is that big dams are projects which have negative social benefits, but go through because they give positive benefits to selected powerful groups. Arundhati Roy (1999, pp3-4) makes this argument in characteristically pointed fashion: "Big Dams started well, but have ended badly. There was a time when everybody loved them...Not any longer...The fact that they do more harm than good is no longer just conjecture... They lay the earth to waste. They cause floods, water-logging, salinity, they spread disease...The International Dam Industry is worth 20 billion dollars a year. If you follow the trails of big dams the world over, wherever you go...you'll rub up against the

same story, encounter the same actors: the Iron Triangle (dam-jargon for the nexus between politicians, bureaucrats and dam construction companies), the racketeers who call themselves International Environmental Consultants (who are directly employed by or subsidiaries of dam-builders), and, more often than not, the friendly neighbourhood World Bank...In 1994, U.K. consultants earned 2.5 billion dollars on overseas contracts. The second biggest sector of the market after Project Management was writing what are called EIAs (Environmental Impact Assessments). In the Development racket, the rules are pretty simple. If you get invited by a Government to write an EIA for a big dam project and you point out a problem..., then you're history".

So, not much scope in the above argument for subtle or even radical reformulations of CBA to take into account its shortcomings. What Arundhati Roy is pointing to is a systemic failure in which CBA is by the by. Whatever needs to be shown formally will be shown formally, given the huge payouts involved, not least to those who are doing the CBA and other forms of analysis. Cernea's (2000, p12) vision seems altogether more benign:

"Development will continue, however, to require changes in land use and water use and thus make various degrees of population relocation at times unavoidable. Yet, this does not mean that the inequitable distribution of development's gains and pains is itself inevitable, or ethically justified...It may not be feasible to prevent every single adverse effect. But it is certainly possible to put in place sets of procedures, backed up by financial resources, that would increase equity in bearing the burden of loss and in the distribution of benefits".

It should be clear that this benign vision is not very far from where I argued economic analysis has arrived after a long journey over the past hundred years. At least conceptually, most economists would accept the vision of a distribution sensitive CBA. Yet Cernea's (2000) critique above, that CBA in practice does this rarely, is clearly valid.³ What went wrong?

An intriguing account of the evolution of such "social" cost-benefit analysis from the 1960's onwards, especially as applied to development projects, is provided by Little and Mirrlees (1990,

p 359): “In the late 1960s there was considerable development of methods for applying social cost-benefit analysis to investment in developing countries. In the 1970s, these methods began to be applied...A battle raged in the World Bank during the 1970s about whether social prices should be used. Formally the ‘social price brigade’ won, in that guidelines on the use of distributional weights were actually incorporated in the Operational Manual in 1980. In practice, we believe, they were hardly ever used except in an experimental manner in a few cases...Social pricing, using distributional weights, has been abandoned...When the pressure is on to get money out, it is not surprising that demands for more complex analysis are unwelcome. Worse than this, project analysts would never get promoted if they were honestly compelled to report unfavorably on several projects”.

The Little-Mirrlees (1990) paper refers to the situation in the 1970s and 1980s, but no doubt some of the same pressures remain.⁴ Sophisticated analysis is all very well, but may lose out to other pressures, even when they are not as malign as those highlighted by Roy (1999).

But there is one aspect of Cernea’s (2000) Impoverishment Risks and Reconstruction (IRR) framework that ties straight into the 1930s and 1940s debate in economics. In that debate there was a strong feeling among some protagonists that designing elaborate compensation mechanisms as part of the project, while theoretically desirable since it got one closer to the Pareto improvement criterion, might not be practicable, and might be too costly—that doing this might actually reduce the overall aggregate benefits of the project. It was for this reason that there was tendency to lay great store by the “law of large numbers”—that over a large number of projects the distributional effects would cancel out, leaving everyone better off, if every time the choice was made on the basis of aggregate benefits. As was recognised in the debate, this position could not be sustained logically if projects were large or if distributions of gains and losses were not distributed statistically randomly in the population. These conditions are clearly not satisfied in the case of big dams, and in terms of its own logic economic analysis has to support something like the Cernea (2000) methodology for first of all delineating the distribution of costs and benefits, and then designing mechanisms for compensation. But are there complementary mechanisms that could bolster the Cernea (2000) approach?

Safety nets to the fore

There is no question that in terms of its own history of debate and dissent on the evaluation of projects, economic analysis should embrace specific compensation mechanisms for every project that is being considered. This is not only because of the ethical imperative, and the illogicality of the compensation principle, but also because of political economy considerations—without compensation to those who are displaced and other losers, the project may get delayed or not go ahead at all, thereby foregoing an increase in aggregate benefits.⁵

But there remains the question of the practicality of designing a specifically tailored compensation mechanism for every possible project, policy or process. This is where automatic redistribution mechanisms and safety nets come to the fore to complement project specific compensation. Imagine a world in which a system of safety nets and redistributive instruments ensured, automatically, that no individual or family became destitute, for any reason. Then, *a fortiori*, such a mechanism would prevent destitution as the result of a project on which compensation was not paid. Similarly, consider automatic redistribution mechanisms that prevented inequality from getting “too high”. Then there would, in principle, be no reason to have specific compensation mechanisms to ensure equitable distribution of the gains and losses from a given project.

