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The Use of Grants to Address Market Failures

*A Review of World Bank Rural
Development Projects*



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Foreword

In the past decades the main thrust in rural development has shifted from a public-sector-led to a market- and private-sector-based approach. Nowadays delivery of inputs, services and credits, and marketing of produce are largely seen as private sector roles, and in many countries privatization and liberalization have been implemented to reduce the role of government. With this shift the approach in rural development changed from public service delivery to creating conditions favorable for market and private sector development. Within the new framework subsidized delivery of credit and fertilizers were correctly seen as obstacles for market and private sector development. The new questions for development agencies were what tools and interventions could be used in rural development to reduce poverty, create employment and improve choices available for consumers (World Bank, 2003a). Particular questions to be addressed were how to enhance market and private sector development. These questions had some urgency since it appeared that in many cases private sector activity developed slowly after privatization and liberalization. In many cases it appeared that a good investment climate required more than liberalization. In particular market failures were often mentioned as obstacles for market and private-sector development.

In recent years, there has been a rapid increase in use of grants for enhancing private economic activity in the World Bank's rural lending. Governments use World Bank loans for providing these grants. There are concerns about this. Grants can indeed be used to overcome market failure and as such they can be a welcome instrument. However, grants are a subsidy and there is concern that they are in fact sometimes misused for providing undesirable subsidization of inputs and credit through the back door rather than for overcoming market failures. Moreover, the design of grant schemes is difficult and their allocation mechanisms expensive, which raises concern about their cost-effectiveness.

Unfortunately, there is limited guidance and empirical information about the use of grants in rural lending. This paper aims to fill some of these gaps in information. It mainly focuses on the use of grants for overcoming market failure and related design issues in lending. The paper discusses theoretical and empirical issues, and proposes a framework for assessing and designing grant schemes, which will enhance Bank staff's capabilities for preparing grant schemes.

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Acronyms and Abbreviations

BDS	Business Development Services
DFID	Department for International Development (UK)
ECA	European and Central Asia Department (World Bank)
ERR	Economic Rate of Return
OBA	Output Based Aid
OED	Operation and Evaluations Department (World Bank)
PAD	Project Appraisal Document
TDI	Consultancy Bureau (Ireland)
TDS	Technical Diffusion System

Introduction

Grants can be used to promote private economic activity and, hence, to enhance growth of income and employment. The focus of grants differs between sectors. In near-market agricultural research and extension, grants are used to promote private investment in development and dissemination of technology (Byerlee and Echeverría, 2002). In market and enterprise development, grants can be given to private enterprises, including farms and other household enterprises for investment efforts, especially in training, technology, and innovation. In community-driven development, grants are used for income-generating investments in community-managed projects and for economic activities at the household level.

Governments can promote investment and supply of services by providing grants to service providers, such as organizations for research, extension and training, or project development facilities. Increasingly grants are given to promote demand by supporting recipients directly through vouchers and competitive grants, or through demand-driven business development services (BDS). There are mixed forms as well among the many modalities, which target both supply and demand.

This paper focuses primarily on the justification of grants as a mechanism to overcome market failure. Since grants are a subsidy the question of justification is a central one. Some attention will be given to the role of delivery mechanisms, since these can have a dominant impact on the effectiveness and cost-effectiveness of schemes, but for a detailed discussion of modalities the reader is referred to various excellent sources on these subjects. (Phillips, 2000; Committee of Donor Agencies for Small Enterprise Development, 2001; Steel and Phillips, 2003).

Grants are defined here as a one-time subsidy for a concrete investment activity, including expenditure on economic services with some mixed public and private goods characteristics¹. Long-term subsidy schemes for producing public goods elements in social services (e.g., grants for basic research, health and education) and environmental protection are not discussed. Grants for providing assets to the poor are discussed only to the extent that they impact on the development of markets and sustainable forms of economic activity.

This report is organized in three chapters. The next chapter provides an overview of literature and issues relevant for design of grants components aiming at overcoming market failure in rural areas. It is followed by a chapter that reviews how the selected 12 lending projects are dealing with the main issues and discusses the findings. The final chapter discusses findings and presents conclusions and recommendations.

¹ The literature on small enterprise development commonly speaks of service delivery. The focus on service delivery can be useful in many cases, but for justification of grants it is important to highlight the investment nature of the goods and services referred to. Training often is an investment activity with spill-over aspects as well as a service to be delivered.

Overview of Literature and Issues

Theoretical perspective

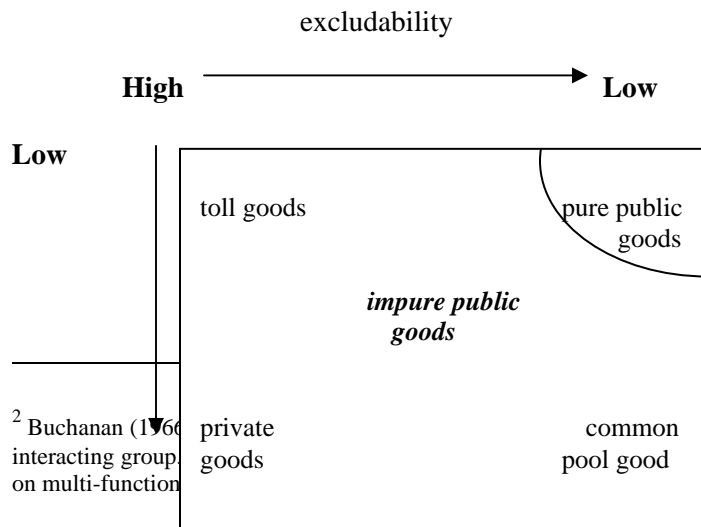
Grants are an instrument of government policy. Their use should be based on sound theoretical and empirical analysis, and their implementation well-coordinated with other policy instruments. A relevant departure for discussing grants is the literature on externalities and public goods. (Cornes and Sandler (1996) present an overview.)

Market failures are rooted in the nature of goods. Private goods are characterized by full excludability (potential users can be excluded from use by the owners) and full rivalry (goods can only be used once) of the benefits of the goods. Pure public goods are characterized by the absence of both. Most consumption goods, such as marmalade and cars, are private goods, which the market will provide. Examples of pure public goods are laws to regulate markets and national defense security. Markets will not provide pure public goods.

In addition to pure public goods there are many impure public goods. They are any goods that are not pure private or pure public goods. Toll goods and common pool goods are special cases. Toll goods are non-rival goods, for which users can be excluded by the private sector, possibly with help from government through proper regulation. ?? are an example. Common pool goods are rival goods for which it is difficult to exclude users, for which scarce natural resources, such as fish stocks in the oceans, are an example. If the number of potential users is small, local institutions or bargained contracts between private parties may ensure efficient provision and use. Otherwise, their sustainable use requires public action which does not come without cost.

These stylized characteristics of goods are all defined as extreme cases in terms of the presence or absence of rivalry and excludability and presented in the four corners of the quadrant in Figure 1.² In practice, however, most impure public goods have shades of rivalry and excludability characteristics. Many impure public goods are produced by private enterprises. But, because of incomplete rivalry or excludability they are characterized by externalities. Their net marginal benefit to producers can be lower than to society. For many impure public goods market conditions may render the private provision of various goods unprofitable, despite their social profitability. Consequently, there can be under-provision or no provision at all. In other words, markets may be partly or fully missing.

Figure 1. Type of Goods

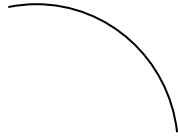


² Buchanan (1960) on multi-function interacting groups

kinds of goods, characterized by indivisibility and size of impure public goods is found in an OECD (2000) report

rivalry

High



Source: Adapted from Van der Meer (2002)

Cornes and Sandler (1996, p. 41) give four basic reasons for possible missing markets. First, it may be impossible or too costly to define and enforce property rights. As a result, benefits spill over to users who do not pay. Second, the cost of operating a market can be too high to be profitable. In particular the set-up costs of new markets may be too high to attract investors. Third, competitive markets cannot emerge if the number of buyers and sellers is too small. Fourth, existence and performance of markets is related to availability of information. Many potential investors may be unaware of market possibilities in product, input and technology markets and collecting such information could be too costly. Obviously, several of these reasons can play a role simultaneously and have a cumulative negative effect on economic development. If market failure is strong it can result in a quasi equilibrium low-level commercialization of the rural economy, as can be observed in many developing countries.

Provision of goods by the public sector is in many cases not attractive. Even the provision of public goods by the Government can be economically inefficient. By nature of the characteristics of public goods public servants are uncertain about the true interests of their constituents and asymmetric information can also play a distorting role. So there can easily be over- or undersupply of public goods. Self interest of public servants can add further inefficiencies. (Cornes and Sandler, 1996, pp. 34-5)

Provision of impure public goods by the government meets similar problems and moreover, government employees may lack adequate knowledge for meeting market demand. So, in the case of private delivery there is market failure and in the case of government delivery there is policy failure. The risk of both failures needs to be assessed in project preparation.

Proper interventions by government may help the private sector in overcoming market failure by providing an adequate mix of information, public infrastructure, protection of property rights, investment resources, etc., and make private investment sufficiently profitable. And by solving the market failure, a competitive market for private providers can emerge.

The nature of goods and externalities related to them can change over time. Through technological, legal and institutional development impure public goods can gradually take on stronger characteristics of a private good, i.e. excludability and rivalry. Two examples can illustrate this. First, when radio and TV emerged the use of broadcasting products was non-excludable and non rival. Therefore broadcasting depended largely on public provision. Since that time, commercial use of TV for advertising, the development of pay TV and cable TV have completely changed the role of the public sector. Second, developing plant varieties of open pollinated crops was in the past a public responsibility because of the strong spill-over effects. With strengthened property rights and improved enforcement, spill-over of benefits of plant breeding to non-payers could be reduced. Moreover, with hybrid-breeding and terminator genes there are also technological solutions to increase excludability. This means that in many fields market failure can become less of an obstacle in the process of development. Public intervention should therefore focus on areas where institutional development, technology and investment can enhance the development of competitive markets.

