

Social Capital and the Social Evaluation of Investments

Hatice Jenkins

Department of Banking and Finance
Eastern Mediterranean University, North Cyprus
Email: hatice.jenkins@gmail.com

Glenn P. Jenkins

Department of Economics
Queen's University, Ontario K7L 3N6, Canada
Email: jenkins@econ.queensu.ca

Development Discussion Paper: 2002-14

ABSTRACT

One outcome of the existence of social capital in a community is that individuals will take into consideration the welfare of other members of the community. If an investment project is undertaken that causes the poorer members of society to increase their consumption of goods and services to improve the satisfaction of their basic needs, then other members of the community who are not directly affected by the project may also experience an increase in the level of their economic welfare. This approach takes into consideration both the change in the economic welfare of the recipients of the assistance that enhances the satisfaction of basic needs in the community, and also the tastes, preferences, and economic welfare of the rest of the community.

These basic needs externality can be created by investments because the project lowers the price of a good or service used to satisfy their basic needs, or by raising the incomes of the poor groups so that they now will buy more of the goods that are used to satisfy their basic needs. This paper develops a theoretical framework for the evaluation of the basic need's externality created by the investment. It then applies this theoretical framework to the case of a project that proposes to expand the water supply in the south part of the city of Manila. We find that these externalities can be quite important. In this particular case a conservative evaluation of the basic need's externality leads to a value that is over 4 times as large as the financial shortfall of the project.

Key Words: social capital, basic needs, economic externalities, investment appraisal

JEL Codes: D61, D62, H43

Revised version published as: Jenkins, Glenn P. and Jenkins, Hatice P., Social Capital and the Social Evaluation of Investments (April 2002). Available at SSRN: <https://ssrn.com/abstract=306781> or <http://dx.doi.org/10.2139/ssrn.306781>

SOCIAL CAPITAL AND THE SOCIAL EVALUATION OF INVESTMENTS

Introduction

In this paper, we wish to link the discussion of the importance of the existence of social capital in a community with the practical aspects of how the existence of social capital will affect the evaluation and selection of investment projects.

At its most fundamental level the existence of social capital results in the identification with a community by its members. (Serageldin, I. and Grootaert, C., 2000). When there is such an identification, then it is likely that the community will desire that all of its members achieve a minimum level of consumption of certain basic needs, such as security, health, nutrition, education, and housing. Communities with a greater amount of social capital will experience stronger feelings of mutual satisfaction created as a consequence of the achievement of a higher level of achievements of the basic needs of life by the less fortunate members of the community.¹

Expressed formally, such preferences can be incorporated into the utility function (U_i) of person i , say by

$$U_i = U_i (X_i, Y_i, U_j (B_j))$$

where U_j is the utility of someone else, and B_j is the j^{th} individuals level of basic needs achievement. If $\left(\frac{\partial U_i}{\partial U_j} \right) \left(\frac{\partial U_j}{\partial B_j} \right) dB_j > 0$ this person i will engage altruistic behavior, whereas if

$\left(\frac{\partial U_i}{\partial U_j} \right) \left(\frac{\partial U_j}{\partial B_j} \right) dB_j < 0$ he or she will demonstrate the malevolent behavior associated with envy.

¹ For a good discussion of the different types or concepts of social capital see Woolcock and Narayan (2000).

Becker (1976) discusses several situations where individuals have interrelated utility functions similar to this situation.

The existence of positive social capital creates a public good when everyone's level of satisfaction is enhanced by the increased private achievement of the basic needs of others. It has the property of non-rival consumption, as the positive feelings are available to whoever wishes to participate.

Investment Appraisal –Social Capital-Basic Needs

Before we consider how we might build the effects of social capital that into our investment appraisal we should recognize that when undertaking an investment appraisal we need to look at it from different points of view or perspectives.

Traditional investment appraisals generally restrict themselves to a financial analysis. The financial analysis considers the views of all those who have financial interest in the project, in particular the owners, and the bankers. The economic appraisal, however, goes much further than that and considers the overall impact on the nation's economy. It evaluates the additional purchases by consumers not by what consumers actually pay, but by how much they would be willing to pay. It also values the resources saved when a project displaces the supply from others by their economic opportunity cost. These economic values may also be very different than the financial benefits and costs using valued at market prices.

