

Capacity Building for Demand-led Research: Issues and Priorities

K.N. Nair
Vineetha Menon

November 2002

Acknowledgements

The authors wish to thank Professor George Waardenburg, Johanna Spreuwenberg, Piet de Lange, Paul G.H. Engel, P.R. Gopinathan Nair and G.N. Rao for their comments on an earlier draft of this paper. However, the responsibility for the views expressed herein is entirely ours.

Contents

LIST OF ACRONYMS	5
SUMMARY	6
1 INTRODUCTION	7
2 DEVELOPMENT EXPERIENCES AND EXPERIMENTS	7
3 GLOBALISATION AND DECENTRALISATION	10
4 KNOWLEDGE FOR DEVELOPMENT	11
5 NORTH-SOUTH PARTNERSHIPS: RECTIFYING THE ASYMMETRY IN KNOWLEDGE	14
THE MMRPs	14
6 KNOWLEDGE GENERATION THROUGH DEMAND-LED RESEARCH	18
7 CONCEPTUALISING DEMAND-LED RESEARCH AND CAPACITY BUILDING	20
8 CONCLUDING REMARKS	23
REFERENCES	25

List of Acronyms

ACP	African, Caribbean and Pacific countries
DGIS	Directorate General for Development Cooperation (the Netherlands)
ECDPM	European Centre for Development Policy Management
EU	European Union
GDP	gross domestic product
HDI	human development index
ICT	information and communication technology
IMF	International Monetary Fund
MMRP	Multi-annual Multidisciplinary Research Programme
NGO	non-governmental organisation
R&D	research and development
RAWOO	Netherlands Council for Scientific Research for Development
UNDP	United Nations Development Programme
WTO	World Trade Organization

Summary

In the context of the failure of past development experiences and the knowledge asymmetry between North and South, this paper examines the various dimensions of the concept of demand-led research. In view of the knowledge gap and the poor material conditions in many countries in the South, considerable support from the North is required for them to build up the necessary capacity. Even with such support, these nations face an uphill task in realising 'capabilities', a higher stage of subjective intrinsic abilities built up on the vital foundation of objective conditions laid down in the process of capacity building. Under conditions of freedom and civil liberties, individuals with such capabilities could actively participate in democratic processes in order to come to their own decisions on 'patent injustices' and how to rectify them. Demand-led research can generate the empowering knowledge that will enable individuals to reach the level of capability to make informed choices of their own, without intellectual inputs from the North. Such knowledge generation can come about by mainstreaming mode 2 knowledge generation, in which societal needs and the interaction between research demand and supply are emphasised, and knowledge utilisation is considered as an important constituent of knowledge generation. Although there is a tendency to equate mode 2 with demand-led research, the two are not synonymous. However, mainstreaming mode 2 research will take us closer to realising demand-led research. The paper suggests some actions that various agencies in the North and the South could take to promote demand-led research in the South.

1 Introduction

In the context of the cumulative experiences with development thinking, there is an indisputable asymmetry that favours the North and its historic use of knowledge as power. This paper highlights the importance of demand-led research as a means for reversing this asymmetry through North–South research partnerships.

This paper stemmed from an international seminar, ‘Demanding Innovation: Articulating Policies for Demand-led Research Capacity Building’,¹ held in Maastricht, the Netherlands, in October 2001. The participants, with different political, economic, cultural and technological backgrounds in 56 countries, agreed that conventional research alone is inadequate to bring about the sustainable development of the South due largely to the prevalence of Northern paradigms in research, and the neglect of development issues and needs in the South. It was also recognised that the capacity for demand-led research in the South is limited, and that it must be developed at all levels. The outcome of the seminar was the Maastricht Declaration,² in which the participants resolved to work together to build a constituency for demand-led research in order to realise the goal of sustainable development.

Drawing inspiration from the Maastricht Declaration, this paper examines the relevance of demand-led research in the context of the evolution of development strategies and policies in the South, and reviews the experiences and insights gained from some innovative North–South research partnerships. In particular, the paper highlights the need for demand-led research in the South, and the facilitating role that the North could play. In the light of this analysis, we then elaborate on the concept of demand-led research, the implications for capacity building, and the conditions that need to be established for mainstreaming demand-led research in the South.