On Kaldor-Hicks efficiency grounds, governments should intervene where the benefits are bigger than the cost of intervention (Zerbe and McCurdy, 1999, p. 571). Externalities and related market failures are at

first sight priority areas for intervention. However, they are ubiquitous and cannot be addressed all at the same time. Moreover, not all market failures can be solved efficiently by government and not all pose serious obstacles for increased private investment and production. Therefore, governments should perform with priority those functions for which its powers of coercion give it an absolute advantage. Market failures that deserve priority are those in which government action can lower transaction cost sufficiently to produce significant welfare gains (Zerbe and McCurdy, 1999, p. 572).

Issues for Assessing Grants Schemes

Views differ on whether providing grants to address market failure is legitimate, effective and efficient, and when grants are the best instrument to be used. In the following sub-chapters the most important issues for analysis are discussed.

Obstacles for private investment and possible remedies

Policy makers often try to justify their preferred interventions on grounds of purported market failure. Uncertainty about prevalence, impact and best remedies to mitigate market failures leaves much room for wishful thinking and for political and ideological preferences in public expenditure. Loose claims of market failure can easily result in misguided interventions with grants. Although economic policy making is more an art than a science, good economic analysis can make important contributions to the decision-making processes. And, with systematic ex ante and ex post analysis, more information becomes available to improve decision making.

Despite uncertainties, much can be said about the prevalence of market failure and the desirability of proposed interventions to address them. The fact that the private sector does not invest in certain fields is not necessarily a sign of market failure. Several examples illustrate this. First, expected profitability may be too low for many reasons other than market failure. Lack of formal rural finance services as such is not necessarily a proof of market failure; it may be the result of government policies and regulations, and it may also reflect low effective demand. Lack of use of modern technology and low levels of market integration may primarily be caused by lack of profitability rather than being tokens of market failure.

Private investment and production can be hampered by the following factors:

- ❑ lack of public goods, such as infrastructure, legislation, information
- ❑ lack of economies of scale; there are lumpy investments for which no enterprise has sufficient size
- ❑ long maturation of the investments; private investors cannot wait that long for returns
- ❑ high risk; certain activities may be too risky for individual private enterprises but expectedly profitable for society at large
- ❑ high transaction or information costs
- ❑ high cost of protecting property rights

A closer look at each of these factors will show what public intervention may or may not achieve.

If lack of infrastructure with a public-good nature causes higher private investment costs or higher operation costs to producers for providing certain goods, for example, milling of grain without electricity, public investment that solves these deficiencies in electricity supply is likely to be the best solution.³

Grants for reducing the high cost of production does not solve anything. Similarly, deficiencies in law and regulations cannot be corrected effectively by grants.

In many cases, lack of economies of scale can inhibit private sector activity. This will not automatically be solved by grants. In some cases collective action, e.g., cooperation of enterprises may be an effective solution, for which government may provide a favorable institutional and policy environment for collective action, as part of which grants could play a role. For example, grants could be justifiable for establishing privately operated marketplaces.

High risks can have many causes and many possible solutions. Long gestation periods for investment may increase risks. For generic exogenous risks, the development of private insurance markets may be stimulated. In some cases it may be justifiable to reduce risks by grants. However, if government interventions in markets are the main source of risk, grants are certainly not the best solution. Risks related to political instability are also unlikely to be a good reason for risk reducing grants. Governments can help reduce risks for private investors in several ways, especially by improving transparency of public policies and reducing information and contract enforcement costs.

The accumulated transaction and information costs in the supply chain may be so high that profitability for investors is seriously eroded, or, if costs are forwarded to buyers, prices may be so high that demand dwindles. If high transaction costs are the result of poor public policies or deficient infrastructure, grants may not be a good instrument to reduce transaction costs, unless they solve the bottlenecks. But where lack of technology, information and trained staff play a role, grants may be useful. If start-up enterprises face high information and transaction costs to get off the ground, starter grants could be useful.

Lack of property rights can result in spill-over of benefits to non-paying users and lead to under-supply. Establishing and enforcing property rights will in principle be the best solution. However, if enforcement costs are too high grants may help. This situation can occur with the development of more productive open pollinated plant varieties, especially for less commercial areas, and government can properly provide subsidies for their development.

Grants are in general not neutral interventions. If they are based on the wrong assumptions and analyses they can have harmful effects on market development. If not used appropriately, grants can crowd out the commercial provision of services and thus undermine the objectives of impact, outreach, cost effectiveness, and sustainability. Grants can be given for activities, goods and services with a public goods element[?]. They should as much as possible be designed in such a way that they are market creating and not market distorting (Phillips, 2001).

Examples of grants that are generally justifiable (but not automatically without further scrutiny) are: grants for training of skills, technology, innovation, access to information, starting a business, project preparation, participation in trade fairs, private investment in local infrastructure, private investment in networks and lumpy capital with externality, and collective action for mutual benefit with spill-over effects.

Examples of grants that are generally not justifiable are: Grants for private goods used as current inputs in production processes, such as construction materials, fuel, and fertilizers. For example, subsidized agricultural inputs have in many cases crowded out private sector suppliers. Subsidized credit has discouraged the development of sustainable private rural finance institutions.

The BDS report (Committee of Donor Agencies for Small Enterprise Development, 2001) recommends that cost-benefit analyses be made to predetermine whether the development impacts of using grants outweigh the distortionary effect that they can have. It also recommends that grants (subsidies) be directed primarily before transactions, or as much as possible in such for one-time investments (e.g., product development).

Analysis of Costs and Benefits

Two factors make measuring the economic rate of return (ERR) difficult. First, the impact of solving a market failure is difficult to assess because of spill-over effects. Second, designers of demand-driven grant schemes face uncertainty about the applications that will come forward. In the remainder of this chapter, methodological issues of estimating costs and benefits in grant schemes are discussed.

Although many community driven rural development projects provide grants for promoting economic activities, the reports reviewing these projects focus mainly on social rather than on economic assessment (Wiens and Guadagni 1998; Owen and Van Dommelen 1998). In their paper issued for the World Bank on designing rules for demand driven rural investment funds, Wiens and Guadagni (1998, p. 3) mention eight primary policy objectives that demand-driven investment funds should meet. The only economic one is: “choose projects that are economically viable”. In their findings Wiens and Guadagni (1998, p. xvii) report that the projects they reviewed included few income-generating projects, “productive-type projects” they call them, and that there is little base for drawing conclusions about their relative quality. Scanty evidence from Mexico suggested that these sub-projects may be less sustainable than projects addressing basic needs, and screening subprojects for feasibility did not suggest that this led to better quality. Wiens and Guadagni state that full economic evaluation of all sub-projects would be a costly strategy, but they complain that little has been done to develop and apply rules of thumb for screening.

Of particular interest are analyses by Biggs (1999) of a Bank-supported grant scheme for technology diffusion to private enterprises in Mauritius. The project appraisal document had purported market imperfections, causing under-investment in technology-transfer activities by the private sector. According to Biggs the essential questions in such cases are whether the intervention would generate sufficient additionality⁴ gains to justify public investment into the private sector. And, if so, whether there would not be another sector that needs the investment too, and that would have a higher social benefit. In his report he concluded that the technology diffusion service in Mauritius may have functioned but that the additionality of the project was limited. Not less than 80% of the respondents claimed that without grant support they would have made the technology transfer investment on their own.

Biggs uses a scheme to illustrate which projects should receive grant support and which not (Figure 2). Projects in quadrants A and C are so called ‘bad’ projects for which net benefits to society are negative. Nevertheless, firms will invest in projects in Quadrant A, because they can make a profit. Projects in quadrant C are profitable neither for firms nor for society and not likely to be funded privately. The projects in quadrant B are profitable and get the necessary input from the private sector, so there is no need for grants for these projects. Projects in quadrant D, do not get funding from the private sector, though the net benefits for society are positive. Firms should get grants for these projects. Technology dissemination services are impure public goods, but those provided for projects in B are sufficiently profitable for the private sector to be privately funded.

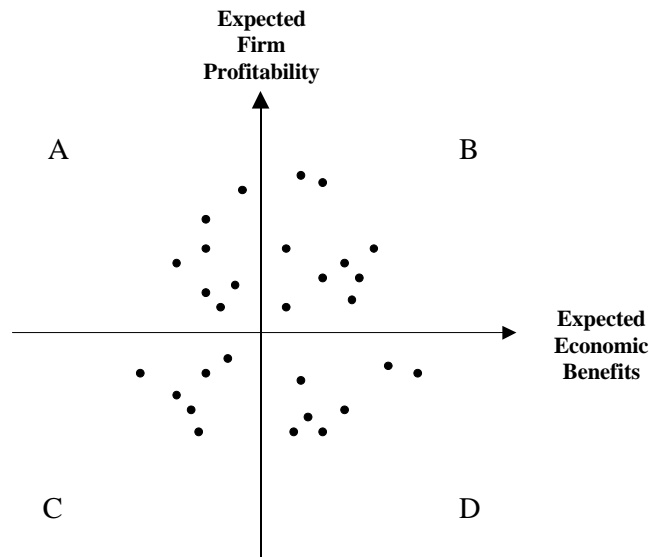
What does this mean in terms of aggregate cost-benefit analysis for a scheme with a large number of supported projects? Selecting projects that are not economically beneficial (A and C) will reduce the ERR. Unnecessary support (B) will also reduce the ERR, but much less since the private sector will reallocate scarce resources. Only administrative costs by the implementers of the scheme and the applying firms are a net loss for the economy. The ERR could increase with increased efforts on selectivity (only good projects from D receive funding), but probably there is a trade off in increased handling cost. Interestingly, Biggs does not assess the possible externality, i.e., the spill-over effects of the interventions.

⁴ Additionality refers to projects that are executed only because a grant is received, and that would not have taken place without the grant.