In the appraisal of investment projects that are undertaken for reasons that are not purely financial in nature, there has been a great deal of research done on how the benefits and costs should be measured, (Belli, P., 2001). In order to evaluate the impact of a project on the entire country a system of economic (shadow) pricing is used to capture the benefits and costs that accrue to those

who are not the direct financial stakeholders of the project. The economic analysis measures whether all the stakeholders of the project taken together are made better or worse off by these actions.

Typically, in the economic analysis alone there is no judgment made about the desirability of the distribution of the projects benefits and costs amongst the stakeholders in society. However, the evaluation techniques used in the stakeholder analysis enables us to allocate the benefits and costs to the various identifiable stakeholders, including the impact on the budgets of the different levels of governments (Jenkins, G. P., 1999). It is here that the decision makers must weigh the desirability of the distributive pattern of benefits and costs created by the project together with its prospective economic outcome to determine if it should be implemented. Of course, this decision should not be taken with each project in isolation. Rather it is the stakeholder impacts of the portfolio of investments being undertaken over time that is most relevant when considering the impacts of any single project.

If the project, through its impact on prices and incomes assists the poorer members of the community in achieving a higher level of attainment of the basic needs, we would expect that in societies where there is significant social capital an increase in the level of satisfaction of the better off members of the community will also occur.

The whole community will feel better when they know that poor individuals are buying certain items that are identified with the fulfillment of their basic needs. In this case when a project creates an opportunity for the poor to achieve a higher level of basic needs, this generates satisfaction in the community that is not measured by the traditional financial or economic appraisal of investments. The basic function of social capital as the catalyst for creating community wide externalities has been recognized by other researchers (Collier, P. 1998). In this

paper we are attempting to take this discussion one step further and provide a practical way of evaluating these community wide externalities arising from the increased level of basic needs achievement by the less fortunate members of the society.

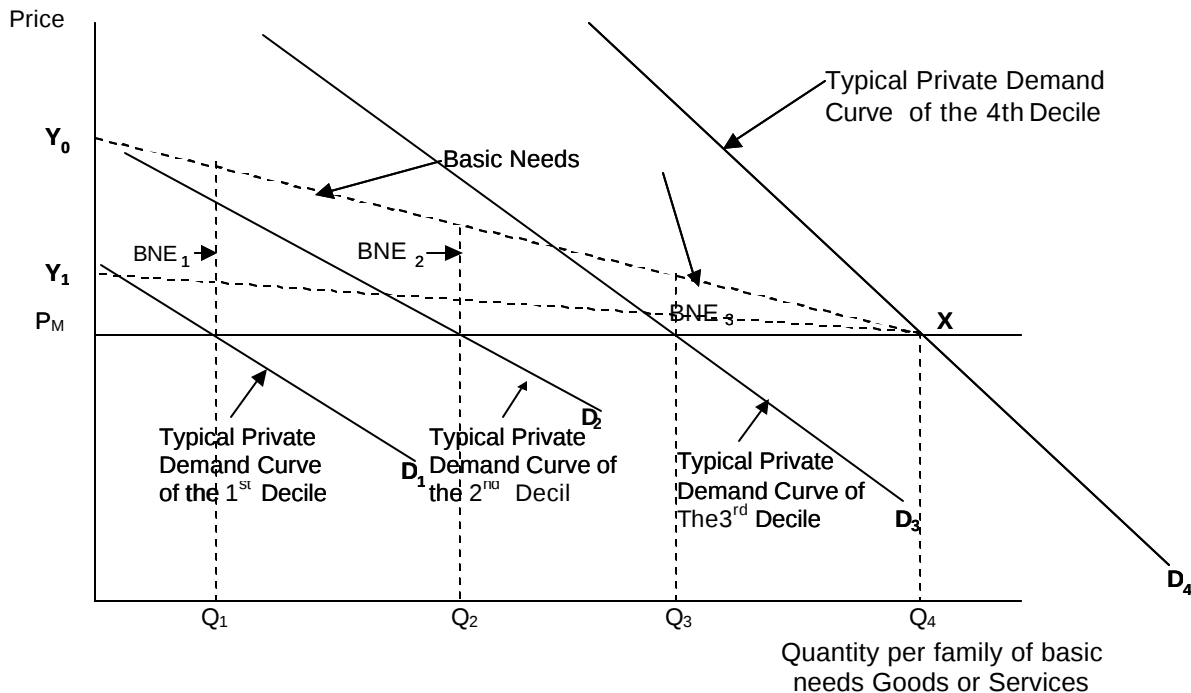
The basic needs externality approach is not new. Arnold Harberger (1984) first introduced it to include the social dimensions of a project into its economic appraisal. However, very few practical applications have been carried out to date. The rationale for the BNE approach is not just that the poor should have more income, but that they should have better nutrition, medical care, housing etc. In other words, we are looking at the results of the expenditures, not just the means for making the expenditure. If the poor get more income and decide to buy luxuries, or spend it on alcohol or gambling, this will not create a basic need externality. While most economic welfare analysis looks only at the level of well being of the recipients, a basic needs analysis also includes the impact of these expenditures on the welfare of those bearing the costs. In some situations a financial subsidy will be needed to increase the consumption of goods and services that will improve the level of basic needs achievement of the poor. If the basic needs externalities from the additional achievement of the poor are large enough, the rich will also be made better off, even if they are the ones who have to finance this subsidy. Such an economic rationale can explain the widespread practice of subsidization of essential public services consumed by low-income groups.

