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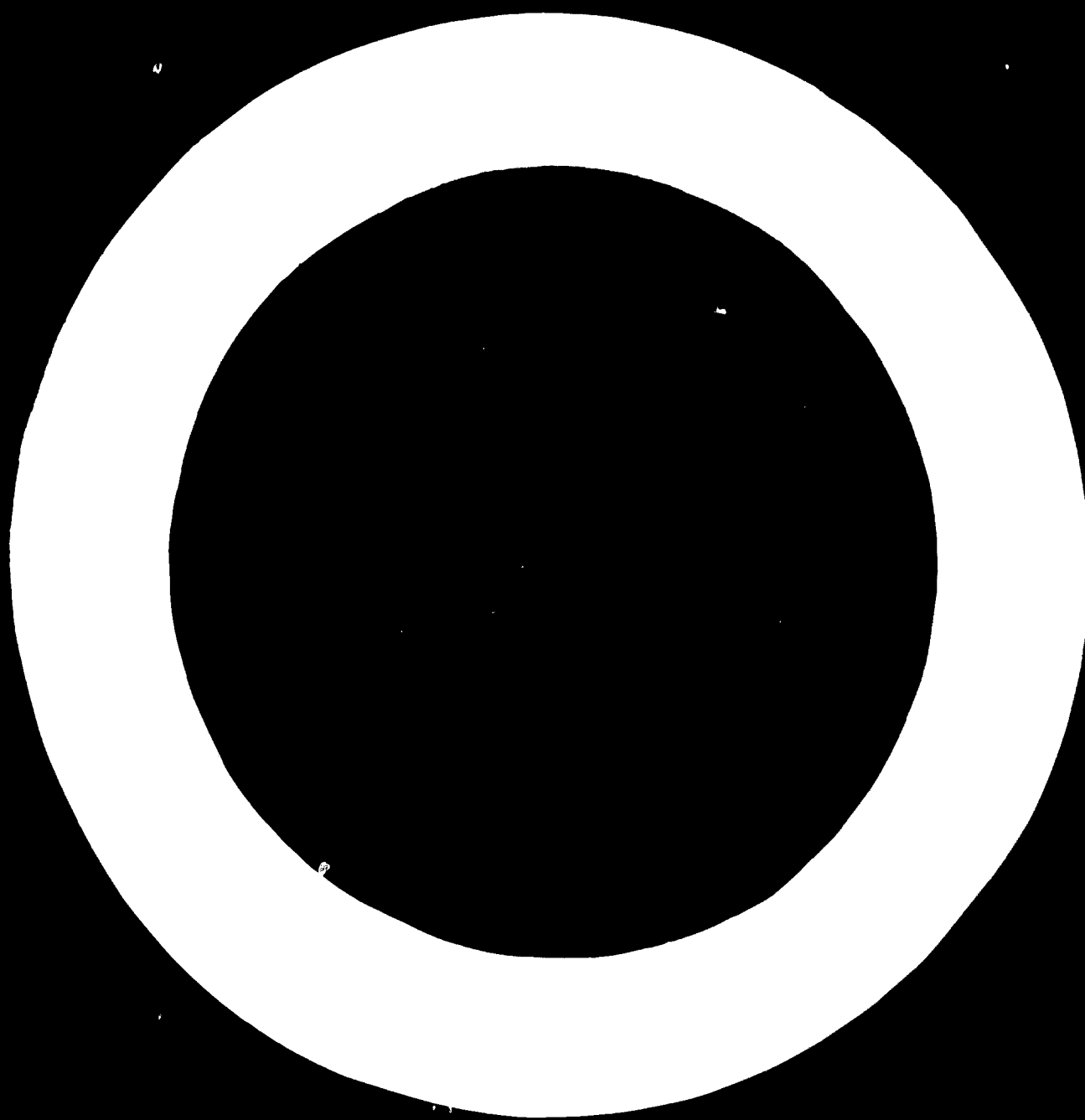
ON THE CONCEPT AND MEASUREMENT
OF NATIONAL PARITY

by

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employment, the balance of payments and the distribution of consumption (by regions, or groups). Moreover, each of these categories applies both to the present and the future.