Moreover, requirements of legitimacy and equitability, criteria not discussed by Biggs, may increase handling cost and thus reduce ERR.

In conclusion, it should be noted that a cost-benefit framework provides a better base for assessment of the economic impact of grant schemes than do the additionality criteria proposed by Biggs.

Figure 2: Conditions for successful project selection



Source: Biggs (1999)

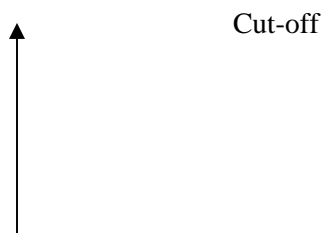
Sustainability of impacts of grant schemes can be an important issue for calculating the ERR. Investments become profitable by receiving grants. One-time investments, such as investments in training and set-up costs can have a permanent impact if the market failure is solved. But, if the market failure is not overcome the grants may promote temporary activity only. Grants for current inputs can be ineffective and harmful. If, for example, current inputs such as fertilizer are very expensive because of high transaction costs, grants may only have a temporary effect on use, since grants have limited effect in addressing the market failure. In this case the effects of grants are not sustainable and the result would be a low ERR.

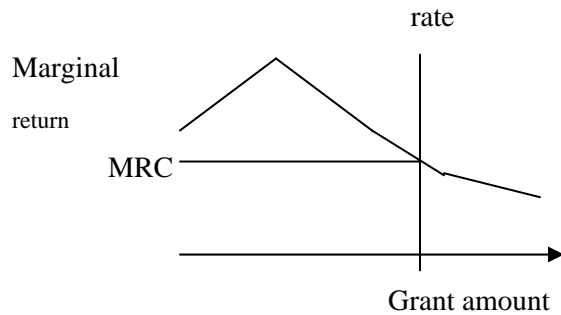
The Optimal Amount of Grants

An important question in ex ante economic analysis is the optimal grant percentage and the amount of grants that can be given to particular investments, to individual applicants and to identified target groups. Figure 2 can be used to illustrate the minimum grant amounts that would be needed. For projects in quadrant D the grants should be sufficient to bridge the distances from each point to the abscissa in order to bring the investments to minimal private profitability.

In general it will be costly and difficult to tailor grant percentages for individual sub-projects. Therefore, ex ante evaluation should be made to estimate cut-off rates. For a target group, the number of applicants and minimum and maximum grant amounts per applicant should be assessed. Most likely there is a hill-shape relation between the amount of grant and the marginal return to grants. (Figure 3). Grants can be given to the point where the marginal return equals the marginal resource cost of the scheme, which should then be the cut-off rate.

Figure 3. Marginal return of grants.





Different sectors, same principles

In project design there is often a narrow sectoral perspective and an assumption that each sector deserves its own approach and that general perspectives have limited relevance for individual sectors. This is a wrong assumption. Sectors are indeed different, but economic principles are the same. This will be illustrated with examples from CDD and rural finance.

Community-driven projects use grants for a variety of purposes. Some are aimed at income transfers and provision of basic needs (e.g., safety nets), or investment in social infrastructure (e.g., health and education). Increasingly, however, grants are aimed at providing productive assets to poor communities or poor households, e.g., a grain mill, irrigation or transport equipment and experimentation with and demonstration of agricultural technology. A third group are activities at the community level that combine safety-net and income-generating activities, as is the case with food-for-work in construction of infrastructure. Sometimes lump-sum grants are given for whatever assets or working capital the poor seek to acquire.

In all cases where there are private providers of goods and services, or where they should be encouraged to enter markets, grants can be distortionary. Grants for income-generating assets in CDD projects could increase activities to unsustainable levels, provide unfair competition with existing small enterprises and crowd out unsubsidized activity. Such pitfalls may be aggravated by any bias toward community-managed activities and against individual private investments. Therefore, principles and approaches for market-based BDS as recommended by the Committee of Donor Agencies for Small Enterprise Development (2001) should be applied where possible. Activities combining income generation and social safety nets may be justified on social grounds, but assessment should focus at least on acceptable cost-effectiveness of the intervention and on avoiding undesirable side-effects on development of markets and enterprises.

Providing financial services in rural areas is a normal private sector activity. There are reasons why such services often develop slowly. Demand for formal financial services develops with commercialization of the economy. The expansion of markets for formal financial services can be hampered by market failure and there are good arguments to provide public support for accelerating this process. Targeted credit lines and credit subsidies have proven to be the wrong approach (World Bank, 2003b). Grants, if provided on proper theoretical grounds and good empirical analysis, can be a useful tool. They can be given to financial service providers for capacity building, e.g., performance-based lump sum investments in staff-training, Management Information Systems, product development, and sometimes for expanding the branch network. Preferably, grants should be demand-driven, enabling financial service providers to provide services on commercial terms. Grants that, in fact, subsidize the cost of credit to users, often given with the aim to introduce new technology, should be avoided. It is also important not to push expansion of financial services beyond sustainable demand.

Instruments⁵

Grants to stimulate private sector investment in equipment, training, technology and innovation are usually matching grants used to complement funding by the investor for purposes ineligible for support. The grant percentage can vary with the externality and, where relevant, the poverty characteristics of the target groups. Grants can be made in many ways. A few options are now discussed.

If the purpose is to support effective demand and market development, use can be made of vouchers given to the service users. This method is often used for support of training through BDS. The justification for the grant is that investment in training usually has significant spillover effects. Moreover, markets may still be underdeveloped because of low demand. Giving grants directly to providers can lead to supply-driven approaches. With vouchers, suppliers have to compete and develop attractive supply of training. An advantage is that direct support is given only for actual use, not for fixed cost of providers.

If many applications are expected for grants in a certain field, for example for export promotion, a competitive procedure can be used in which grants are evaluated and prioritized on quality criteria of the proposals. This process has the advantage that effectiveness of the scheme can be enhanced. The downside is that the administrative costs are higher and that the evaluation process of proposals can result in unacceptably long waiting time for investors. One pragmatic alternative to directly competitive assessment that has often been used is to assess proposals against agreed criteria as they are received.

Usually, maximum grant percentages and grant amounts for matching grant schemes are pre-determined, so that applicants know what they are applying for. If the scheme is considered very attractive the number of applications may be a multiple of what can be funded, and if the conditions are not considered favorable there may be few applications. In schemes with several rounds of submissions it is common to adjust conditions for subsequent rounds on the basis of evaluations of previous rounds.

There are also competitive procedures that allow the applicants to indicate how much they are willing to pay themselves and what grant they require. Such a style of competitive bidding is difficult to handle for schemes with many applicants, such as export promotion, but it can be useful for infrastructure service delivery, development of a vaccine, or contracts for provision of extension. If the project is well defined, applicants compete for the amount of subsidy set for it. This type of contracting is called output-based aid (OBA) and is advocated in the World Bank's private sector strategy (World Bank, 2002a). The advantage of OBA can be that much public budget is saved and that more projects can be supported. It requires high professional input to prepare tender contracts.

The kind of grants most suitable to be applied depends greatly on local circumstances, especially the level of development. TDI (2002), in a report commissioned by the World Bank, recommends that donors should critically examine the market before they implement grant schemes. For example "Matching grants for feasibility studies and technical assistance are not appropriate in a less developed country where technical /business consulting expertise is not available." (TDI, 2002 p. 10).

Implementation of grant schemes

Design and implementation of grant projects can be complex and often requires learning by doing. Obviously, the implementation modalities have major impact on the effectiveness and efficiency of the grant schemes. Many decisions have to be taken about eligibility of applicants, targeting of issues, goods and services for which grants can be given, percentages of grants for different items, maximum and

⁵ There is much more experience with grants in developed than in developing countries (TDI, 2002). For a discussion of issues in Bank projects, see Phillips (2001) and Steel and Phillips (2003).

minimum grant amounts, procedures for application and decision making, requirements for application proposals, how to inform the target population, possible support for preparation of proposals, responsibilities and authority of public and private agents, final authority of decision making, possibilities for appeal against decisions, reporting requirements by recipients, accountability, monitoring and evaluation. In many countries, especially the more developed ones, grant schemes are often administered by autonomous bodies and the implementation is guided by requirements of law and regulations, which provide transparency and define rights of public and private agents. In such cases extensive operational manuals are needed for implementation.

In community-driven development projects concern with the quality of group processes dominates. Usually, facilitation is provided for participatory planning, and support is given for group formation and local capacity building. Extension workers and specialists provide technical assistance for planning and implementation of sub-projects. For investment in social infrastructure and services, cost-effectiveness and sustainability in service delivery are the main aims, and cost-benefit calculations are often not possible. Community involvement and possible use of private contractors can enable cost-saving and build community commitment to the project.

Among propagators of community-driven development approaches, the opinion is widespread that the selection process of community funds ensures optimal use of funds. Evidence to support this claim is mixed at best. Van Zyl, Sonn and Costa (2000) in their assessment of the community development program of Brazil, which aims at rural poverty reduction, found that communities can manage their own local development efforts, and sometimes considerably better than any state agency, provided they are appropriately empowered. Findings by the OED (2002) evaluation report on social funds and Wiens and Guadagni (1998) give room for doubt about the general validity of this finding. The local political process and weak implementation capabilities can result in biased allocations. Decisions made by the community might not reflect the different interests of all groups within communities. Perhaps bias in selection is more a problem for income-generating investments than for provision of basic needs services.

A Proposed Framework for Assessment

The following framework of questions is proposed for assessing grant schemes aiming at addressing market failure.

Fundamental questions about market failure

1. Is there indeed a market failure? For what goods and services? Assessment of prevalence of market failure has to be explicit about the nature of market failures to be addressed. Bundled goods and services have to be disentangled in the analysis.
2. Would a grant scheme deal most effectively with the underlying problem of market failure? Does it compensate for, reduce, or eliminate market failure that discourages private investment and sales? Perhaps regulation or provision of public goods, such as information, are more cost-effective than grants?