Basic Needs Externalities

In Figure 1, we illustrate the relationship between the private demand functions, D_1 , D_2 , D_3 , D_4 of four members of a society who have incomes that represent the averages of each of the four lowest deciles of the income distribution. The demand functions are for the services of those

items identified as basic needs for the society. Given the level of income of the people in the lowest decile of the income distribution, and a price of P_m , the private demand is a quantity of Q_1 . For people with income in the second lowest decile of income the quantity demanded is Q_2 , and so on for people in the third and fourth income deciles.

FIGURE 1: BASIC NEEDS EXTERNALITIES ASSOCIATED WITH EACH DECILE OF POOR



Y_0X is associated with high social capital.

Y_1X is associated with low social capital.

For illustrative purposes we will assume that the cohorts of people in the bottom 40 percent of the income distribution are the segments of the community for which others in the society get a positive external benefit, when their achievement of basic needs increases. For example, the better off groups in society will have their welfare improved if they know that poor people have better housing, especially if these people had little or no housing before. Or maybe the children of

the very poor people, who were able to get little or no education before, now get a better education. As a consequence of the achievements of the poor groups the rest of the society also feel better off. Hence, the overall economic welfare in the country is unambiguously improved. We would also expect that the community's basic needs externality is bigger for improvements in the satisfaction of the basic needs of the extremely poor people, than for additional achievements of those who are not so poor.

The basic needs externality is shown by difference between the lines $Y_0 X$ and the $P_m X$. What we are really saying is that the community's incremental externality becomes smaller per unit of private consumption once we consider higher income consumers. This is illustrated by the differences in the vertical distances BNE_1 , BNE_2 , and BNE_3 . In this case there is no positive externality for income groups from the fourth income decile and higher. The general feeling is that those in these higher income groups should look after their basic needs themselves. But there is a desire by the rest of society to see the less fortunate people improve the level of their basic needs satisfaction.

In fact we often find communities provide subsidized basic needs services to the poorer groups of society. If they finance these services by cross subsidization, they are in fact taxing the better off segments of the community in order to promote the consumption of these same items by the less fortunate. The fact that better off people politically accept cross subsidization pricing schemes, is evidence that basic needs externalities exist within many communities.

