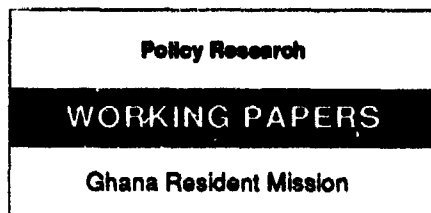


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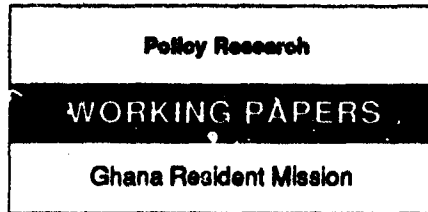
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The Links between Economic Policy and Research

Three Examples from Ghana and Some General Thoughts

Ravi Kanbur

For research to reach policymakers and be useful to them, it should be as country-specific and policy-specific as possible. It should be presented in short, pithy summaries that policymakers and their top advisors can understand. Most senior policymakers are unlikely to read anything longer than two pages.



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This paper — a product of the Ghana Resident Mission — was prepared for presentation at the Eastern Economic Association meetings, Washington, DC, March 19-21, 1993. Copies of this paper are available free from the World Bank, P.O. Box M27, Accra, Ghana. Please contact Phyllis-Maie Attipoe, Ghana Resident Mission, extension 526-3003 (October 1993, 15 pages).

Kanbur gives examples of research recently published in professional journals that directly helped, or could help, in formulating policy advice (and perhaps even policymaking). An article by Younger (1992) was helpful in analyzing a problem in Ghana, where aid flows to government crowded out the private sector (especially private investment), which competed for scarce domestic resources. Younger suggested that tighter fiscal policy combined with looser monetary policy would promote more investment. Younger's analysis helped frame "thinking in an area where muddleheadedness is common," and provided Kanbur with analytical ammunition when he supported budgetary restraint. In another example, research based on the Ghana Living Standards Survey helped identify the poverty consequences of alternative revenue instruments.

The link between economic policy and research *can* be made, says Kanbur, but that does not mean it *will* be made. Usually such a link relies on the chance placing of a researcher in the policymaking and advising trenches.

One problem is that policymakers face highly specific, timebound problems and are interested only in answers to particular questions. But what matters to researchers is the generality of results or the methodological innovations in analysis. Journals turn down papers that answer very specific policy questions.

The appropriate dissemination of research results requires that researchers speak the language of policymakers. Kanbur proposes that:

- Professional researchers should do highly country-specific and policy-specific studies that use the best-practice methodological tools plus a detailed institutional knowledge of the country.

- There should be a continuous attempt at synthesizing the findings of professional research for the benefit of the policy community, as is done in the *World Bank Research Observer*. "We need single-page or double-page flysheets summarizing research results," says Kanbur, particularly those that are country-specific and policy-specific.

- Research should be presented in short, pithy summaries that policymakers and their top advisors can understand, setting out the policy question addressed and the answer provided (the latter are not so common, especially for Africa). "A basic rule of thumb I have developed is that anything longer than two pages is unlikely to be read by the most senior policymakers, the limit for the next most senior is four pages, then eight pages, and 16 pages. If it is longer than 16 pages, do not bother to send it to the policy fraternity (unless it is prefaced by a two-page summary)."

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**The Links Between Economic Policy and Research:
Three Examples from Ghana and Some General Thoughts***

by

**Ravi Kanbur
The World Bank**

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*This paper was prepared for presentation at the Eastern Economic Association meetings, Washington D. C., March 19 -21, 1993

1. Introduction

This paper is about how papers published in professional economic journals might (or might not) have an impact on economic policy. I have in mind, in particular, development economics journals such as the Journal of Development Economics, Journal of African Economies, World Development, or World Bank Economic Review. I write from the perspective of someone who has been in the policy trenches for the past year, as the World Bank's Resident Representative in Ghana, and as someone who has been involved in, and continues to be involved in, academic research and publication.

Rather than talk in very general terms about policy making and research, I will simply give three examples where I feel academic research has helped, or could help, me in formulating policy advice. The concluding section does, however, offer some general thoughts on fostering links between policy and research.

2. Reference Interest Rates on Lines of Credit

When I arrived in Ghana, one of the first issues to cross my desk was the slow disbursement of a line of credit in our Rural Finance Project. The line of credit is from the Bank of Ghana (BoG) to Participating Financial Institutions (PFI's) for onlending to the agricultural sector. The instruments available in the design of the project are (i) monitoring to ensure that onlending is indeed to agriculture and (ii) the interest rate charged by BoG to the PFI's. Notice, in particular, that the interest rate for onlent funds is not controlled.