Faced with such a multiplicity of objectives - both over categories and over time - it is clearly impossible to demand the maximization of each such objective. Increasing present aggregate consumption is most likely to reduce the future level of aggregate consumption, for it cuts down on present savings, and hence investment. Likewise, increasing next year's consumption might demand cutting down this year's consumption. Redistributing consumption may dictate locating a new industry in a relatively backward region; where its net contribution to aggregate consumption may well be less than what it would be if it were located in an advanced region. Increasing employment may entail more current consumption and with it the reduction in current savings and hence future aggregate consumption.

A balance has, so to speak, to be struck between the claims made by this multiplicity of objectives. Moreover, the relative emphasis that the government might desire to place on the conflicting national objectives have to be articulated in a precise manner if individual projects are to be selected in a way that realize the goals that the government wish to achieve in their national development plan. The relative weights that articulate the emphasis that the government wish to place on the various national objectives we call national parameters. These national parameters are of crucial importance to project planners, as they must be used systematically in evaluating every project that is submitted for assessment. Notice that I have said that the values of the national parameters must be systematically used for the evaluation of every project that is submitted for assessment. This is to say that all project planners must use the same set of values for the national parameters if consistency is to be maintained in project planning. The choice of the values of these national parameters is thus a matter of national policy. Rather than letting each project evaluator choose his own set of values for the national parameters the central planning organization might ideally to communicate to all project evaluators their view of what values of these parameters to use.

2. When a project is undertaken, it has a myriad of impacts on the economy in question; good as well as bad. Undertaking the project may involve importing machinery - thus using up foreign exchange that could be used for other purposes. It will involve the use of labour which is scarce from the point of view of increasing employment. It may involve the use of domestically produced materials which might have been used in some other project, but cannot now be. The project will eventually produce the commodity that it is designed to produce and with this contribute, directly or indirectly, to the increase of aggregate consumption. Moreover, it might be one that raises income in some particularly distressed region. The art of project selection lies in evaluating all these consequences - good as well as bad - in a systematic fashion, so that one is in a position to assert whether undertaking the project is a desirable thing, or not.

Many of the parameters that are required in the evaluation of a project (say, the export price of steel, if the project requires imported steel; the wage that must be paid to construction workers; the cost of a unit of its output, etc.) are those that are specific to the project itself. They are not a wide circle to narrow, indeed, there is still some disagreement amongst economists as to how to measure them!), but a much narrower one can be reached as to the possibility of calculating them than their any other economic principle be left to the hands of the individual project engineers. It does not require any special knowledge or judgement regarding the economy as a whole to look up the price of a unit of steel that gives the c.i.f. value of a unit, and to see if a project requiring imported steel is profitable at that price. The c.i.f. prices may be in dollars or in dollars, and the engineer may have to convert all items in terms of dollars or pounds. Now, there may be some reasons for not wanting to convert all dollar figures into figures of a particular currency by using the current exchange rate. If the project engineer is not to get involved in the issue of foreign exchange, what foreign exchange rate? The appropriate price of foreign exchange is often called the shadow price of foreign exchange. The evaluation of the shadow price of foreign exchange is in practice quite a difficult task, but even in principle it requires facts and judgements.

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concerning the economy as a whole - the totality of exports, possible aid forthcoming, overall demand for foreign exchange, and so on. The facts required for analysis to be at the disposal of a project evaluator, and the judgements that are required in evaluating them from a wider perspective are those that involve decisions at the level of some central planning organization. The overall trade policy, choice of a growth rate for the economy as a whole, and so on. The wider perspective of foreign exchange is, therefore, another such national parameter which must be given to the project evaluator by the central planning organization.