Costs and Benefits

3. Do the benefits of intervention outweigh the costs? This poses the need for a cost-benefit analysis. Often the implementation costs for the public and private sectors are high and the benefits uncertain. For delivery of social services, some assessment of cost-effectiveness analysis is needed. What are the likely dynamic rewards of solving the purported market failures? Are there unintended and perhaps undesirable side-effects of the proposed grant scheme? Grants may cause market distortion and unfair competition. What is the optimal amount of grants that can be given per investment, per applicant and per area?

Implementation modalities

4. What is the best design of the grant scheme? Should it intervene on the demand side or on the supply side? Different modes of implementation may greatly affect effectiveness and efficiency of grants schemes, depending on market situations and specific targets that are pursued.
5. What are the eligibility criteria? Who are eligible for receiving grants, eligible for what and for how much? Do all eligible parties have a fair and equal access to the grants? Or, are, in fact, only some social strata effectively supported? Equity requirements may be costly to meet.
6. Is the capacity to implement the scheme sufficient? Effective and efficient implementation of grant schemes should not be taken for granted. Government and private sector capabilities for implementation and governance may be poor, and expatriate expertise too expensive. Does the expected future use of grants schemes warrant relevant capacity building?
7. Are transparency and accountability sufficiently planned? This is essential for good governance.

Such a list of questions could readily be expanded but those proposed constitute a practical minimalist set, which is already rather demanding to answer adequately in practice.

Review of Use of Grants in the World Bank Portfolio

Kinds of Grants and Their Use

There is not a generally agreed terminology for different types of grants. The most common way is to name grants after the services that they are aiming to generate or the intended impact of the grant scheme, e.g., research grant, technology dissemination grant, export promotion grant, innovation grant, community development grant, starter grant, project feasibility assessment grant, training grant, market development grant, business linkage promotion and capital grant.⁶ But, also widely used is terminology that indicates the procedure or basis on which grants are given: competitive grants, demand-driven rural investment funds and matching grants.

In a report for the World Bank, TDI (2002) gives a broad overview of grants used for 18 projects in 14 countries. It reports that various policy objectives and the use of grants evolve with the level of economic development. In low-income countries, grants are often in the form of expertise provided in kind and, since there is little domestic expertise, it is often obtained from abroad. (See Table 1) In mature economies grants are used selectively for a range of policy objectives, often on a competitive basis.

Table 1. Policy objectives and kind of grants

<i>Stage of Development</i>	<i>Policy Objectives</i>	<i>Incentives/ Matching Grants offered.</i>
Low Little domestic expertise available	Initiate economic development.	Capital grants, matching support. Support mainly in the form of foreign technical advice and business support
Early developed Local technical / business expertise available	Greater awareness of disparities between regions, rural-urban and on needs and potential of smaller businesses.	Start of greater selectivity in use of incentives and more use of matching grants.
Mature developed	Focus on rural/regional blackspots and moving up the value chain in selected target sectors / technologies.	Shift from hard support in the form of matching grants to soft supports in form of advice and information

Source: TDI (2002, p. 10). Table adjusted for this paper.

In many countries emergence of new enterprises and growth of existing ones is pursued as a means to enhance economic growth, provision of services and employment creation. In the review of projects selected for this paper, grants for private sector development were found for export promotion facilities, assistance to entrepreneurs for cost of project preparation, capital cost to overcome financial barriers, research and development, adoption of new technologies and training for upgrading skills of the workforce.

⁶ So called “capital grants” are provided for working capital in situations where services from formal financial institutions are not available.

Promotion of agricultural research and dissemination of technology were in the past often seen as public goods, and hence government responsibilities, but increasingly the private sector has become active in parts of these fields as well. Since governments increasingly favor this trend, grants are given to stimulate investment in research and technology by private entities, such as private enterprises, cooperatives, producer organizations and market organizations. Research funds more recently established, especially in Latin America and Eastern Europe, have a strong orientation toward applied and adaptive research. Research grants flow directly to users, who may then contract an appropriate research provider (World Bank, 2000). There has also been a growing trend towards the establishment of 'technology funds', which finance research and extension activities and include investment in facilities as well. This results in more demand-led research and more competition between research providers.

In the reviewed projects, grants for agricultural research and extension are given for improving extension services through grants for program development, improving information systems, and providing inputs in areas that lack ready access to finance.

Community driven development funds are usually welfare oriented. Most projects channel resources to small-scale subprojects that are proposed, designed and implemented by public and private agencies, such as local governments, NGOs and community groups. Increasingly, community development projects include grants for productive assets, which are the focus of this paper, such as income generating investments at the community level and for household activities in farming and non-farm enterprises. In 54 reviewed social fund projects, OED (2002, p. 67) found important amounts of activities that are basically income-generating in nature; 83 percent of the projects had among others road construction/maintenance, 80 percent bridge construction/rehabilitation, 53 percent irrigation, 34 percent markets, 25 percent micro-credit, 21 percent agro-processing, and 15 percent electrification.

Overview of Findings

From the many World Bank projects that have components that provide grants for agricultural research and development, private enterprise and community development, twelve were reviewed, four in each group. The main source of information were the PADs. Through interviews with Task Leaders additional information was gathered. The projects are listed in Table 2 and information about the grants component summarized in Annex I. The information available on the grants schemes in the PADs differs significantly. In several cases it appeared scanty. Often the PAD gives general information only and the grant schemes are further elaborated in project operational manuals or implementation documents prepared by the project management team. Since these documents are not readily available, information about the projects is in most cases incomplete and review of the grants components was apparently difficult. Sometimes the fact that a grant component is small may explain why the information reported is so scanty. The lack of information in the PADs means that much decision making is left for the implementers.

Table 2 Overview of the selected case studies

<i>Field</i>	<i>Selected projects</i>
Private Sector Development Projects	Niger; agro industry and marketing (P058730) Tajikistan; Farm Privatization Support Project (P049718) Benin Private Sector Development Project (P039882) Madagascar Private Sector Development and Capacity Building Project (P001555)
Agricultural Research and Extension	India National Agricultural Technology Project (P010561) Peru Agricultural Research And Extension (P047690) Romania Agricultural Support Services Project (P043882) Nicaragua Agricultural Technology Project (P064915)
Community Development	Brazil Rural Poverty Reduction Project (P074085) Vietnam Northern Mountains Poverty Reduction Project (P059936) Indonesia The Second Village Infrastructure Project (P040521) Malawi Second Social Action Fund Project (P049599)

Economic justification for the use of grants for productive assets in the reviewed projects is weak in general. Justification is often put in terms of desirable outcomes without strong evidence that the interventions will be effective (Table 3). The PADs report various obstacles for development as reasons for applying grants. Reasons given include lack of markets, lack of working capital and lack of access to credit. In many projects poverty of the target population and lack of assets are given as an argument for the use of grants. The obstacles cited could be caused by market failures but in most cases this is not sufficiently clear. The research and technology projects have an easier case to make since market failure in this field is generally accepted. Encouraging private sector investment in this field is in only two cases a central aim of the project. Better targeting of public research is still the dominant justification.

In all projects the use of grants could be effective and could even be the best intervention to overcome market failures but the information provided and the methodology used are generally insufficient to make that point. Little attention is given to possible distortion of markets by the use of grants. Where arguments concerning lack of assets for the poor and merit goods are used, the case for cost-effectiveness of grants is often insufficiently made.

Table 4 shows that only four of the twelve projects have a cost-benefit analysis (ERR and/or NVP). In most cases the PAD justifies the investment in terms of expected benefits in qualitative terms. In several of the projects, evidence of rates of return from other projects, even in other countries, is cited to justify the investment. Some claims are close to “hear say” arguments. It should be mentioned, though, that in several projects little specific cost-benefit analysis is done on the grant component because it is so small. The World Bank is not alone in poor economic justification of grants schemes. A survey of matching grants schemes elsewhere carried out for the Bank also notices that economic justification for grants is usually not available in published project information (TDI, 2002).

In several cases the difficulty of measuring the impact of bottom-up decisions is given as a reason for not estimating the ERR. Projects supporting research and technology all cite poor functioning of existing public institutions and insufficient focus on needs and demand of the target population as justification. The grants systems are justified on grounds of better allocative efficiency and better effectiveness in targeting compared with which might be achieved through input funding. The India and Peru projects provide examples of strong efforts to justify the investment in terms of cost-benefit analysis, whereas, on

the other hand, the Madagascar project does not make a serious attempt. In the cases of India and Peru a full *ex ante* cost-benefit analysis is done and additional cost-benefit calculations are included in the project. The other research and technology projects take high returns on investment for granted.

Table 3. Reported market failure

<i>Countries</i>	<i>What kind of obstacle or market failure is allegedly addressed in the project ?</i>
<i>And why grants?</i>	
Niger P058730	Poor marketing infrastructure and lack of credit. - Address lack of financing in the private sector. Create incentive for farmers to organize, in order to boost production and profitability for exports.
Tajikistan P049718	No institutional mechanisms for land privatization and farm restructuring. No financial sector. - Kick-start the economy.
Benin P039882	Lingering constraints in the regulatory and institutional framework for private sector development. - Inject know-how in companies to remain competitive.
Madagascar P001555	Weak business sector, no business development services available. Lack of foreign direct investment. Market failure resulting from two decades of public-sector led economic policies? - Provide information, advisory and expert support services for small micro enterprises and by doing so, develop business development services providers. Boost foreign direct investment.
India P010561	The market does not invest enough in the agricultural sector. Poverty and environmental issues need to be addressed. - Address the need for more focus for agricultural research.
Peru P047690	The poor in remote areas do not have enough access to education, health, property rights, and infrastructure services. - Provide for the research that the private sector does not provide.
Romania P043882	The private sector does not invest in relevant and effective agricultural institutions. - Provide for research that otherwise doesn't get attention.
Nicaragua P064915	Rural poverty. The market is difficult to access for medium and small scale farm households. - Promote efficient resource use. Stimulate market for agricultural services.
Brazil P074085	Rural poor lack access to markets. Regular research and extension inadequate for needs of small farmers. - Provide for projects that otherwise would not take place.
Vietnam P059936	Insufficient access to markets for communities in remote rural areas. - Increase local peoples involvement in development planning, increase livelihood.
Indonesia P040521	Poor villages lack access to markets. - Increase access to markets.
Malawi P049599	The market does not provide enough investment in socio-economic infrastructure. Create more attention for the safety nets of the very poor, and vulnerable. - Address need for socio economic infrastructure development.