Safety nets in developing countries got a bad reputation in the 1960s and 1970s, partly because what was actually implemented in the name of safety nets (for example, overly generous pension schemes for the urban professional elite) was in fact the opposite of what is intended by the term—in many cases, the systems introduced were highly regressive in their impact. There was also a tendency to introduce cumbersome “one size fits all” mechanisms, as opposed to a system of interventions tailored to specific circumstances of different categories of people—small farmers, rural landless, urban informal sector etc. What is needed, however, is a vision of an interlocking set of mechanisms which provide security against income shortfalls for whatever reasons, the individual component mechanisms designed appropriately for different

contingencies. It is this vision that should guide us in the future, rather than the failed attempts of thirty years ago and the nihilism to which that failure gave rise.⁶

Of course, a perfect safety net or perfectly automatic redistribution is not practicable. But then neither is perfect project specific compensation. Rather, it is hoped that the two together come closer to achieving the objective of implementing projects that increase aggregate benefits and do so equitably. In fact, the stronger the system of safety nets, the less the need for project specific compensation to be elaborate and complete. To the extent that such elaborate project-specific designs are thought to be overly expensive, automatic safety nets (although they have their own expenses) may reduce the need for them and therefore increase the acceptance of more projects with aggregate net benefits. A joint theory of project-specific compensation and generalised automatic safety nets now awaits development.

An inescapable dilemma?

Consider the relationship between the distributionally sensitive approach to CBA advocated by Stiglitz (1999), and the IRR approach of Cernea (2000). Without the compensations envisaged in the Cernea (2000) approach, use of distributionally sensitive weights *a la* Stiglitz might well (we would hope) reject the project as producing negative social benefit. But suppose now that, despite its best efforts, the Cernea method still leaves some poor people worse off than they would have been before. The distributionally sensitive weights would pick this up but, unless these weights gave an infinite weight to the losses suffered by even a single poor person, the project may well pass the Cernea (2000) and the Stiglitz (1999) criteria. But some poor people will have been made worse off. What to do in this case, which is likely to be the case in almost any project of significant size, despite all possible efforts to redesign and compensate?

This is an inescapable dilemma, which of course is the dilemma economists struggled with in the 1930s and 1940s. It doesn't go away just because there is some compensation, or even elaborate compensation. It is present whenever compensation is not perfect, in other words, when the Pareto improvement criterion is not met. It is not enough to modify the Pareto criterion to allow

the rich to be made worse off, because the problem will arise whenever a poor person is unavoidably made worse off. To stop the project in this case means that those poor who would have been made better off will now stay as poor as they were. This is the other face of the inescapable dilemma—development projects sometimes pit not the rich against the poor, but one group of poor against another group of poor.

I have recorded the unsuccessful attempts of economists to square these circles, and I have reported the uneasy compromises that have been reached conceptually, as well as the entirely unsatisfactory application of even that conceptual position in practice. But what do other disciplines have to say on this dilemma? Granted that development projects create winners and losers. Granted that the simple criterion of aggregate net benefit is totally distributionally insensitive. Granted that project-specific compensation and social safety nets are needed to protect the most vulnerable from having to pay the price of development projects, policies and processes. But suppose, as is bound to be the case, that after all of this there will still be some poor and vulnerable individuals somewhere who are made worse off. What would be the conceptual approach of disciplines other than economics to evaluating whether such projects should go ahead?

Conclusion

Physical and other forms of displacement are almost always the concomitants if not the consequences of the development process. Displacement losses can come in a variety of forms. There are those investors and secure members of society who realise less gain than they had expected as a result of development processes. Then there are the severe consequences for those individuals and communities who involuntarily move, leaving behind homes, networks, jobs, social capital and emotional ties to place.

A standard characterisation of economics, especially of CBA, is that it pays no attention whatsoever to these losses. This paper is an exploration of the history of economic thought and practice on how to balance the assessment of gains and losses that accrue as the result of

displacement and of development processes more generally. Economists have struggled mightily with the core criterion of a Pareto improvement, which vests individuals with infinite rights in their current standard of living, and with its deeply conservative implications. The criterion of Pareto Improvement prevents redistribution away from the rich, and, if employed rigorously, would stop most projects from ever taking place.

I show that where economists have arrived conceptually is an uneasy compromise by using distributionally sensitive weights to evaluate the gains and losses of a project. In practice, however, systematic use of such weights in project appraisal or CBA is rare. Apart from advocating such use, in the spirit of the conceptual position reached in economics, I have argued that specific compensation mechanisms and generalised safety nets will reduce tensions between protecting the vulnerable and supporting projects that produce aggregate net benefits—including for the vulnerable themselves. Following Cernea (2000), the argument here strongly supports the explicit taking into account of displacement in development projects, and systematic compensation as part of the project design. But generalised safety nets are also necessary to support those whom such project design fails to target.

Endnotes

1. As Amartya Sen once famously remarked, “A society can be Pareto Optimal and still be perfectly disgusting”.
2. This was done on the occasion of his Presidential Address to Section F of the British Association.
3. Indeed, it can be argued that Cernea’s (2000) critique of CBA is in pursuit of a more comprehensive protection and compensation for the displaced.
4. The literature on what they call “social” cost-benefit analysis, with explicit use of distributional weights, includes their own Little and Mirrlees (1969) and UNIDO (1972). For the tussles between different ways of doing even such distributionally sensitive cost-benefit analysis, see Sen (1972). An argument for treating projects and policies in a unified framework is developed in Kanbur (1990). For another account of the theory and practice of CBA in development projects, see Squire (1989).
5. For a discussion of the interlinkages between unequal distribution of gains and the prospects for economic growth itself, see Kanbur and Lustig (2000).
6. Such a vision is developed in the “Security” section of the World Bank’s (2000) World Development Report for 2000/2001.

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