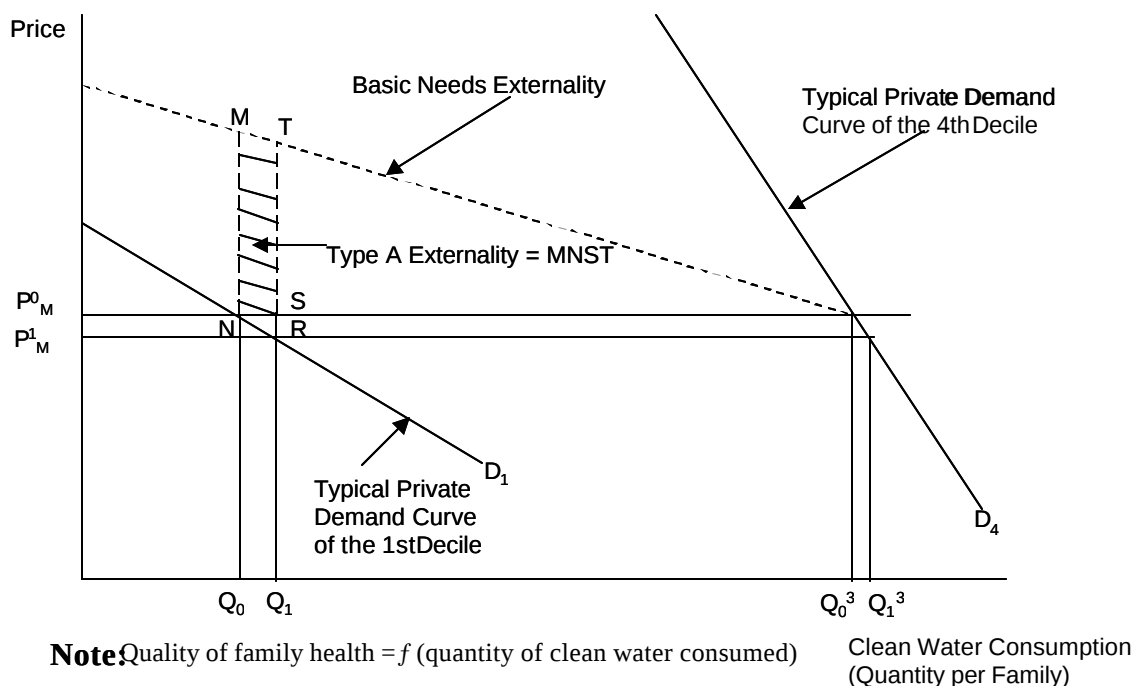
Now you would also expect that this premium would be smaller, the lower is the presence of social capital in the community. In Figure 1 the loss in the size of the basic needs externalities as

a consequence of a lower level of social capital is shown as the differences between line Y_0X and Y_1X . If there is no social capital there is no reason to have a basic needs externality. This is the theoretical framework that we wish to apply in our investment appraisals.

How Investment Projects Can Create Basic Needs Externalities

An investment project may have two impacts that will affect the level of basic needs satisfaction. If the project is producing a good or service, the expansion of the output of the project itself will usually lower the cost of the item to consumers. In the case of public utility services such as water supply or health services, the cost reduction often comes about through the improved access to the service, rather than through a lowering of the financial user charges.

FIGURE 2: BASIC NEEDS EXTERNALITY CAUSED BY A PROJECT THAT LOWERS THE COST OF A SERVICE
(EXAMPLE: POTABLE WATER PROJECT LOWERS COPING COSTS)



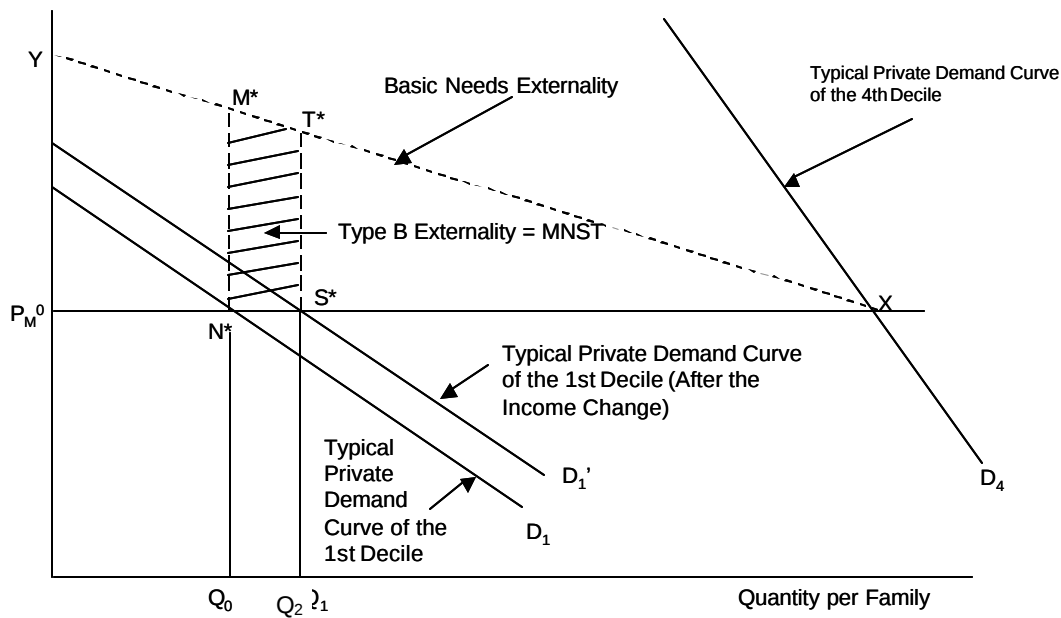
In Figure 2 we show the relationship between the price of the input to basic needs satisfaction, the quantity that will be privately demanded, and the size of the basic needs externality. In this case we consider those with an income level in the bottom decile of the income distribution. Before the implementation of the project, the market price for the service was P_m^0 , but after the project was in place the market price has fallen to P_m^1 . Because of this reduction in price consumers of these goods or services will increase the quantity they want to purchase from Q_0 to Q_1 . Or if people didn't have access to service at all, implementing the project may now provide access, hence, opening the possibility for the consumption of the good or service. The price effect of the project causes all the people, including the poor, to buy more. Because the poor people consume more of these inputs to alleviate their basic needs, the rest of the society feels good about it. The change in the value of this positive public good externality is shown as the area NMTS in Figure 2.