The design and management of grants schemes is difficult. In many cases international consultants are brought in to develop the grants schemes. In some cases they also help to administer the implementation. This has the advantage that qualified and independent expertise is used. But, in general this solution is too expensive. For small grants schemes the dilemma may be that local expertise for administration is insufficient and foreign expertise too expensive. Capacity building will be necessary for sustainability. Given the relatively long learning process to build capacity for administering grants schemes, a short intervention through a Bank project, which has little prospect for continuation after the project ends, bears the hallmark of unsustainability.

The risk of governments administering grants schemes is that political bias may enter into the decision making. An autonomous unit within the government, or a public-private unit in an independent institution with government oversight, may be preferable. The PADs do not always provide information about the exact arrangements on implementation, and procurement documents were not readily available. Table 5 shows that, in nearly all cases, the government or government organizations are administering the project. Not clear is the degree of independence of the implementing bodies from line administration and political interference. In cases where private sector entities or other organizations are involved, some degree of independence is likely.

Table 6 gives an overview of what goods and services the grants can be used for. Only in the case of Tajikistan are grants reported for current agricultural inputs, such as fertilizer. This is an exceptional situation explained by the development of private farms after privatization. In a number of cases the grants are for BDS and for local infrastructure. In research and extension projects the use of grants is relatively clear. In demand-driven community projects the sub-projects are selected by the community and the PAD gives little information on what is likely to be financed. If there is no needs assessment of which the results are included in the PAD, the decision is, in fact, left to the implementers.

Table 4. Cost-Benefit Analysis of the grant elements in the selected projects.

<i>Countries</i>	<i>Costs and benefits</i>
Niger P058730	Assumption is that the project will create rural employment, farm income and profitability, increased export, increased productive private investment, possibilities for collective action, and the informal export sector is big, so it is difficult to get accurate data
Tajikistan P049718	It is assumed that the grant for initial inputs will generate more benefits and that the cost benefit is positive, especially taking the factor into account that the project is setting up micro finance schemes for the long term.
Benin P039882	An economic analysis is done for the whole project, not separately for the grants component. It is said to be difficult to give a estimate of the benefits of the grant scheme as the estimate of the potential increases in output by the individual enterprises is not available.
Madagascar P001555	Other countries' experiences (e.g., India, Kenya) are said to indicate output gains of ten times the cost of productivity upgrading activities funded by participating firms with matching grant program support.
India P010561	Cost benefit analysis is carried out through an aggregate ex ante rate of return estimate, supported by two case studies for the ex ante rate of return analysis for the rice/wheat system and ex post evaluations for hybrid rice in India.
Peru P047690	Global experience has shown high yields of return. The conservative estimates and robustness of rate of return estimates indicates that the program would be a sound investment.
Romania P043882	The conventional economic analysis will not be done for purpose of investment decision making in the competitive grant scheme. Monitoring and evaluation will ensure that projects are implemented in a cost-effective and efficient manner.
Nicaragua P064915	Benefits are listed, but not in relation to the costs.
Brazil P074085	The financial viability of the separate subprojects was estimated. The internal rate of return was estimated to exceed 30% on average.
Vietnam P059936	Villages determine the types of infrastructure and services themselves. An overall ex-ante cost benefit analysis is considered too speculative.
Indonesia P040521	The rate of return for infrastructure is estimated to exceed 20% even without benefits from employment and lower unit costs of labor.
Malawi P049599	The communities identify and decide on the type of project. Recent economic and sector work in Malawi confirms that this selection of projects by beneficiaries provides very high economic rates of return.

Table 5. Administrators of the Reviewed Projects

<i>Countries</i>	<i>Who is administering the grants?</i>
Niger P058730	The project implementation unit will manage the project. A consultant firm will prepare the guidelines and accounting mechanisms.
Tajikistan P049718	The government. There is a consultant exploring potential micro finance possibilities.
Benin P039882	Government; association of exporters
Madagascar P001555	The project will be managed by a private, not for profit bureau.
India P010561	National steering committee, project management committee and technology dissemination management committee.
Peru P047690	The foundation management board (government)
Romania P043882	The Ministry of Agricultural and Food has appointed staff to the Project Management Unit
Nicaragua P064915	The foundation management board (government).
Brazil P074085	Central and decentralized government
Vietnam P059936	Government
Indonesia P040521	Government
Malawi P049599	Government

Grants can be given up to a certain maximum and a certain percentage of the goods and services to be purchased. Table 7 shows that information on grant percentages and maximum grant amounts for various goods and services is available for about half of the projects. In case public research is the beneficiary, grants are mostly for variable costs only, and not for salaries and fixed facilities.

In many cases only associations and organizations are eligible for obtaining grants. Enterprises usually get support through BDS providers. Eligibility criteria for obtaining grants are not always sufficiently transparent in the PADs. Criteria for research grants are more easily available in the PADs than criteria on which institutions/communities and firms are eligible to receive the grants. Apparently, during the implementation of the project criteria have to be sharpened. In research and technology projects the emphasis tends to be on quality of proposals and researchers, and on targeted allocation of public funds as an alternative to block grants rather than on stimulating investment by private sector entities.

Table 6. Goods and services for which grants are given.

<i>Countries</i>	<i>What are the grants spent on?</i>
Niger P058730	Collective investment needs
Tajikistan P049718	Inputs
Benin P039882	Not applicable
Madagascar P001555	Support services
India P010561	Research and extension
Peru P047690	Research and extension
Romania P043882	Research and extension
Nicaragua P064915	Costs eligible for financing include research materials and supplies, travel, minor equipment requirements, facility renovation and maintenance, and research assistant and salaries for laborers. Grants may also finance short-term training and travel for research team leaders, but not construction, salary supplements, general degree training programs, or salaries for lead researchers.
Brazil P074085	In the past grants were spend on; community-owned ventures like grain-milling facilities, seed banks, input-supply stores, and storage facilities (60%); small works projects (25 percent) and institution-building activities in rural community associations (15 percent).
Vietnam P059936	E.g., infrastructure
Indonesia P040521	E.g., infrastructure
Malawi P049599	E.g., infrastructure

Table 7: Overview of selected projects with grant elements.

<i>Countries</i>	<i>Type</i>	<i>Grant % provided</i>	<i>Who's eligible</i>	<i>Criteria</i>
Niger P058730	Demand driven export promotion grant facility	70%	Associations of producers and exporters	Organizations have to submit proposals that meet the needs of their members.
Tajikistan P049718	One-time grant	-	Family farms	Farms have to be privatized.
Benin P039882	Matching grant	Firms: 50% Associations: 70%	Small micro enterprises (SMEs)	Grant depends on the innovativeness of the proposal, the size and managerial capacity of the enterprise.
Madagascar P001555	Matching grants	30-80 %	BDS intermediaries working for associations, SMEs, and their foreign partners	The beneficiaries must prove that the grant will improve productivity
India P010561	Competitive grant	-	Research institutions, scientists	By submitting a qualified research proposal.
Peru P047690	Matching grant	85%	Producer groups in association with identified service providers	Applicants should submit proposals which have to be approved under competitive procedures.
Romania P043882	Competitive grant	-	Research institutions, extension agencies, universities, private industry and NGOs	Funds will be approved for projects based on pre-determined criteria.
Nicaragua P064915	Matching grant	75%	Research organizations institutions, domestic and foreign, certified/ prepared with the participation of small, medium-scale farm households.	Grant would fund proposals submitted by applicants under competitive procedures.
<i>Brazil</i>	Matching grant (demand driven)	Community has to provide labor	Poor communities in Sergipe.	Rural community associations have to identify the small-scale investment needs of their community.
<i>Vietnam</i>	Block grant	-	Poor communities in Vietnam's northern mountain region.	The community assessment process will involve identification of development priorities by local people.
<i>Indonesia</i>	Matching grant	93%	Poor villages	Village should identify infrastructure needs, and labor availability.
<i>Malawi</i>	-	-	Communities	The communities identify and decide the type of project that is most needed in their area and which will provide the greatest return to their inputs of labor, time and materials.

Discussion, Conclusions and Recommendations

Discussion

Grants have become a frequently applied instrument in World Bank rural development projects for enhancing economic activity. In general the design and implementation of grants schemes requires significant preparation and expertise. Box 1 summarizes a framework for assessment of grants schemes.

Although economic theory suggests that grants can be a good instrument to solve or compensate for market failure, there are many risks involved in improper use, especially waste of public resources, distortion of markets, destruction of markets and crowding out of the private sector, unfair competition, political favoritism and corruption. This means that careful preparation, assessment, monitoring and evaluation of projects with grants is necessary. However, review of twelve projects revealed that the information given in PADs is in many cases scanty. Projects generally provide insufficient justification for the use of grants and have severe deficiencies in *ex ante* evaluation. *Ex post* evaluations are rarely included in the projects and at the end of the project little can be said about the impact and sustainability of the interventions. Implementation arrangements are also insufficiently described in the PADs and far too many important decisions are left for the implementers. The main weaknesses observed in the PADs and directions for their resolution are discussed further below.

The first weakness is the lack of discussion of market failures that are to be solved and the justification of using the grants scheme for that purpose. Task Leaders, evidently, do not see the importance of explicitly identifying market failure and available instruments for solving them, or they lack the tools. Review and evaluation procedures seem to be insufficient as well. There is a need for explanation of various market failures and their nature, of difficulties in “proving” the prevalence and assessing the magnitude of market failure in concrete situations. The solution to this could be to develop a guidance note for Task Leaders and provide a training course.