2 Development Experiences and Experiments

Past experiences and experiments with development shown that policies to improve material conditions alone are myopic, and often antithetical to development. The annual reports of international organisations such as the World Bank and the United Nations Development Programme (UNDP) demonstrate that despite economic growth over the years, the disparities between North and South have widened, due primarily to the faster rates of growth achieved by the former.³ Although the relative incidence of poverty in the South has declined, in absolute terms the number of people living in poverty has increased, pointing to the failure of development efforts. The fact that the development policies and strategies adopted by countries in the South have undergone considerable shifts over the past 50 years points to the complexities of the challenges of development faced by these countries

In the 1950s it was believed that faster rates of economic growth could be achieved by stepping up the levels of accumulation and investment. It was widely believed that the ‘trickle down’ process of

¹ The seminar ‘Demanding Innovation: Articulating Policies for Demand-led Research Capacity Building’ was organized by ECDPM and the Netherlands Ministry of Foreign Affairs (DGIS). The proceedings are available at www.demanding-innovation.org.

² The Maastricht Declaration recognizes the need to develop the capacity for demand-led research in the South, and the role that the North could play in realizing the goal of sustainable development. It spells out a plan of action for stakeholders in both North and South to promote demand-led research.

³ The average income in the richest 20 countries is 37 times the average in the poorest 20, and the gap has doubled in the past 40 years. It is estimated that the ratio of per capita incomes in the richest and poorest countries increased sixfold between 1870 and 1985 (World Bank, 2000: 14).

growth would result in improved standards of living and poverty reduction.⁴ However, development theorists did not agree on strategies for raising the levels of accumulation and investment; some argued for inward-looking import substitution strategies based on industrialisation, others for export-led strategies. However, there was a shared optimism that science and technology could be harnessed to modernise societies. Most newly independent countries followed the first route, whereas a few countries opted for the latter.

It soon became apparent that the rates of income growth (both aggregate and per capita) were much lower than anticipated, and the expected trickle down effects of growth had not materialised.⁵ By the 1970s, it was recognised that economic growth alone was insufficient, so that development debates began to emphasise the need for growth with redistribution, and human resource development by investing in education and health. Meanwhile, some of the East Asian countries that followed an export-led strategy, together with investments in science and technology and human resources, and effective land reform achieved significant economic growth.⁶ These countries had reformed their economies by liberalising trade and capital markets and reducing the role of the state, while expanding and stimulating market forces. On the basis of this experience, referred to as the East Asian miracle, international financial institutions such as the IMF and the World Bank formulated structural adjustment and stabilisation policies for developing economies, even though variants of these policies in Latin America had not produced the desired outcomes. The result was the monetary-fiscal fiasco of the 1980s.

The strategy that the state should progressively withdraw from economic activities, retaining a regulatory and facilitating role, leaving the market to take over was widely debated in the development literature in the 1980s. The economic crisis in the Soviet Union and the erstwhile socialist economies added impetus to the argument for a market-based approach to development. By the 1990s, the international institutions had adopted this approach in their agendas for development in the South. Their main prescriptions for accelerating economic growth and development included the privatisation of state-run enterprises, reduced subsidies, pricing of public utilities, downsizing state apparatus, institutional reforms, decentralisation of administrative functions to the local level, etc.⁷

The development dilemma faced by nations across the world, especially those in the South, is illustrated in the following:

- Between 1967–97 the average GDP of developing countries increased at a rate of 2.1% per annum, which if maintained would mean that the per capita GDP would double every 35 years. The average per capita incomes of the poorest and middle-income countries increased much more slowly than in the North, making it difficult for them to catch up (World Bank, 2000: 14).
- Of the world's 6 billion people, 2.8 billion live on less than \$2 a day. A further 1.2 billion more live on less than \$1 a day, and of these 44% live in South Asia. Although standards of living in Latin America, South Asia and sub-Saharan Africa have improved, the number of people living in poverty has been rising. In the countries of Europe and Central Asia in transition to market economies, the number of people living on less than \$1 a day rose more than 20 fold. In the South poverty, economic disparities and the dependence on foreign aid are increasing, and the flow of resources from South to North continues (World Bank, 2000: 3).
- Across the world, there are unacceptable levels of deprivation. 'Of the 4.6 billion people in developing countries, more than 850 million are illiterate, nearly a billion lack access to improved

⁴ In the context of the countries that gained independence following World War II, development theories and strategies were unanimous about the need to increase levels of accumulation as soon as possible, and to transform this into productive investment. There was little concern about the distributional consequences of growth, since incomes and savings were very low.

⁵ This line of argument is based on South Asian experiences with development planning, particularly that of India; see Chakravarty (1987), Robinson and Kidron (1970) and Wignaraja *et al.* (1991).