This area is determined by the fall in price brought about by the project, the own-price elasticity of demand for the item, and the magnitude of the externality that other people receive per unit of additional basic needs achievement. A similar basic needs externality will be created by the additional consumption of all households with incomes below a certain threshold. But the marginal externality will become smaller as we move from lower income cohorts to higher income ones.

Another way that a project can increase the size of the basic needs externality is by increasing the income of the poor. This may become about as a result of increased employment, or may be because the project causes a large drop in the price of a commodity on which poorer people spend

a significant proportion of their incomes. For example, a rural road or a bridge might greatly reduce the cost of transport to local markets, or a project may supply potable water at a fraction of its prior coping costs. The increased income will be spent on a variety of goods and services, some of which will increase the level of basic needs achievement. This is shown in Figure 3.

FIGURE 3: BASIC NEEDS EXTERNALITY CAUSED BY INCREASED DEMAND DUE TO THE INCOME EFFECT OF AN INVESTMENT PROJECT



In Figure 3 we again illustrate the situation of a consumer who is part of the cohort of people that make up of the first decile of the income distribution. Initially this consumer has a demand curve for the basic needs goods and services of D_1 . At the market price of P_m^0 the individual is consuming a quantity equal to Q_0 . When this person receives more real income as a result of the project, his or her demand function for these items will shift from D_1 to D_1' , hence, increasing the quantity purchased from Q_0 to Q_2 . . Because of the income effect of the project the basic needs externality is increased by the amount shown as $N^*M^*T^*S^*$ in Figure 3. The sum of these changes in the basic needs externalities over all the individuals in society measures the additional

benefit that should be added to the economic benefits of an investment project as a result of the existence of the social capital.

An Application of the Estimation of the Basic Needs Externality

Two questions remain. First, how can we go about to measure the size of the basic needs externality in the practical appraisal of a project? Second, does this externality have the potential to be large enough to have a significant impact on the decision of whether or not to undertake the investment?

To answer the first question we start by asking if the project's output is a direct input into the set of items whose consumption will enhance the achievement of a better level of basic needs satisfaction. If the project's output is not an input into the achievement of basic needs satisfaction, then we do not need to consider the impact of the changes in the price of the project's output or changes in the quantity demand on the size of the basic needs externality via that route. In this case the project may still have an impact on the incomes of the poorer strata of the society. The change in the income of the poor will lead them to consume more of the items that will allow them to improve their level of basic needs satisfaction. As a consequence the size of the basic needs externality will change.

The particular case we will consider in this paper is the Manila South Water Distribution Project (Korman, Jenkins and Shukla, 2002). The Metropolitan Waterworks and Sewerage System (MWSS) identified South Manila as the region with the greatest need for increased access to potable piped water in the Philippines. In this southern part of Metropolitan Manila, only about 30% of the area's population had access to piped water in 1990. The goal of the project was to

bring a sufficient quantity of high quality potable water to satisfy the demand for water of 85% of the region's households, while improving the health conditions caused by inadequate clean water supply and sanitation services in the region. The MWSS proposed to construct new clear water reservoirs and pumping stations, and expand its network of transmission mains, secondary distribution pipes and service connections. The primary investment was to be completed by 1995, but the project was to continue making additional investments in service connections through the year 2004. The total investment cost of the project was estimated at 1,369.5 million Philippine Pesos.