The second weakness is the lack of economic evaluation. Many Task Leaders do not see the need for economic evaluation, or sometimes they claim that it is not possible. Given the scale at which the World Bank operates and its influence on development efforts by governments and other donors, this lack of evaluation is serious and unacceptable.

One reason for this omission could be that in particular CDD projects mainly focus on grants for social purposes and that the grants for economic purposes are a minor part of the projects. The other is that, as said before, many staff involved in CDD projects incorrectly believe that selection by communities is sufficient guarantee for economic benefits of the grants. Reviews of CDD projects are basically focused on cost-effectiveness and sustainability, and less on economic impacts. It is recommended that the assessments for these projects be broadened to always ask the question of whether the intervention is the most cost-effective way to help the poor without distorting markets and private sector activity. Grants for income-generating projects such as food-for-work, should be assessed in the same way. Grants for investment in local economic infrastructure with a public goods character and interventions in the market sector and can and should be justified within a cost-benefit framework. If the economic infrastructure has important social functions as well, the cost-benefit analysis will help to establish how much in fact the subsidy for the social functions is.

Having said this, it is necessary to turn now to the difficulties Task Leaders are facing in financial and economic analysis of grant schemes. This analysis is, as said before, complicated because of the spill-over effects and the possible broad variety of sub-projects emerging from decentralized bottom-up decision making. *Ex ante* analysis of large numbers of small projects would be an expensive strategy, if feasible at all. However, the increasingly large investments in grant schemes for economic purposes require proper assessment of their costs and benefits and economic rationale, at least at the aggregate level. Solutions

may be found in different directions. First, pilots could be helpful to make *ex ante* assessments. Second, stylized models could be made of possible investment in sub-projects which are likely to be selected frequently, such as small-scale rural infrastructure and irrigation, and used to support *ex ante* assessments. Third, more efforts can be made to obtain *ex post* evaluation of samples of sub-projects. These *ex post* evaluations can be included in the project design and provide not only benchmark data for later use in other projects, but possibly even information for use in later phases of the project.

Box 1: A proposed framework for assessment of grants schemes aiming at addressing market failure

Fundamental questions about market failure

Is there indeed a market failure? For what goods and services? Bundled good and services have to be entangled in the analysis.

Would a grant scheme deal most effectively with the underlying problem of market failure? Perhaps regulation or provision of public goods, such as information, are more cost-effective than grants.

Costs and Benefits

Do the benefits of intervention outweigh the costs? This asks for a cost benefit analysis. What are the likely dynamic rewards of solving the purported market failures? Are there side-effects of the proposed grant scheme? What is the optimal amount of grants to be given?

Implementation modalities

What is the best design of the grant scheme? Should it intervene on the demand side or on the supply side?

What are the eligibility criteria? Who are eligible for receiving grants, eligible for what and for how much?

Is the capacity to implement the scheme sufficient? Effective and efficient implementation of grant schemes should not be taken for granted.

Are transparency and accountability sufficiently planned? This is essential for good governance.

The second chapter has more details

A third weakness is the description of implementation modalities. Preparation of grant schemes requires much work and involves many choices and often the devil is in the details. Deficiencies in design can prove to be very costly. Many PADs provide insufficient information on implementation modalities. Choices for intervention are insufficiently discussed. Eligibility of recipients, items for which grants can be given and grants percentages should be readily available in the PADs and decisions should not be left completely to the discretion of the implementers. To build up capacity for designing and managing competitive grants schemes requires much time and often learning by doing. Decisions to build such capacity in developing countries should not be taken lightly, and may not be justifiable for one-time short-term and limited interventions.

Collection of all relevant information for designing a grants scheme can be a major burden for a Bank task manager. In many countries and especially those in the OECD, particularly those under the European Commission, there is much written information and tacit knowledge available in specialized agencies. However, it is not easily available to Task Leaders in the Bank. And even if it is available it cannot be used directly, since different fields of application and different levels of development have their specific requirements, established procedures and manuals. For applications in rural areas for small enterprises and for agricultural development, adjustments are needed. Some guidance is available in the Bank but there are major gaps as well. Recent work by Phillips (2001) and Steel and Phillips (2003) provides useful information on competitive grants schemes for SME. Much useful information is available also for competitive grant schemes in research and technology (World Bank, 2000; World Bank, 2000b). Guidelines for grants in CDD projects are most needed. However, applications of technology schemes at grass-root levels, especially for on-farm research and demonstration, are less readily available.

Task Leaders could be effectively assisted by standardized guidelines and manuals for different fields of application. In addition, training courses could be organized aiming at sharing tacit knowledge.

Conclusions and Recommendations

There has been a rapid increase of the use of grant schemes for enhancing economic activity in the Bank's rural portfolio, but their impact and sustainability are uncertain. In community- and other demand-driven projects, justification and economic assessment is generally insufficient.

Development of criteria and guidance for assessing these investments is lagging. Manuals for guiding Task Leaders in the implementation of grants schemes are lacking or deficient.

Economic literature and experience suggest that grants can be a useful instrument to overcome market failure, but there are several risks involved in improper use: waste of public resources, distortion of markets, destruction of markets and crowding out of private sector, unfair competition, and political favoritism and corruption

In order to improve proper use an assessment methodology is needed for grants schemes for enhancing economic activity in rural areas at the community, farm and small-enterprise level. Such a methodology is outlined in this report.

It is recommended that the assessment methodology be further developed and disseminated and more specifically that:

1. the OED conducts an evaluation of the grants schemes with special attention to justification, economic evaluation, and implementation modalities
2. the Agriculture and Rural Sector Board and its Thematic Groups promote:
 - the provision of training to strengthen the capabilities of Bank staff in identifying and assessing market failure and in identifying in which cases grants and other interventions are and are not a good instrument
 - the development and application of methods and good practice tools for economic analysis of grant schemes
 - support for Task Leaders for designing grant schemes through good practice guidelines and standard manuals

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Appendix I Case Studies

Private Sector Development Projects

Niger; Agro Industry and Marketing (P058730)

Objective of the project: To boost agricultural and livestock exports by giving private sector enterprises and producers the tools for increased production and profitability, and to provide a catalyst for building capacity and developing an entrepreneurial mentality in the export sector.

Grant Type: Export promotion grant facility (demand driven).

Eligible: Associations of producers and exporters.

Who is administering the grants: The project implementation unit will manage the project. A consultant firm will prepare the guidelines and accounting mechanisms.

Criteria for obtaining the grant: The beneficiaries must be organized groups of producers exporters, collectors of hides and skins, local retailers and processors for the export market. Organizations must be legally recognized or in the process of being legalized in order to submit proposals for grants. The project will favor high-value products for which a current or potential market exists; proposals with a large number of beneficiaries; proposals of which the beneficiaries have made a convincing argument that operation and maintenance of the investment (if applicable) are assured; proposals which have sound economic and financial rates of return for their investments; proposals that will not displace existing private investment; proposals made from women's groups or other organizations of relatively poor individuals.

What are the grant percentages: It is a matching grant, for which the beneficiaries have to supply 30 percent.

What are the grants used for: Not applicable

Justification: Because the financial sector is weak (3percent of the population has access to the formal financial sector), grants are justified to kick-start the export sector. To ensure longer term sustainability, the beneficiaries are encouraged to get involved in the micro finance sector.

Why Grants: This matching grant component is aimed at addressing the lack of financing in the private sector, and intends to create incentive to organize farmers.

Cost and Benefits: Assumption is that the grant will create

- ❑ rural employment
- ❑ farm income and farm profitability
- ❑ increase export levels
- ❑ increase productive private investment
- ❑ create possibilities for collective action

The economic and financial rates of return for the proposals have to be sound. Calculations may be done in advance by the project implementation unit, as part of the monitoring and evaluation function. The key performance indicator is to have 80percent of the grant investments successfully meet market needs and collective needs of the organizations.

The board approval / revised closing date: 06/01/2000 - 10/31/2005

Final remarks from the Task Manager: “A stronger communication effort on the basis of professional strategic communications principles will be needed and technical assistance may be called for in this respect as well”. “It is extremely worrying that the project operating cost category is already exhausted even before the project has been able to achieve any substantial results”.

Tajikistan; Farm Privatization Support Project (P049718)

Objective of the project: Develop procedures and institutional mechanisms at the state level and selected regions to ensure fair, secure and equitable transfer of land and other farmers assets to private individuals or groups: Test and implement these procedures in ten selected former state and collective farms in order to provide representative models which could serve as a basis for wider geographical replicability: Create sustainable private family farming units and provide them with the enabling conditions to operate independently in the market economy.

Grant Type: One-time grant to the private "family farms" for inputs.

Eligible: Farm families can receive a one-time grant. The farm family is defined as a family unit consisting of a husband and wife and their children; with/without their grandparents, and immediate relatives all living in one household.

Who is administering the Grants: The government. There is a consultant exploring potential micro finance possibilities.

Criteria for obtaining the Grant: Only those family farms which meet the following eligibility criteria shall be provided with this one-time privatization grant: possession of a clear land use rights certificate; account in the Tajiksberbank (Savings Bank of Tajikistan); membership in the Water Users Association and access to assured and timely supply of water for agricultural activities; and engaged in agricultural activity as the main source of livelihood. The grant would be provided in cash to each household's account at the rayon branch of Tajiksberbank.

What are the grant percentages: Not applicable. This grant is limited to \$300 per hectare of arable land to each family farm subject to a maximum of \$600 per farm family.

What are the grants used for: Essential farm inputs.

Justification: Because of the absence of rural savings, credit mechanisms and banking infrastructure, low levels of crop profitability due to civil disturbances and the stalling of political economic transition, the conditions for credit-led restructuring are low at the present time. The program also initiates a pilot scale of rural savings and credit associations in selected project rayon's.