Although, I think, has been said to suggest that there is a natural "division of labour" between the central planners and the individual project evaluators. The values of the national parameters ought ideally to emerge from the central planning organization and to be communicated to the project planners. The project planners can be expected to evaluate the values of those parameters that pertain to the specific projects.

4. For the time being, national parameters to be evaluated? It is clear from the nature of these parameters that they embody both facts pertaining to the economy as a whole, and the preferences of the central planners about the course that the economy ought to take. In what follows I shall try to give some idea of the method that may be used to evaluate these parameters with the help of the arguments that are involved in the evaluation of one such national parameter, viz. the parameter that embodies the desire for an extra consideration towards a particular region or regions in the economy. This national parameter reflects the fact that, even when the desire to increase the aggregate consumption of the nation, which, by its definition, is neutral as regards persons and regions enjoying this consumption, there ought to be a special consideration shown to certain or certain regions. This is a particular example of the national objective of the redistribution of consumption.

To keep the argument really simple I shall assume away all inter-temporal problems. I shall assume further, to focus on things, that the government has by its national objective - viz. the increase in aggregate consumption, and more equitable distribution of consumption between the distressed region and

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the rest of the country. Now it may be thought that if one increases aggregate consumption one automatically helps the distressed region. This is not always true. The region may be a small part of the country and the benefits from the increase in aggregate consumption may be spread thinly over all regions. In any case, aggregate consumption is by definition neutral as between regions and groups. It follows that there is no guarantee that the consumption of the distressed region will be increased at all by an increase in aggregate consumption. The benefits may all (or almost all) go to a particularly prosperous area of the country. Quite apart from these arguments, we are in any case considering the situation where the national planners have singled out a specific region as meriting special consideration. We are considering the simple example where the national planners have only two national objectives, viz. increasing aggregate consumption, (C), and increasing the consumption (D) of the distressed region. Now if there exists a project that raises both C and D by more than any other available project, there is universal joy. Clearly we ought to undertake the project. But it may well be that project 1 raises C more than project 2, but project 2 raises D more than project 1. The national planners now have a dilemma. For a choice has to be made about how many units of an increment in C they are willing to forego for the sake of increasing D by one unit. This rate of substitution, which surely begs of ethrical considerations, we shall call the regional redistribution weight, w. That is to say, the project evaluator will be asked to increase not simply C, nor simply D, but the quantity $V = C + wD$. If project 1 raises V by more than project 2, and the projects are mutually exclusive, we accept project 1 and reject project 2.

The reader may feel that there is an air of unreality in all this. Who is this all-seeing national planner, he may ask, who can sit and decide whether to put w at the value of 0.25 or 0.35? Planners, he may retort, deal in hard facts. Not for him such intricate considerations that are necessarily involved in selecting values for such metaphysical quantities like regional redistribution weights. One may be tempted to sympathize with this sentiment. But it is not a point that is well taken. Consciously or unconsciously, in a refined manner or in rules of thumb, national planners make these value judgements in any case.

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For there is no getting away from them. When the planners decide to have the economy embark on a fixed steel mill or against the settlement of an irrigation project, judgments of this nature are implied. When the planners decide to raise the rate of savings by additional taxation they are indeed making judgments regarding the conflict between future and present consumption..

Nevertheless, it may be felt that planners (or for that matter anyone (excepting possibly academic economists) are not used to the use in terms of specific numbers that articulate implicit judgments about what ought or ought not to be done. Planners may indeed agree that the distressed region deserves special consideration; that it may be desirable to initiate some industries in that area, even although this might cost the country in terms of increased payments on a higher rate of taxation. But they may hesitate to rely on a specific figure for w to achieve this, since it is so very difficult to judge what the different consequences will be if, instead of imposing the value of 0.25 they were to choose 0.35. Such a reservation is understandable. But I submit that the procedure that I shall describe below for evaluation is precisely one that will, at every stage, bring to the attention of the planners the exact consequences of the various choices made for the value of w . The great advantage in evaluating projects with the help of such numerical parameters is that there will necessarily be an overall consistency in the various decisions. Moreover, planners will be able to judge in a precise manner the costs involved in undertaking one project rather than another. These are issues that deserve real consideration.