From the financial analysis of the project, we find that it has a marginally negative outcome with a financial NPV of about -21.86 million pesos. Hence, some subsidy would likely be needed if this project were to be undertaken by a private firm. The economic analysis indicates that the project has a net present value that is highly positive. The key question is, if the project is implemented, will the increase in the basic needs externalities enjoyed by the better off groups in this area be big enough to cause them to be willing to subsidize sufficiently the financial costs of the project?

The primary impact of this project is to reduce the price of water used for drinking and cooking to a large number of people, and to increase the availability of water to some households who do not pay for the water they consume. The cost of water used for washing will be reduced somewhat, but we assume that the health impact of consuming more clean water is primary due to its use for drinking and cooking. The increased availability of potable water is accompanied by a dramatic fall in the price of water for drinking and cooking causing the total amount of consumption for these purposes to increase. As compared to the price charged by vendors, the

implementation of this project will cause the cost of drinking and cooking water to fall by about 90 percent.

A basic needs externality arises due to an increase in the consumption of clean water for drinking and cooking. This is estimated to be equal to 5 percent of the incremental potable water provided by the project. The magnitude of the externality per cubic meter of additional consumption is assumed to be equal to between 20 and 40 percent of the cost of supplying the water to low income groups. This corresponds to the rate of subsidy for water consumption of the poor that we frequently find expressed in the preferential water rates charged to these groups elsewhere in the Philippines. So for our estimates here we use an average rate of basic needs externality of 30 percent of the cost of supplying the increased water used for drinking and cooking by those in the bottom and 40 percent of the distribution. Within the group of consumers who were paying for their water use both before and after the project, we estimate through the use of an income and expenditure survey (Family Income and Expenditure Survey, 1994) that 40 percent of these people are classified as being in the bottom 4 deciles of the income distribution.

There is a substantial increase in the water being made available to some households free of charge with this project. These households tend to be much poorer than the average for the entire community, so we assume 70 percent of the increased water supply will be consumed by people with incomes in the bottom 4 deciles of the income distribution. Of the total increase in the water consumed by that group, 5 percent will be used for drinking and cooking purposes. The results of these estimations are presented in Table 1.

TABLE 1 PRESENT VALUE OF BASIC NEEDS COMMUNITY EXTERNALITY FROM INCREASED CONSUMPTION OF WATER BY POOR* DUE TO LOWER PRICES

Types of Consumer	Present Value of Externality (Millions of Pesos)
Non-Paying Consumption ^a	4.25
Paying Consumption ^b	15.50
Total Basic Need Externality from lower prices	19.80

^aProportion of total increment water used for drinking = 5%, Proportion of non-paid for drinking water consumed by lowest 4 deciles of income distribution = 70%, Value of basic needs externality /m3 of target consumption is 30 percent of financial cost of supply.

^bProportion of total increment water used for drinking = 5%, Proportion of paid for drinking water consumed by lowest 4 deciles of income distribution = 40%, Value of basic needs externality /m3 of target consumption is 30 percent of financial cost of supply.

We find that the basic needs externality arising from the increased consumption of water due to the improved access and lower price amounts to about 19.80 million pesos. This amount in itself is almost twice the size of the shortfall in the NPV of the project.

From the feasibility study of the Manila South Water Distribution Project we can determine a number of stakeholder impacts. These impacts are the increase or decrease in the present value of the well being of various groups in society, in addition to those who have a direct financial interest in the project. In this case the stakeholders that have been identified are the Government, non-paying water users, paying users, the skilled labor working on the project, and the previous water vendors in the area. (Korman, Jenkins and Shukla, 2002) These stakeholder impacts are presented below in Table 2.

TABLE 2 ALLOCATION OF STAKEHOLDER IMPACTS OF PROJECT**Manila South Water Distribution Project**

Stakeholder	Present Value of Impact (millions of Pesos)
Government	17.22
Non-Paying Users	446.33
Paying Users	858.09
Engineering Labor	24.38
Water Vendors	-14.52

From Table 2 we find that the government gains 17.2 million of additional tax revenues. Non-paying users will receive an income effect from the increased availability of drinking and washing water for free that has a value to them of 446.33 million pesos. Some of these people were purchasing water from vendors and pumping from wells. Others were getting restricted amounts of free water from the public system, and now have access to increased supplies. Paying users are by far the biggest class of beneficiaries and gain 858.09 of benefits over and above what they now have to pay for the water. The skilled labor improve their standard of living by the amount of 24.38 million pesos, while the water vendors who are made redundant have a loss in net income of 14.52 million pesos. From these values we need to estimate the proportion of the income benefits and losses that accrue to the bottom 4 deciles of the income distribution.