⁶ See, for example, Gerard and William (1999), World Bank (1998), Richter *et al.* (2000).

⁷ The World Bank has championed such ideas for reforming the state and making institutions and markets more efficient for giving new directions to development and poverty reduction (see World Development Reports 1999, 2000 and 2001). For the theoretical and empirical formulations underlying the discussion, see Hayward (1986) and Wade (1990).

water sources, and 2.4 billion lack access to sanitation. Nearly 325 million boys and girls are out of school, 11 million children under age five die each year from preventable causes, equivalent to more than 30,000 a day' (UNDP, 2001: 9-10).

- Rates of economic growth over the last 30 years reveal little about the improvements in vital indicators of development such as political stability, education, life expectancy, child mortality and gender equality, which appear to have little to do with the spread of economic growth (UNDP, 2001: 10).
- Although global food production has increased, 800 million people are still malnourished. In addition, environmental degradation is depleting food resources; 25 million tonnes of topsoil are lost annually, and three-quarters of marine fish stocks are over-exploited. The costs of soil erosion and the health and other effects of pollution have been estimated at 5% of global GNP (World Bank, 2000: 18).

It is now widely accepted that past development policies were neither culturally appropriate nor qualitatively acceptable, and were unsustainable. The failures of development efforts have cautioned the world to be wary of the inherent assumptions behind them. The critique of Swantz and Tripp (1996) is undoubtedly justified: 'Perhaps the greatest fallacy of the development ideology is that it relegated people who adhered to traditional beliefs and practices to being passive receptacles of progress, denying them agency in their own lives, and refusing to recognise their own choices and rationales for asserting their preferences' (p.44).

Amartya Sen (1993) pointed to the ethical dimension of development. Despite the unprecedented increase in overall wealth, and the fact that 'development' has been on the agendas of most nations for several decades vast numbers of people, perhaps even the majority, are denied elementary freedoms. Even in the Indian state of Kerala, lauded by many scholars and development experts as a 'model of development' (Franke and Chasin, 1994), many communities in remote areas 'still suffer a lot of deprivation, including lacking the tools to become literate, and are outliers in the model' (Oommen, 2000). The high values of some indicators of development in Kerala (see table 1) conceal the vital importance of local and community-specific knowledge. Also, it should be borne in mind that even when communities and regions advance, individuals might still be deprived if 'public action' is not guided by a moral philosophy that ensures justice for all (Dreze and Sen, 1989; 1995). Similarly, Cohen (1993) argued that people should have equal access to advantages, including welfare, resources, etc. According to Sen, the quality of life should be assessed in terms of individual capabilities (a position rejected by Cohen), 'capability' being defined as the ability or potential to do or to be something – more technically, to achieve a certain 'functioning'. How knowledge can bring this about in order to eliminate poverty and deprivation is the greatest challenge of the 21st century.

In the last decade, national and international organisations, including the World Bank⁸ have given priority to eliminating poverty, by

- promoting income and employment opportunities, through the creation of productive assets, credit schemes and market formation;
- empowering the poor by encouraging their participation in political processes and in decentralised decision-making, as well as by efforts to remove social and institutional barriers resulting from discrimination on the basis of gender, ethnicity and social status; and
- enhancing security for the poor, through mechanisms to reduce their vulnerability to economic shocks, natural disasters, ill health, disability and personal violence, and encouraging investments in human capital and activities that will yield high returns.

Underlying these strategies is the assumption that genuine participation in development at the micro level can limit some of the damage resulting from past strategies, and may go a long way towards alleviating the worst forms of poverty. However, when micro level participatory development also subscribes to a philosophy of sustainable development, it is essential to think globally as well as locally. As Sen observed, there can be agreement on the need to identify cases of 'patent injustice'

⁸ For a discussion of the World Bank's strategies, see the *World Development Report 2000/2001*.

(1993: 287),⁹ but the emergence of such agreement first requires an open discussion of what is feasible. In other words, a healthy democracy, basic civil rights and political freedom are indispensable for the emergence of shared social values – they cannot be decided merely by the pronouncements of the state. Processes such as participation in political decisions and social choice should therefore be seen not as the means to development, but as constituent parts of the ends of development itself (Sen, 1999: 287–88). These processes, however, have become increasingly complex due to the processes of globalisation and decentralisation.