Consider then the case of the national planners who, with the initial knowledge of the state of the economy, tentatively set the figure of 0.25 for w . They feel that with the existing inequality of consumption between the distressed region and the rest of the economy, the value of 0.25 roughly reflects the extra weight that ought to be allowed on the consumption accorded to the members of this region. I do not deny that this is a difficult judgment to make, but I do deny that planners can, or in fact do, avoid making them when they go about their business. Normally speaking, planners do not have to face such questions in such a bald guise. That is not to say that

they do not face them at all. By the nature of their job they do not avoid them. Given that they decide on a course of action or study, they will be able to calculate the value of w that will justify the course of action that they have advocated. If the planners wish to justify their course of action, they will have to answer that this is probably the best, or indeed the one that they find acceptable. Paradoxically, then, it may be simpler to face these awkward questions squarely in the face rather than camouflage them with some vague mumblings about the need to help the distressed region and to go about things in a haphazard manner.


We take it then that a figure of 0.25 has been attributed to the project evaluators by the national planners. The figure of 0.25 reflects the extra weight that the planners feel ought to be given to the distressed region's consumption, given its existing inequality. If the project evaluators, when they finally come up with a list of projects that are found desirable in terms of the national objective of maximizing $V = C + wD$, find that the total of projects that have been recommended by the project evaluators are ones that, if undertaken, will substantially reduce the inequality of consumption between the distressed region and the rest of the country. That is to say that with the degree of inequality that would result from the set of projects if undertaken the planners no longer feel that they are the appropriate regional weight. They would prefer a smaller weight, and did not know that a figure of 0.25 would tilt decisions in favour of the distressed region as against aggregate consumption to this extent. They did not know this because they were not aware of the technical possibilities available to the country. This is natural. The technical possibilities were collected in the formulation of projects and this takes place before the project evaluators. If the planners feel that 0.25 is the higher value once the recommended projects are undertaken, it is clearly because the loss in the increment in aggregate consumption due to a unit increment in the consumption in the distressed region exceeds h when 0.25 is the value of w . Armed with the knowledge of what happens when 0.25 is chosen as a value for w , the national planners inform the project