To make this estimate we use the same factors as were used in the allocation of the additional water consumption. It is assumed that 70 of non-paying uses are poor, 40 percent of paying users are poor and 70 percent of the water vendors are poor. Where we define poor as people who are

in the bottom 40 percent of the income distribution. The values of the impact of this project on the incomes of the poor are shown in column 1 of Table three. The poor non-paying users are estimated to gain 312.43 million pesos because of the drop in the price of drinking and washing water, in the same way the poor paying users are estimated to gain 343.23 million pesos. Poor water vendors lose 10.16 million pesos, because they no longer are competitive suppliers of potable water. We assume no basic needs externality arises due to changes in the revenues of the government or income of skilled workers.

The next step is to estimate how these changes in income will affect the poor's demand for goods and services that will affect the achievement of their basic needs such as the quality of housing, nutrition, health, and child education. Given the normal expenditure patterns of low-income households a conservative estimate is that 70 percent of any additional income they receive will be spent on these types of basic needs goods and services, such as housing, food, clothing, health related expenditure (Family Income and Expenditure Survey, 1994). The basic needs externality enjoyed by the better off groups from this additional consumption of the poor, is again set at 30 percent of the amounts of additional expenditures made by the poor in the community. The final estimate of the value of the basic needs externality is calculated as the product of the income change of the poor, times the marginal propensity to consume of the basic needs enhancing goods and services, times the rate of basic needs externality created by additional expenditures on these goods and services. The estimates for the case of the Manila potable water expansion project are shown in column 2 of Table 3.

TABLE 3 BASIC NEEDS COMMUNITY EXTERNALITY FROM IMPROVED HOUSING, NUTRITION, HEALTH, EDUCATION OF POOR* FROM INCREASED REAL INCOME

Stakeholder	Value of Impact (millions of Pesos) (1)	Basic needs externality 30% premium (2)
Non Paying User ^a	312.43	45.93
Paying Users ^b	343.23	28.83
Water Vendors ^c	-10.16	-1.49
Total	645.50	73.26

*The poor are defined for this purpose as those in the bottom 40 percent of the income distribution.

^aPoor receive 70% of income change; proportion of income spent on basic needs = 70%;basic needs externality = 30% of value of additional private expenditures on basic needs.

^bPoor receive 40% of income change; proportion of income spent on basic needs = 70%;basic needs externality = 30% of value of additional private expenditures on basic needs.

^cPoor receive 70% of income change, proportion of income spent on basic needs = 70%; basic needs externality = 30% of value of additional private expenditures on basic needs.

We find that the basic needs externality that is create by the income effects of the project on the consumption by the poor amounts to a total present value of 73.26 million pesos over the life of the project. Of this total, the group of poor, but paying, users who will be able to purchase potable water at about 7 percent of the price that they were paying for drinking and cooking water from the water vendors. This increase in their real income results in a basic needs externality of about 28.83 million pesos.

In table 4 we bring together the two sources of basic needs externality associated with this project. As this project produces potable water that is a direct input into the achievement of a better health status of the household, we find that the non-poor receive an external public good

benefit of 19.80 million pesos. Second, because this project reduces the cost of potable water by over 90 percent, the income effect is so large that it creates a substantial increase in the consumption of the poor, and a substantial basic needs externality amongst the non-poor of 73.26 million pesos. The total present value of the basic needs externality as a result of the implementation of this project is estimated to be equal to 93.05 million pesos. This is an amount of economic benefits that should be added to the direct economic benefits that comes from the improved water services enjoyed by the customers and from reduced operating costs.

TABLE 4 IMPORTANCE OF BASIC NEEDS COMMUNITY EXTERNALITIES

	<i>Present Value (Millions of Pesos)</i>
PV basic needs externality due to price effect 30% premium	19.80
PV basic needs externality due to income effect 30% premium	73.26
PV total basic needs externality	93.05
PV total cost of project	1369.5
Ratios of basic needs externality to total investment costs	0.07
PV of financial shortfall	(21.86)
Ratios of PV basic needs externally/ PV financial shortfall	4.26

In table 4 the present values of the basic needs externality are compared to the present value of the investment costs of the project. The result is that the basic needs externality is equal to approximately 7 percent of the value of the initial capital costs. As compared to the financial shortfall, the basic needs externality is 4.3 times as large. Because the basic needs externality is enjoyed by the better off groups in the society, the value of this externality tells us the minimum

amount that the richer people can provide as a subsidy to this project without being made worse off.