3 Globalisation and Decentralisation

Globalisation has opened the gates of nation states and has permeated the remotest corners of the world, bringing about a certain degree of homogenisation as well as unprecedented linkages between cultures, locations and individuals.¹⁰ Capital, technology and products can now move across national boundaries much faster and more freely than ever before, transforming the locus of production and trade in commodities and services. Although the World Trade Organisation (WTO) provides the economic and institutional framework for these changes,¹¹ the revolution in information and communication technologies (ICTs) has accelerated the process, transforming the world into a ‘global village’ (McLuhan and Powers, 1992). The free flow of knowledge offers such a tremendous potential for development that the present society qualifies as knowledge-based.¹²

Decentralisation is often regarded as a countervailing force against globalisation.¹³ It can also be seen as an effort to bring about people-centred development in that it is encouraging local participation in political, administrative and economic decision-making, and in policy implementation. It can also be used to relieve regional and local tensions and conflicts resulting from uneven development. Governments all over the world have attempted some form of decentralisation by devolving power and responsibility to the local level. Thus, despite its inherent homogenising tendency, globalisation has not eliminated peoples’ linkages to locations, cultures and environments, but in many cases has increased awareness of them. Decentralisation has further accentuated such local linkages. There are therefore contradictory tensions and complementarities between globalisation and decentralisation. When nation-states themselves are at a disadvantage in dealing effectively with the power of the Northern states and of multinational corporations, the smaller, much less powerful societies and populations in the South are under severe threat of being further marginalised if these states withdraw their protection and support. Globalisation is also allowing people to forge networks across nations. For example, the Fourth World is a worldwide network of indigenous peoples demanding self-governance. What is clear in such networks of deprived and marginalised populations is that their desire for development cannot be satisfied at the level of social engineering by nation-states alone, or by the international agencies that provide aid to the South.

Nations and cultures whose value systems do not incorporate egalitarianism or justice for all may not provide an atmosphere that allows for the needs of certain populations to be translated into demands if they are denied the opportunity to build their capabilities. In such cases, globalisation offers them an opportunity to take advantage of transnational networking, enabling them both to articulate their needs

⁹ Sen observes that inequalities based on race, gender and class often survive on the implicit understanding that there is no alternative. Thus public discussion to debate conventional wisdom on both practicalities and valuations can be central to the acknowledgment of injustice. He also cautions that at the level of pure theory of justice, it would be a mistake to lock prematurely into a system for ‘weighting’ these competing concerns. This crucial resolution has to come about through democratic decision-making.

¹⁰ In recent years the literature on globalization has proliferated. For a comprehensive list of references, see World Bank (2000). For a synthesis of the conflicting views on the impacts of globalization on developing countries, see RAWOO (2000).

¹¹ Kruger (1998) discusses a number of aspects of WTO as an international institution.

¹² The World Bank (1998) articulated the potential for utilizing ICTs to the advantage of developing countries.

¹³ As in the case of globalization, the literature on decentralization is growing rapidly (see World Bank 2000, ch.5). For essays on the theory and practice of decentralization, see King (1992).

as demands, and to ensure that they are heard by appropriate agencies. Alternatively, when what is valued culturally is challenged by universal values, such trans-cultural challenges may be opposed from within the culture. As Spencer observed, ‘We live in a world in which maintaining cultural boundaries is even more frequently asserted by politicians and ideologues of all sorts. Yet, it is also a world in which more and more people are finding out the arbitrariness and contingency of cultural boundaries... The more the world is culturally fluid and permeable, the louder are assertions on all sides of cultural differences’ (Spencer, 1990: 290). The inherent tension between universal values and cultural relativism¹⁴ complicates the conceptualisation of ‘demand-led research’ and the ‘capacity building’ required for such research, two concepts that do not lend themselves to easy capitulation. While there can be no easy resolution to this tension, location-specific demand-led research for development necessarily has a place for a moral philosophy for development, without which the inequalities within cultures and nation-states cannot be effectively challenged.

4 Knowledge for Development

If globalisation is providing opportunities for the free exchange of knowledge as a public good,¹⁵ decentralisation has raised new demands for knowledge for sustainable and ethical development. Decentralisation places the onus on local governments to find solutions to problems specific to the locality, thereby creating a demand for local-level development policies, the formulation of which requires knowledge and information relevant to the local realities. In good local governance, elected representatives are accountable to citizens. For such accountability to be effective, people must be able to express their views, and to monitor the workings of local governments. Only informed vigilance and activism on the part of ordinary people can ensure their effective participation in local level policy formulation and interventions. Thus, a vibrant and transparent grassroots level democracy is essential to ensure the efficiency and effectiveness of local governance. There are no set models of decentralisation to guide this process; it has to be realised by learning through trial and error or by sharing such experiences.