The interest rate to the PFI's was based on a formula (also part of the original design), which took the interest rate on 180-day deposits minus 2%. The rate was adjusted every six months. The problem we faced was that the line of credit was not being used because the interest rate thrown up by the formula was too high to induce PFI's to come in and borrow in order to onlend. This was only partly because twice yearly adjustments were too infrequent in a period of rapidly declining interest rates (as was the case at that time). So, what formula ought to be used?

The professional literature on credit markets, for example the special issue (September 1990) of the World Bank Economic Review on this topic, helped in thinking through the issues involved. It should be stated, however, that I did not question the basic objectives of the project, which were to ensure that credit got into the hands of those engaged in the agricultural sector, although the credit markets literature would help in addressing this question as well.

One possibility that the recent literature alerts us to is that of rationing in credit markets. Even if there is excess demand for credit at the going interest rate, price adjustment may not take place because at a higher interest rate the composition of loan applicants may change adversely. Such adverse selection can explain non-market clearing equilibria. In such a setting, it seems clear that making an additional line of credit available to financial intermediaries, at the same cost as the current marginal cost of funds to them, will alleviate the credit rationing and achieve the objective of getting credit into the hands of those who did not previously get any. The right formula for the interest rate to the PFI's seems to be one which approximates the PFI's marginal cost of funds.

However, suppose that the market is characterized not by rationing because the interest rate is being used as an indirect screening mechanism (to use the terminology of Hoff and Stiglitz, 1990),

but by the use of direct screening mechanisms which identify and exclude high risk borrowers in the agricultural sector. Suppose that we are nevertheless determined to ensure that credit does flow from the PFI's to these borrowers, perhaps because we feel that part of the perceived risk by the PFI's will be removed once they start interacting with these traditionally excluded borrowers, or that once these borrowers acquire credit and invest, a virtuous circle will set in. Then it seems clear that a subsidy will be needed for the PFI's, the exact extent of which will depend on what sort of a spread they will demand in order to lend to the target group. In this case the formula should use the marginal cost of funds to the PFI's as a base, and then subtract a certain amount (say 2%) to determine the lending rate from the BoG to the PFI's, on condition that lending from the PFI's will be monitored to ensure that it is indeed to the target group (otherwise the subsidy is a straightforward transfer of rent to the PFI's).

In the case of Ghana, the consensus is that the second of the two settings described above obtains. The "reference interest rate" formula is thus clear in principle. Of course, operationalising this in practice is not easy. If all PFI's were identical we could simply identify the marginal cost of funds. But in reality there is a range of PFI's, some of which rely primarily on savings deposits, while others take in time deposits. The clientele is segmented as between rural and urban banks. In principle, we could segment the PFI's into different categories, but the project design did not allow for this. So, how to calculate the marginal cost of funds? One operational answer is to take a weighted average of interest rates offered on various types of deposits by the range of PFI's, the weights being the proportion of all deposits accounted for by each type (i.e. to estimate the average cost of funds). But the formula needs to be monitorable and easily implementable, and information on deposit shares is not easily and openly available. Information on interest rates is indeed available, so that finally, practically, it was decided to take a simple average of the highest time deposit rate and the lowest savings deposit rate. Even this can be justified, it seems to me, on the principle of insufficient reason, since what we are really after is the

interest rate on the marginal source of funds for the PFI's, and we cannot easily find out which is the marginal source and it can in any case change over time and across PFI's.

2. The Dutch Disease Literature

Aid plays a major role in Ghana's economy. In recent years aid flows have been running at 7 to 8 per cent of GDP. In a (now) largely liberalized foreign exchange market, the implications of this aid for different sectors needs to be thought through. Clearly, the Dutch disease literature has been of immense help. I have found particularly useful the article by Younger (1992), in developing a strong argument to convey to policy makers in favour of larger budget surpluses.

Younger (1992) summarizes the issue as follows:

" 'Dutch Disease' refers to the problems that a booming export sector causes the rest of the economy. In Ghana's case, the boom sector is capital from aid (and perhaps repatriations). As this capital hits the economy, it is spent either on imports or domestic goods and services ... If the expenditure is on imports, then there is no direct effect on the money supply or aggregate demand in the economy: the balance of payments shows an off-setting current account deficit. But when the demand is for domestic goods and services, it creates problems for macroeconomic management. First the increase in aggregate demand for Ghanaian goods will begin to drive prices up, and this helps to explain the persistence of inflation in Ghana. At the same time, foreign exchange must be changed to cedis to make local purchases, so the money base increases."