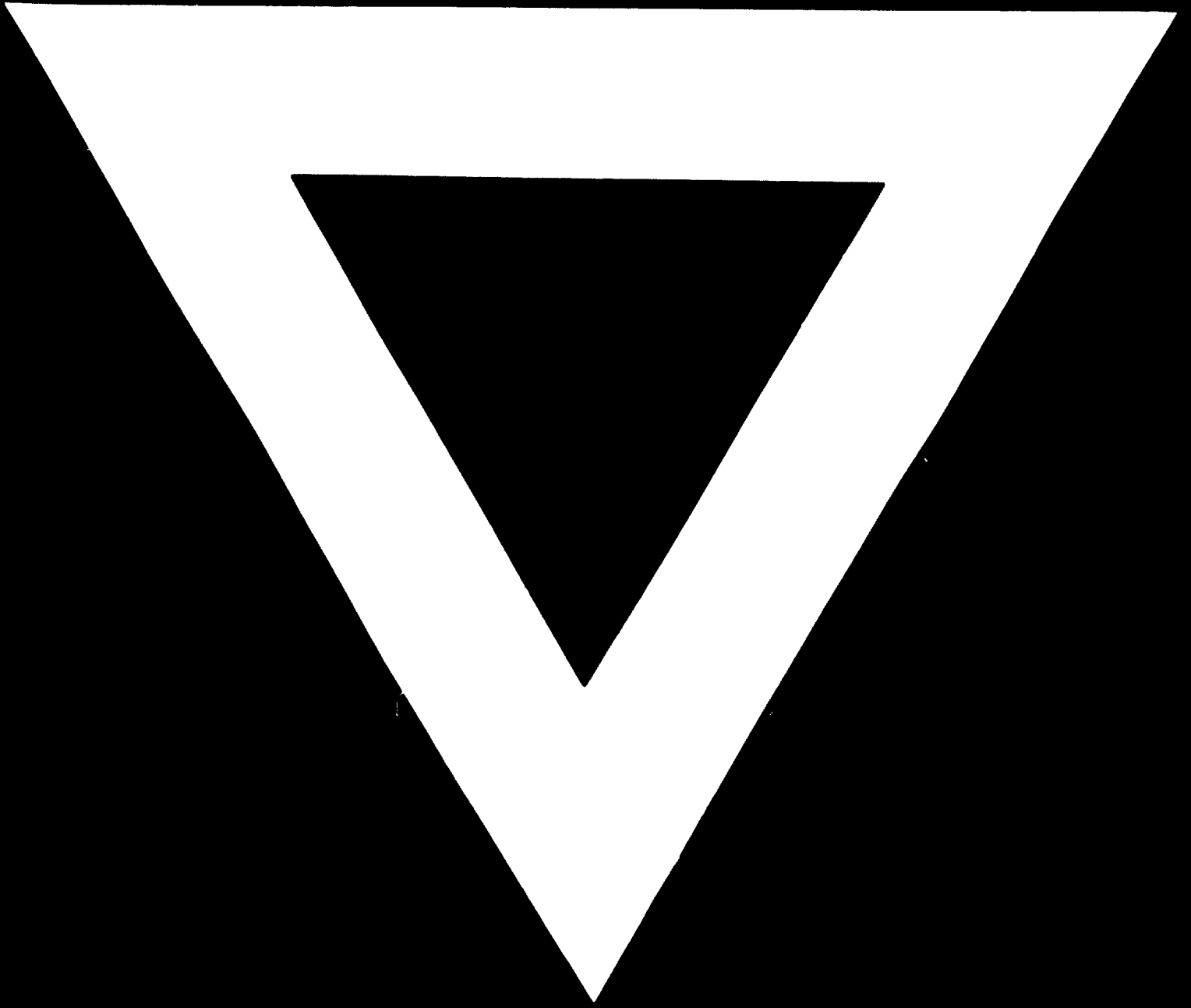
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4. It may be felt that one is asking project planning to fill too many bills. Why, it may be asked, must we select projects with a view to redistributing consumption to a particularly backward regions? After all, industrial investment is not the only lever at the disposal of the government to realize all the objectives it has. It may, (in fact it has) been argued that the government ought to evaluate projects only in the light of increasing aggregate consumption and ought to rely on taxation as a method of redistributing consumption. This is a perfectly pertinent point to raise and, of course, governments actually do use taxation as a means of reducing inequality. Now governments ought clearly to use all the levers at their disposal for achieving their social goals. But the suggestion that one can divorce the act of public investment from the national objective of reducing inequality is not very compelling. Recent investigations into the theory of optimal taxation and public investment seem to suggest that even if one were to assume away the administrative costs of collecting taxes (which is not a trivial assumption), the extent to which the government will require a flexibility in the rates of taxes that they can charge is embarrassingly large if one is to justify the evaluation of projects only in the light of increasing aggregate consumption. But taxation is notoriously unpopular in developing countries. Bearing, therefore, in mind the kinds of political and administrative constraints that governments typically face, industrial investment may well be the least unpopular lever at the disposal of governments for achieving its national objectives. I submit to you, therefore, the suggestion that the burden on project planning is likely to be very large indeed. Investment evaluation ought to be made in the light of the various conflicting objectives that planners regard as desirable. It is all the more reason that investment planning is pursued in a consistent and systematic way.





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