Why Grants: The purpose of the grant is to enable farm households to obtain a minimal amount of the most critical agricultural inputs to increase crop and or animal productivity as soon as possible.

Cost and Benefits: It is assumed that the grant for initial inputs will generate benefits that exceed costs. The cost-benefit ratio is assumed favorable, especially taking into account that project is setting up micro finance schemes the long term.

The board approval / revised closing date: 06/10/1999 - 12/31/2004

Final remarks from the task manager: NA

Benin Private Sector Development Project (P039882)

Objective of the project: Improve business environment, local enterprises' competitiveness and access of small, medium and micro enterprises to credit.

Grant Type: Matching grant scheme.

Eligible: Exporters, that are usually large firms, and small and medium enterprises.

Who is administering the grants: Government; association of exporters.

Criteria for obtaining the grant: Grant depends on the innovativeness of the proposal, the size and managerial capacity of the enterprise.

What are the grant percentages: The amount of subsidy would not exceed 50percent for firms and 70percent for associations.

What are the grants used for: Input for injecting know-how in companies to stay competitive

Justification: The matching grant fund will be a cost-sharing mechanism designed to foster exporters' competitiveness through increasing their access to local and foreign expertise. The cost-sharing mechanism is to ensure involvement from the beneficiaries. The justification that is given, also focuses on the sustainability of the grant scheme, which is ensured as it is integrated into a broader macro framework including policy adjustment.

Why Grants: To improve the efficiency of exporters operations and help business organizations improve the quality of services to their members. The fund is also intended to provide technical support to small and medium domestic companies to improve the efficiency of their operations and help business organizations improve the quality of services to their members.

Cost and benefits: The economic analysis of the project takes the grant component into account. It is difficult though to give an estimate of the benefits of the grant scheme as the estimate of the potential increases in output by the individual enterprises is not available. Instead, the output generated from the supported firms has been used as an alternative measure for the benefits. This approach indicated very high benefits. Employment creation has been taken into account as a secondary effect of the matching grant scheme. Financial return understates the economic returns since the shadow wage is under the market wage, and it is difficult to capture economic externalities associated with environmental resource use.

The board approval / revised closing date: 11/30/1999 - 06/30/2004.

Final remarks from the task manager: NA

Madagascar Private Sector Development and Capacity Building Project (P001555)

Objective of the project: Support accelerated export-led growth by increasing private investment and productivity through reforms in the policy and business environment, upgrading of private firms' capabilities and global market knowledge and involvement, and attracting foreign direct investment.

Grant Type: Matching grant

Eligible: Small and medium enterprises

Who is administering the grants: The project will be managed by a private, not for profit bureau.

Criteria for obtaining the grant: The beneficiaries must prove that the grant will improve productivity

What are the grant percentages: The amount of the matching grant would be based on the total cumulative cost of all the support services received by a single beneficiary firm during the life of the project, according to the following formula:

<i>Total Cumulative Cost of Support Services</i>	<i>US\$</i>	<i>Beneficiary Contribution Grant</i>	<i>percent Matching</i>
0-	6,500	20%	80%
6,500-	20,000	35%	65%
20,000-	50,000	50%	50%
Over	50,000	70%	30%

What are the grants used for

Not applicable

Justification: Regarding justification for the design of the grant, a survey has been carried out to assess the demand within the private sector for and supply of expert support services.

Why Grants: To encourage productivity improvements by providing partial funding for a broad range of expert support services for small and medium firms and business associations to. The fund will not provide technical services directly to the private sector but will act as a catalyst and intermediary between firms and associations of the private sector that need assistance, and local and international suppliers of business services. It will finance improved access to private support services (management, marketing, information and technical experts and consulting firms) provided, wherever possible, by local providers to strengthen the local market for such services, but also importantly by international private providers where needed.

Cost and benefits: In other countries with the same type of matching grant schemes, experience indicates output gains of ten times the cost of the matching grant support. The fund will maximize the synergy with other donor-funded and private support service and outreach programs to ensure cost effectiveness.

The board approval / revised closing date: 05/29/1997 - 12/31/2002.

Final remarks from the task manager: "Project implementation has suffered from the political crisis in the country".

Agricultural Research and Extension

India National Agricultural Technology Project (P010561)

Objective of the project:

- ❑ Improve efficiency of the Indian Council of Agricultural Research Organizations and Management systems
- ❑ Enhance effectiveness of priority research programs and of scientist in responding to the technological needs of farmers
- ❑ Develop models that improve the effectiveness and financial sustainability of the technology dissemination system with greater accountability to, and participation by, the farming communities.

Grant type: Competitive Grants Program for Agricultural Research.

Eligible: For the project as a whole the immediate target population are research scientists, administrators, extension staff, NGOs, Farmer Organizations, private sector and the farming community. The medium to longer term target population is the majority of Indian farmers.

Who is administering the grants: National steering committee, project management committee and technology dissemination management committee.

Criteria for obtaining the grant: Acceptance of the proposal depends on;

- ❑ priority areas of research at macro- or micro-level
- ❑ capability of researchers
- ❑ availability of infrastructure, facilities and other logistic support
- ❑ whether research is multi-institutional and multi-disciplinarily

What are the grant percentages: not applicable

What are the grants used for: Not applicable

Justification: The project aims at addressing the need for more research focused on poor rain-fed areas, the need for attention to longer term environmental sustainability issues, and the need for improvement in public goods such as integrated pest management, nutrient management, phytosanitary regulation, biodiversity conservation, soil conservation, etc.

Why Grants: To get participants outside the traditional research centers into national agricultural research. To encourage linkages between research and development activities of public and private organizations.

Another strategic choice for implementing grants has been to address the constraints to private sector entry, to promote public/private partnerships, to provide a competitive grants scheme open to the private sector, and to provide a formal consultative mechanism for interaction at the policy level.

Cost and benefits: Three ways of cost benefit analysis are applied:

1. aggregate *ex ante* rate of return estimate.
2. two case studies
 - a. an *ex ante* rate of return analysis incorporating elasticity's of supply and demand covering rice/wheat system

- b. an *ex ante* analysis following a similar methodology for hybrid rice
- 3. review *ex post* evaluations of research India.

The board approval / revised closing date: 03/17/1998 - 12/31/2003.

Final remarks from the task manager: NA

Peru Agricultural Research And Extension (P047690)

Objective of the project: To increase the productivity and competitiveness of the agricultural sector through the adoption of environmentally sound technologies generated and disseminated by the private-sector led and decentralized technology innovation system.

Grant Type: Matching grant for agricultural research and extension; agricultural technology fund; extension grants; adaptive research grants; development grants. The grants are used for the private provision of extension advisory services, and for adaptive research projects carried out in collaboration with producers.

Eligible: Producer groups in association with identified service providers (i.e., NGOs, government research institutes, universities, agribusiness firms, consulting firms, and individuals). The fund will target medium-scale, market-oriented producers and will encourage them to increase their share of co-financing over time.

Who is administering the grants: The foundation management board (government)

Criteria for obtaining the grant: Applicants should submit proposals which have to be approved under competitive procedures. The criteria on which the proposals are selected are the following;

- ❑ profitability and sustainability
- ❑ structure and content
- ❑ technical and scientific merit
- ❑ responds to priorities
- ❑ contributes to development of a market for services
- ❑ strengthens strategic alliances
- ❑ social and environmental aspect
- ❑ farm utility
- ❑ qualifications and experience of researchers
- ❑ plans for transfer of technology and environmental impact
- ❑ (Women, indigenous and vulnerable groups receive special attention as potential beneficiaries).

What are the grant percentages : All projects would require co-financing from grant recipients. The adaptive research grant would fund up to a maximum of 75 percent of the total project cost, a maximum grant amount of US\$300,000 and a maximum project life of three years. Projects with smaller, subsistence-oriented producers would rely more heavily on co-finance by NGOs or other service providers.

What are the grants used for: Not applicable

Justification: The Government could choose not to invest in an agricultural technology system, but rather to leave financing of agricultural technology innovation completely to the private sector. In the Peruvian case, this is not a desirable option, since most products of research and extension are non-appropriable goods. Investment in research and extension may make many benefits flow to society as a whole. The requirement that grant recipients prepare and co-finance projects ensures that government financing responds to genuine interests of users.

Cost and benefits: Global experience has shown high yields of return. The conservative estimates and robustness of rate of return estimates indicate that the program would be a sound investment.

Why Grants: A grant scheme is supposed to be a cost effective way to co finance the adaptive research and extension projects the public institutions do not provide for.

The board approval / revised closing date; 11/23/1999 - 12/31/2002.

Final remarks from the task manager: “Given the success of the project, an extension to June 2004 has been approved to compensate for the one-year delay in effectiveness.

Romania Agricultural Support Services Project (P043882)

Objective of the project: Increase agricultural productivity, sustainability and income by providing immediately needed technology, information and training for private farmers

- Improve efficiency, cost effectiveness and client relevance in the management of research and extension

Grant type: Competitive grant

Eligible: The grant scheme will be open to universities, NGOs, private industry and extension services. The project will provide funds based on pre-determined criteria, on priority needs of farmers and agro processors.

Who is administering the grants: The Ministry of Agriculture and Food appointed staff to the Project Management Unit

Criteria for obtaining the grant: All qualified private and public sector research, extension and farming specialist/ organizations will be eligible to submit proposals to the Agricultural Service Board which will be reviewed with the assistance of peer reviewers. Funds will be approved for projects based on pre-determined criteria outlined in the Competitive Grant Scheme Manual and will be directly disbursed to the successful applicants. The criteria for evaluation of research proposals would include farm utility, qualifications and experience of researchers, plans for transfer of technology and environmental impact.

What are the grant percentages: The grants will range between \$5,000-\$250,000.

What are the grants used for: Grant funds will be provided for laboratory and field equipment, materials, vehicles, office equipment, computers, travel costs, short term training, field labor, fuel and supplies.