The response to inflation and monetary expansion has been a tight credit policy, which explains to some extent the fact that private-sector investment has not taken off in Ghana. Since most of the aid flows to government this beneficiary of the boom sector has crowded out the private sector in competition for scarce domestic resources. In particular, private investment has been crowded out. Younger's solution is that the government should run budget surpluses (perhaps with the aid of a VAT), over and above grant inflows to the treasury and should at the same time make more credit available to the private sector. "This move toward tighter fiscal policy together with looser monetary policy would promote more investment."

I have found Younger's (1992) analysis perceptive. Clearly, it draws on earlier academic literature (e.g. Corden and Neary, 1982), but its application to Ghana is novel and insightful. It helps to frame one's thinking in an area where muddle headedness is common. It has also provided me with analytic ammunition when I argue in favour of budgetary restraint.

4. Fuel Taxes and Income Distribution

Taxes on fuel are at centre stage in any discussion of Ghanaian public finances. In 1988 the petroleum tax accounted for 8.9% of total tax revenue, in 1991 and 1992 the figures were 24.7% and 23.4%. The 1993 budget, in response to large increases in recurrent expenditure, announced significant increases in petroleum taxation which led to an immediate 60% jump in prices at the petrol pump. It is expected that petroleum taxation will account of 38.0% of total tax revenue in 1993.

Such steep increases in petroleum product prices have generated considerable controversy, and many observers have based their critique on the assertion that fuel taxes are regressive. How true

is this assertion? In order to analyze this issue, we need information on fuel consumption patterns in the Ghanaian economy. We also need a conceptual framework from which to develop rules of thumb for assessing the "regressiveness" of alternative revenue raising measures.

Besley and Kanbur (1988) develop a theoretical framework for evaluating the poverty consequences of alternative commodity taxes. In the framework of modern public finance theory and using a recently suggested class of poverty measures by Foster, Greer and Thorbecke (1984), they derive rules for when shifting the pattern of commodity taxation will reduce poverty. It turns out that a crucial indicator is the fraction of total expenditure on a commodity accounted for by the poor. The intuitive reasoning is straightforward. A unit increase in excise taxation raises revenue in proportion to total consumption of the commodity in the economy (as a first order of approximation). By the same token, the income equivalent of utility loss to a poor household is proportional to its consumption of the commodity, so that if the poverty measure is additively separable in the appropriate sense, the impact on poverty will be proportional to the total expenditure on the commodity by the poor. It follows then that the efficacy of taxing a particular commodity is proportional to the ratio of the poverty impact to revenue raised - hence the indicator. Besley and Kanbur (1988) show the precise assumptions required and how the indicator can be generalized when these assumptions do not hold. But the indicator can serve as a useful and implementable benchmark in policy discussions. Notice, for example, that it is different from another indicator that is often used - the fraction of total expenditure of the poor accounted for by the commodity.

One important point that emerges from the above, and which is drilled into those trained in modern public finance theory, is to focus on "equal revenue" comparisons. The regressivity of a tax cannot be coherently discussed in isolation - the formulation always has to be one of relative regressivity

in raising the same revenue. There may, however, be some comparators that could be candidates for providing a general benchmark. One example is a proportional consumption tax. Here the indicator is clearly the fraction of total consumption of all commodities accounted for by the poor. Another example is a poll tax. Here the indicator is simply the head count ratio - the fraction of the population below the poverty line (see Besley and Kanbur, 1988).

Armed with this conceptual framework, we can now proceed to assess the regressivity, or otherwise, of petroleum taxation in Ghana. What we need to implement the rules of thumb is a "poverty profile" for Ghana, which gives us consumption patterns of the poor and of the economy as a whole. Such a poverty profile is presented in Boateng et al (1992), based on the Ghana Living Standards Survey. I will not here go into the details of the survey and how it was used to construct the poverty profile. Suffice it to say that the survey was conducted in 1987-88, and a poverty line of two thirds of mean per capita household consumption expenditure was used. On this basis, the survey showed that 36% of Ghanaians were below the poverty line, and their consumption was 16% of total consumption by all Ghanaians.