To be able to utilise the knowledge that is available globally, countries in the South must be able to translate it into a form that is socially acceptable, or modify, adapt and assimilate it with local knowledge to make it relevant to local conditions. They therefore require skilled personnel. The shortage of capable human resources will hamper their ability to develop socially appropriate regulatory frameworks to manage the forces of globalisation. Globalisation has also brought new research agendas, such as developing indigenous seed varieties or preserving medicinal plants used in local health practices, with the objective of protecting the interests of local communities. It has also brought with it an unprecedented need to monitor the diffusion of new information and technologies.¹⁶ Past experience has shown that multinational corporations can be unscrupulous in their use of Southern locations for experimentation. In this and many similar areas the activities of transnational corporations need to be monitored and evaluated in order to counter the negative effects of globalisation, and this will be possible only by enhancing the science and technology capabilities at

¹⁴ For a discussion of the dichotomy between universalists and cultural relativists in a human rights context, see Pollis (2002).

¹⁵ A public good can be accessed by everyone without one person’s use affecting its availability to others. According to Stiglitz, a key part of successful development is combining global with local knowledge. The intellectual property rights regime affects how the gains are shared and thus the pace of development in the South. But other aspects of the knowledge infrastructure in less developed countries can affect the pace of development and the extent to which they can access the fruits of knowledge as a global public good (Stiglitz, 1999: 312).

¹⁶ ‘Given the limited use of transgenic plants worldwide and the relatively constrained geographic and ecological conditions of their release, concrete information about their actual effects on the environment and on biological diversity are still very sparse. As a consequence there is no consensus to the seriousness or even the existence of any potential environmental harm from genetically modified seeds’ (UNDP, 2000: 12).

the local level. Ideally, global and local knowledge can complement and reinforce each other.¹⁷ Many environmental movements have effectively used global networking to build such complementary relationships.

The process of decentralisation has also accentuated the need for building and strengthening the local capacity for demand-led research, with local-level planning and implementation strategies to identify solutions to location-specific problems. These problems vary in nature, from technological, organisational, institutional and socio-economic, to environmental, and their solutions require multidisciplinary networking and information exchange. The scope for replicating locally identified solutions is limited due to differences in local circumstances, so that the process of decentralisation warrants the creation of decentralised research capacity at the local level. Since knowledge to meet the demands of decentralisation is promoting grassroots development and institution building, the process of knowledge generation may also function as a means of mobilising local people for participatory development. Although the emerging development thinking and policies (characterised by globalisation and decentralisation) call for an expansion of the knowledge base for managing these changes, countries in the South are unfortunately poorly equipped to meet this challenge. The diffusion of information and communications technologies (ICTs) has been uneven, and bridging the knowledge gap¹⁸ will require building and strengthening the science and technology capacity and capabilities in the South. In terms of the UNDP's technology achievement index,¹⁹ which presents a snapshot of each country's achievements in the creation and diffusion of technology and the human skills necessary to absorb innovation, there are considerable disparities both between North and South, and within countries. Bridging the knowledge gap will require considerable investments in science and technology in the South, yet the current levels of investments are on average less than 0.5% of GDP, compared with 4–5% in the North (Retout 1998). Because the former lack the resources to invest in science and technology, the North can play a vital role in building and strengthening such capacities within the framework of North–South research partnerships.²⁰

It is now accepted that there has not been an equitable sharing of the knowledge and insights gained from experiences between the North and the South and within the South. In this context, it is significant that the UNDP *Human Development Report* (2001) called for a dynamic knowledge management system capable of distilling knowledge and making it available for further adaptation and use in new settings. The report recognised, however, that such a Herculean task would be beyond the capacity of individual nations. It will require international institutions to make a concerted effort to build the South's capacity to assess and adapt relevant policy and technical knowledge to local situations when necessary, and to create new knowledge that in turn may be relevant elsewhere.

The enormous ethical responsibility of those engaged in knowledge generation and in improving people's lives has not been sufficiently acknowledged by the North. A consensus has now emerged

¹⁷ Retout (1998: 76) visualizes such complementarity as follows: 'Countries can acquire knowledge by tapping into the global knowledge base and by adapting this knowledge to local needs and specific contexts, while the results of country specific or area specific research can add to the global body of knowledge. But countries also have to develop their own local knowledge base in order to be able to serve essential national needs and priorities. Moreover, a local knowledge base and capabilities are necessary if a country is to be able to assess, absorb and adapt knowledge which comes from outside. There is a growing appreciation for location specific knowledge in a rapidly evolving global knowledge system. This appreciation derives from the continuing surprises from experiences of specific regions or countries in dealing with economic and social development. The world continuously learns from 'best practices' and exceptions to received wisdom to augment its knowledge base. This provides opportunities for area specific research to contribute to global learning, as long as avenues for effective exchange of information in internationally accepted formats exist.'