Justification: Research in areas that otherwise would not get attention e.g., agroforestry. The pluralistic institutional structure implicit in the grant scheme operation may gradually reduce the dependence on public funding of research and extension institutions by bringing about diversification of funding support, and improve the overall efficiency of public funding of research and extension activities. If the project is successful in enhancing the confidence of farmers and other stakeholders in research and extension institutions as providers of new technologies, information and training, it should make possible government funding being supplemented by beneficiary funding.

Why Grants: Grants are supposed to provide a closer association between research scientist and extension specialists and the needs of the newly emerging private farmer in setting priorities for research/extension and in formulating and evaluating research and extension proposals.

Cost and benefits: The conventional economic analysis will not be done for purpose of investment decision making in the competitive grant scheme. Monitoring and evaluation will ensure that projects are implemented in a cost-effective and efficient manner.

The board approval / revised closing date: 01/27/2000 - 12/31/2004.

Final remarks from the task manager: Not applicable

Nicaragua Agricultural Technology Project (P064915)

Objective of the project: To establish an efficient, demand-driven, agricultural technology, knowledge and innovation system

Grant type: Demand driven matching grant for research and technical assistance.

Eligible : Research organizations and institutions, domestic and foreign, with proposals certified by or prepared with the participation of small and medium scale farm households. These include agricultural technical assistance services, producer groups, government research institutions, universities, the private sector, NGOs and other research institutions both domestic and foreign.

Who is administering the grants: The foundation management board (government).

Criteria for obtaining the grant: Grant would fund proposals submitted by applicants under competitive procedures. Approval of grant proposals depends on the following factors:

- ❑ responds to technological demands of small and medium size farmers
- ❑ scientifically sound
- ❑ potential to transfer practical results to agricultural technical assistance and education activities
- ❑ impact in terms of the number of potential beneficiaries, cropping area and expected returns
- ❑ minimizes local and/or external negative externalities
- ❑ promotes collaboration among the best scientific resources available for research locally or overseas
- ❑ the researchers ability to mobilize additional resources from the private sector, NGOs, foreign universities, and other research organization

What are the grant percentages: The research grant facility will provide matching grants to finance up to 75 percent of the total project operating cost, up to a limit of \$ 80,000 per grant.

What are the grants used for: Research materials and supplies, travel, minor equipment requirements, facility renovation and maintenance, and research assistant and laborer salaries. Grants may also finance short term training and travel for research team leaders, but would not finance construction, salary supplements, general degree training programs, or salaries for lead researchers.

Justification: The fund is supposed to improve efficiency in resource use and stimulate a market for agricultural services

Why grants: The grant component will strengthen and promote client-responsiveness in agricultural research and technical assistance. The fund is intended to improve efficiency in resource use and stimulate a market for agricultural services. Promote demand-driven agricultural services.

Cost and benefits: The project states the benefits of the program, but not in relation to the investment costs.

Expected benefits include:

- ❑ adoption of new production, marketing, management and post-harvest technologies resulting in income and productivity increase
- ❑ improved levels of agricultural education and training
- ❑ trained young farmer

- ❑ definition of agricultural educational and training
- ❑ increased efficiency of agricultural public sector employees
- ❑ increased agricultural growth and, employment and community development resulting form greater resources being generated in the agricultural areas
- ❑ natural resource protection, and minimization of negative externalities

The board approval / revised closing date: 06/06/2000 - 03/01/2004

Final remarks from the task manager: *NA*

Community Development

Brazil Rural Poverty Reduction Project (P074085)

Objective of project: Reduce rural poverty by improving access to basic social and economic infrastructure and services and support for productive activities; increasing the social capital of rural communities to organize collectively to meet own needs; enhancing local governance; and fostering closer integration of development policies, programs and projects at the local level.

Grant type: Matching grant

Eligible: Provides matching grants directly to rural communities and associations.

Who is administering the grants: Government. In this specific case of Brazil, communities can develop to different stages of self selecting beneficiaries, depending on how well they do in previous projects.

Criteria for obtaining the grant: The grant scheme focuses on the poorest rural communities in the 71 municipalities of the project area. In this specific case of Brazil there has been a selection of municipalities based on poverty level and/or other socioeconomic characteristics and also a selection of beneficiary communities through Municipal Council deliberations. The community associations have to identify local needs and submit proposals that address them, for more information see the project operational manual.

What are the grant percentages: The grants are up to US\$50,000 for each subproject.

What are the grants used for: A broad range of subproject investments including infrastructure (e.g., rural electrification, local road improvements and water supply), social investments (e.g., health-related house improvement, day care centers, school or health post rehabilitation) and productive subprojects (such as small-scale community agro-processing, communal tractors and minor irrigation schemes). Subproject selection is demand-driven, however, an indicative breakdown of investment types, based on historical program data in the state suggest approximately 60 percent of financing shall be used for infrastructure, 20 percent for productive investments and 20 percent for social activities.

Justification: Since the rural poor have no access to formal credit institutions, matching grants for productive investments and technical assistance can encourage the formation of groups, provide some experience in the management of financial assets and income-earning activities, and thus make them more attractive to financial institutions.

Why Grants: Implement projects which otherwise will not take place, but do benefit the society

Cost and benefits: The financial viability of the separate subprojects was estimated. The estimated internal rate of return exceeded on average 30 percent.

The board approval / revised closing date: 01/29/2002 - 06/30/2006.

Final remarks from the task manager: “The State is expected to finance some 250 subprojects by end-December 2002”.

Vietnam Northern Mountains Poverty Reduction Project (P059936)

Objective of the project: Provide poor villagers with a variety of improved and sustainable infrastructure and social services, and increase institutional capacity of upland communes and districts.

Grant type: Block grant

Eligible: Poor villages that submit proposals for the use of the funds.

Who is administering the grants: Government

Criteria for obtaining the grant: Villages will submit proposals to the commune for approval. Village proposals can be submitted every six months. The villages will prepare proposals based on priorities they previously identified in the community assessment, and guided by an agreed menu of subprojects. Whether a second proposal for grants is accepted depends on successful completion in the previous cycle.

What are the grant percentages: An agreed amount per year is deposited in a commune account. Local communities are expected to contribute labor and materials to a minimum of 10percent of total subproject costs. Each village will be assigned a budget ceiling, based on the village population, the degree of remoteness of the village, and the 'poor and hungry' rate within the village.

What are the grants used for: For example, improvements to public village facilities, small-scale activities that provide greater household security, contribute to social well-being, improve production or generate income, to the benefit of the neediest households in the village.

Justification: Provide assistance to remote villages that otherwise would not get attention from the government.

Why grants: To increase the scope for specific interventions within geographically targeted poor areas that are tailored to the particular needs of poor people, and to support government efforts to increase local people's involvement in development planning.

The scheme will foster greater control by local people over development within their communities by permitting them to identify, finance and implement small-scale but significant local initiative.

Cost and benefits: The communes will select infrastructure and services as an integrated element of the project implementation process. The infrastructure works are therefore not known in detail *ex ante*. An overall, *ex ante* cost benefit analysis for this project is therefore considered too speculative. In addition, it is unrealistic to expect that approval of each subproject proposal can be subject to an economic analysis, given the huge number of small schemes that the project will finance.

The board approval / revised closing date: 10/25/2001 - 12/31/2007.

Final remarks from the task manager: NA

Indonesia The Second Village Infrastructure Project (P040521)

Objective of the project: To build small infrastructures in poor rural villages on the two islands where most of Indonesia's poor are, Java and Sumatra. Create cash employment for the villagers. Secondary objectives are to increase decentralization and community participation.

Grant type: Matching Grant

Eligible: Pre select poor villages

Who is administering the grants: government

Criteria for obtaining the grant: The village targeting was replaced by a system of requesting proposals from villages and providing funds to the most deserving proposals. Each proposal should ideally reflect infrastructure needs and labor availability. Very remote villages will not be included in the program, as they might be too small to reach significant benefits from the grant.

What are the grant percentages: Each of 2,600 of the poorest villages on Java and Sumatra get about \$50,000 equivalent for building local public infrastructures. The villagers have to contribute 7 percent of the grant.

What are the grants used for: Infrastructure

Justification: Build infrastructure, which otherwise would not be done, as the villages are too poor. To ensure sustainability, the villages had to agree to maintain the facilities built, given that public funds will always be insufficient to cover maintenance of village level infrastructure.

Why grants: To increase access to markets.

Cost and benefits: Without counting the benefits from employment and lower unit costs of work the rate of return for infrastructure exceeds 20 percent.

The board approval / revised closing date: 10/10/1996 - 07/31/2000.

Final remarks from the Task Manager: NA

Malawi Second Social Action Fund Project (P049599)

Objective of the project: Enhance and sustain the provision and use of resource endowments. The project aims to: address the need for socio-economic infrastructure development; support safety net; prioritize and implement projects by training of stakeholders.

Grant type: Demand driven

Eligible: Communities.

Who is administering the grants: Government

Criteria for obtaining the grant: Communities identify and decide the type of project that is most needed in their area and which will provide the highest return to their inputs of labor, time and materials.

What are the grant percentages: Unclear

What are the grants used for: Mainly infrastructure

Justification: The project aims to enhance and sustain the provision and use of resource endowments by beneficiaries which will contribute to poverty reduction. Furthermore the project also supports the decentralization efforts of the government and build capacity at local authorities to respond to community needs.

Why grants: Objective is to reduce poverty through growth, and interventions for which the targeted communities have to get together and discuss potential interventions

Cost and benefits: The grants are demand-driven; communities identify and decide the type of project that is most needed. Recent economic and sector work in Malawi confirms that this selection of projects by beneficiaries provides very high economic rates of return. Recent estimates of the economic rates of return are 15 percent for secondary education, 50 percent for the creation of boreholes and 26 percent for rural roads.

The board approval / revised closing date: 10/15/1998 -05/31/2003.

Final remarks from the task manager: NA