The following table presents consumption patterns for non-food items, among which are gasoline and kerosene - the key items in fuel taxation (Boateng et al, 1992, present much more information on poverty in Ghana, including consumption patterns for food). The table makes interesting reading. The poor account for only 0.2% of total expenditure on gasoline. There is a clearly a prima facie case for the progressivity of taxing gasoline. However, the poor account for 25.3% of the consumption of kerosene. The poverty consequences of taxing this commodity are clearly more severe. In relation to the two "universal" indicators we see that while taxing kerosene is still more progressive than a uniform poll tax, it is less progressive than a uniform consumption tax. Another issue that has

come up in the Ghanaian context is the possibility of taxing alcohol. For alcohol, tables in Boateng et al (1992), show that the poor account for 17.4% of total consumption, so that taxing it is more progressive than taxing gasoline, but less progressive than taxing kerosene.

One concern that has been raised about gasoline prices is that they will feed into transportation prices. From Table 1 we see that the transportation expenditures of the poor account for 13.3% of total transportation expenditure in Ghana. Thus the second round effects of a gasoline price increase will be more regressive than the first round effects, but overall the total effect is still likely to be less regressive than taxing kerosene or a poll tax, and about as regressive as a broad based consumption tax.

But these considerations of second round effects, with associated elasticities of substitution in consumption and production lead to an area where further research is needed. We have the methodology, as developed for example by Hughes (1987). What is needed is an application to Ghana, which takes into account the institutional peculiarities and makes best use of the limited information available. Such research, if it is done quickly and if it is kept focussed on the central policy issue will, I can assure you, find its way into the policy dialogue in Ghana instantly.

Table 1**Non-Food Expenditure Pattern by Poverty Group**

	Non-poor	Poor	All
Cigarettes, Tobacco	3.6	7.1	4.2
Cola Nuts	72.7	27.3	100
Soap	8.2	10.6	8.6
Charcoal or Wood	80.0	20.0	100
Other Fuel	5.8	4.1	5.5
(Kerosene etc)	88.1	11.9	100
Gasoline	74.7	25.3	100
Shoes and Clothing	1.5	0.02	1.3
Public Transport	99.8	0.2	100
Medicines, Medical	20.4	22.0	20.7
Services	82.8	17.2	100
Education	5.9	4.7	5.7
Housing	86.7	13.3	100
Utilities	82.0	18.0	100
Other	8.6	8.6	8.6
All	83.9	16.1	100
	100.0	100.0	100.0
	83.9	16.1	100

Note: in each cell the upper right entry represents the percentage of the column total, and the lower left entry the percentage of the row total.

s. **Fostering Links Between Economic Policy and Research**

I have given three specific examples where research published recently in professional journals helped or could help in formulating policy advice (and perhaps even policy making) in a fairly direct manner. This shows that the link between economic policy and research can be made. But just

because it can be made does not mean that it will be made. In many, if not most, cases, it seems to me that the occurrence of a linkage relies on chance and serendipity - in the case of the three examples noted here, it relies on the chance placing of a researcher in the policy making and advising trenches. But can we set up channels that will increase the probability of links being made, and of links continuing to be made, without necessarily requiring that all researchers take time off in policy making, and that all policy makers and advisers take time off to write technical pieces in the learned journals? Even as one says this it should become clear that the strategy is not really feasible, except in isolated cases. It may not even be desirable - after all, comparative advantage in research and in policy making should be exploited.

The transition and translation between research and policy is not easy for two reasons. First, the problems faced by policy makers are highly specific and time bound. The policy maker is, understandably, interested only in answers to particular questions - the general applicability or methodological novelty of the answer is not of interest to him or her. But, for the researcher, it is precisely the generality of the results, or of the methodological innovations in the analysis, that matters. This is what gets articles published - how many times have referees turned down a paper with the comment: "a competent exercise, but nothing new or exciting."? The three topics cited in this paper rely on publications that were accepted by the journals because they raised general issues or presented results for the first time. The fact that they were (or could be) useful in answering very specific policy questions in Ghana seems to be accidental. I am sure the editors of the journals in which they were published - and I was one of them - did not have this consideration in mind. So this seems to be a basic problem given by the very nature of research and publication on the one hand, and policy making on the other.