For this type of infrastructure project that improves the quality of a service that is a direct input into the achievement of a basic need (health), and also creates a significant income effect, the value of the basic needs externality may be quite important. In this case the basic needs public good externality is relatively large as compared to many of the other adjustments we normally make to the financial data to obtain economic values, such as the economic opportunity cost of labor and the premium on foreign exchange. Another way of understanding its relative magnitude is to compare it to the total investment cost of the project. Here, we find that the premium amounts to 7 percent of the initial investment cost. It is not so large as to justify high rates of subsidization of such infrastructure projects, but it is significant. In this case a grant of substantially less than 7 percent of the initial investment cost of the project would be more than enough to cover the financial shortfall of the project. This level of a grant, would make the recipients of the service better off, and at the same time make those who provide the funds for this grant to also feel better off. They get more benefits from seeing the poorer achieve a higher level of basic needs than it costs them through the subsidy to make the project financially feasible.

Conclusion

The behavior of certain societies to provide subsidized services to the poorer elements of their population does not mean that the rich are made worse off as a consequence of this transfer. If a society has a high level of social capital, then the better off will reap enjoyment from seeing the poorer elements achieve a better level of basic needs satisfaction. This basic needs externality does not come about just because the poor have more income, but it comes about because the

richer groups who finance the subsidies get benefits from seeing the poor groups improve their living conditions in specific ways that the community has determined to be basic needs.

In some countries we find a high degree of social capital gets translated into the willingness of their governments to publicly finance many items that are considered as basic needs. Such countries tend to provide a greater degree of subsidization and public sector management of services such as health care, public education, and housing that are provided to the poor. This paper would argue that this demonstrated behavior is caused by something that is much more fundamental than a historical accident. Such societies have usually invested in social capital over time and as a consequence there is a broad consensus for these actions. Expenditures that make the poor better off also make the rich feel better off. In countries that have a low level of social capital, such expenditures will make the rich feel worse off, because they pay for the expenditures and do not receive any basic needs externality.

REFERENCES

1. Becker, Gary S. (1976), *The Economic Approach to Human Behavior*, Chicago: The University of Chicago Press.
2. Belli, Pedro et al (2001). *Handbook on Economic Analysis of Investment Operations*, World Bank Institute: Washington.
3. Collier, Paul (1998). *Social Capital and Poverty*. Washington, D.C.: World Bank.
4. Harberger, Arnold C. (1984). "Basic needs versus distributional weights in cost-benefit analysis" *Economic Development and Cultural Change*.
5. Harberger, Arnold C. and John Evans (1997). "Summary of Approaches to Basic Needs Externalities and Suggestions for Further Work." Memorandum.
6. Herrin, Alejandro and Rachel Racelis (1994). *Monitoring the Coverage of Public Programs on Low-Income Families: Philippines, 1992*. Integrated Population and Development Planning Project, National Economic and Development Authority.
7. Korman, Vijdan, Jenkins Glenn P. and Shukla G.P. (January, 2002) "Potable Water Supply Expansion: The Manila South Water Distribution Project", Department of Economics, Queen's University, Canada.
8. Jenkins, G. (1999). "Evaluation of Stakeholder Impacts in Cost-Benefit Analysis," *Impact Assessment and Project Appraisal*, Vol. 17, number 2.
9. Lanzona, Leonardo (1997). "Measurement of Basic Needs Externalities: Education and Nutrition." Report submitted to the Public Investment Staff, NEDA.
10. National Statistics Office (1995). "1994 Family Income and Expenditures Survey". Press Release No. 95-36.
11. Serageldin, Ismail and Christian Grootaert (2000) "Defining Social Capital: An Integrating View", in Partha Dasgupta and Ismail Serageldin (eds.) *Social Capital: A Multifaceted Perspective*. Washington, D.C.: The World Bank.
12. Woolcock, Michael and Deepa Narayan, (2000) "Social Capital: Implications for Development Theory, Research, and Policy" *The World Bank Research Observer*, Volume 15, Number 2, 225-251.