A solution to this problem seems to me to lie in appropriate dissemination. Before elaborating on this, let me pose the second of the reasons why the link between research and policy is

not easy. This is the language problem. If an Englishman does not speak French and a Frenchman English, they will never understand each other. Each will probably get frustrated, blame the other for lack of communication, probably insinuate lack of competence on the part of the other, etc. Policy makers and researchers do indeed, for the most part, speak a different language, and a whole lot of translation is needed. I am referring not just to the obvious fact that a highly technical paper in all its mathematical glory is unlikely to be understood by those in policy making - even those who once had that ability will lose it once they have been in policy making for a while, because survival and advancement in this area needs skills of a different type. I am referring also to the tendency of researchers to be comprehensive in their writings, leading to longish papers that are unlikely to be read by those in the policy making fraternity. A basic rule of thumb I have developed is that anything longer than two pages single space is unlikely to be read by the senior-most policy makers, the limit for the next most senior is four pages, then eight pages and sixteen pages. If it is longer than sixteen pages, do not bother to send it to the policy fraternity (unless it is prefaced by a two-page summary).

Given these twin problems of (i) difference in horizons - specificity and timeliness versus generality and thoroughness, and (ii) language - both length and style of written presentations, what can we do? In answering this question I do, however, want to acknowledge that from time to time, research does impinge on policy making through the "big idea", or through the slow accumulation of evidence from a myriad of experiences.

My first proposition is that the way professional research can help policy making is through highly country specific and policy specific studies which use the best practice methodological tools as well as a detailed institutional knowledge of the country at hand. If in conducting this analysis a new methodological innovation is introduced, this is all well and good (particularly for the researcher),

but it must be understood that this is not the primary objective. In fact, replicating a methodology first tried elsewhere is a perfectly acceptable exercise and should be rewarded, provided that a specific policy question has been addressed and resolved. The test of excellence here is the specificity of the question asked, the detail of the knowledge marshalled, the appropriateness of the tools used and, finally, the nature of the answer delivered. I feel that such excellence is under-rewarded in the economics profession, relative to contributions where methodological innovations are presented or generalizations are established. However, even if the incentives are right, researchers will have to look for such problems actively - they will not simply land on their desks.

My second proposition is that there has to be a continuous attempt at synthesizing the findings of professional research for the benefit of the policy community. This includes synthesizing the findings of highly country specific research of the type discussed above, or of latest developments in theory. Out of such synthesis can come the themes that could provide the broad framework for policy thinking even as the policy makers struggle with putting out the fires of the here and now.

My third proposition is that there is tremendous value to short, pithy, summaries of research of any of the types noted above, in a language and a style that policy makers and their top advisers can understand. While such expositions of "big themes" are useful, even more important are summaries of highly policy and country specific research which sets out the policy question addressed and the answer provided - the latter are not as common, especially in Africa.

These propositions are not new, of course, and I feel that with some modifications, the current system of academic research and publication could be made to serve their purpose. Specialized development journals like the ones mentioned in the introduction do indeed publish country specific

research. But perhaps more could be done in highlighting papers that address, and resolve, highly specific issues through best practice techniques. The development of professional journals at the national level (like recent attempts to revive the Bulletin of the Economic Society of Ghana) will also help in providing an additional outlet for country specific professional research.

On the second proposition, professional journals do go in for surveys from time to time, but so far as I am aware there is only one journal that focusses exclusively on synthesis of professional development economics research - the World Bank Research Observer. We could perhaps do with one or two more journals of this type. Finally, we need single or double page flysheets summarizing the results of research, particularly the country specific and policy specific variety. I know that I would be very happy to have a compendium of such flysheets for Ghana, in areas where I do not myself have special expertise. The production of such flysheets is not of course research, and researchers themselves may not be good at it (although they should try - they may get to like it). The reward structures in research do not encourage such "publication." Yet it is the final step in the link. Many institutions do already produce such policy briefs. But there is room for more, particularly for briefs directed to policy makers in Africa and dealing with very specific policy questions.

One final point. It should be apparent that I have put the onus on the research community to reach out and disseminate to the policy community. I think this is right. While there are some in the policy community who could or would want to interact directly with researchers, I think there is a fundamental asymmetry which makes this direction of linkage very difficult except in some isolated cases. It is up to researchers to learn the language of their policy counterparts, to understand policy problems as perceived by policy makers, to translate these into the language of research and analysis, to conduct the analysis using the best available techniques, and then to attempt to translate the findings back into the

language of policy makers. No single researcher can do all of this, but researchers as a whole should be able to. At least they should try to. Speaking for myself, I can assure them that it is a satisfying experience.

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