¹⁸ The UNDP report makes the interesting observation that developing countries should not forever be held hostage to the research agendas set by global market demand. If any form of development is empowering in the 21st century, it is development that unleashes human creativity and creates technological capacity. Many developing countries are already taking up the challenge to make this happen. Global initiatives that recognize this will not only provide solutions to immediate crises, but will also build the means to cope with future ones (UNDP, 2001: 8).

¹⁹ This is a composite index of a number of variables with appropriate procedures for weighting and ranking, to help policymakers define technology strategies (see UNDP, 2001, annex 2.1).

²⁰ It has also been pointed out that promoting a culture of innovation will be more decisive than providing funds for new technologies (Retout, 1998: 76).

that the unequal distribution of technical know-how and 'information problems' in the South are obstacles to development, and that they affect people everywhere, especially those living in poverty. Rectifying this situation will require dialogue within and between countries in the South, as well as between the North and the South. Needless to say, the capabilities required for conducting such dialogue on equal terms are poor in the South. Building up those capabilities is therefore a requirement for the South, and a moral responsibility of the North.

5 North–South Partnerships: Rectifying the Asymmetry in Knowledge

There are evident weaknesses in existing North–South research partnerships.²¹ The research agenda is usually set by the Northern partners, using analytical and methodological parameters drawn from Northern experience rather than taking into account the specific conditions in the South. Too much emphasis is placed on scientific relevance and too little on development relevance. Moreover, the research process hardly ever results in increased capacity in the South in terms of bringing about demand-led research, and ensuring that the results are applied for development. In 1997, at an international conference on North–South research partnerships held in Leiden, the Netherlands, it was acknowledged that scientific cooperation that is entirely designed and managed by the North has been largely ineffective.²²

Recent discussions have highlighted that the usual North–South collaborations dominated by the Northern partners have made only insignificant contributions to building up and strengthening the research capacity in the South. The recognition that such partnerships have been asymmetrical, and the consequences for science and technology development in the South, have resulted in a conscious effort to change the situation. Some initiatives, in particular those of the Netherlands Directorate General for Development Cooperation (DGIS), aim to support demand-led research programmes that are completely owned by the Southern partners. In the early 1990s the Dutch launched a debate on North–South research partnerships, culminating in a new research policy²³ that led to the establishment of the Multi-Annual Multidisciplinary Research Programmes (MMRPs). Later, the European Union also initiated a major policy dialogue to promote research and technology for development in the African, Caribbean and Pacific (ACP) countries, which incorporated many elements of the demand-led approach of the MMRPs. More recently, the ideas underlying this approach²⁴ were the focus of an international seminar, ‘Demanding Innovation’, on demand-led research and capacity building, held in Maastricht. Before discussing the complex nature of demand-led research and the capacity required, we first describe the characteristics of the MMRPs.

The MMRPs

Unlike many other forms of North–South research collaboration, the MMRPs were established to carry out multidisciplinary, location-specific and demand-driven research for sustainable development. At present there are nine MMRPs – three in Asia (Bangladesh, India and Vietnam), two in Latin America (Bolivia and Nicaragua), and four in Africa (Egypt, Mali, Tanzania and Uganda). The Netherlands provides long-term support, but the Southern partners are autonomous in terms of programme management. Each MMRP supports socially relevant research that addresses long-term or contemporary issues or problems from the perspective of many stakeholders, whose interests may conflict. Each programme sets its own research agenda, focusing on three goals – poverty alleviation, environmental protection and improved gender relations – within the overall framework of sustainable development. These goals represent rights that are significant across cultures, and their denial can be

²¹ A number of interesting papers and reports on North–South research partnerships have emerged from the deliberations of the Netherlands Development Assistance Research Council (RAWOO); see Bunders and Mukherjee (1997), Waardenburg (1997), RAWOO (2001a,b).

²² The participants at an expert meeting in Trivandrum in October 2001 arrived at similar conclusions (see RAWOO, 2001a).

²³ The policy recognized the need to reverse this asymmetry, and acknowledged that capacity building for development research needs long-term support (DGIS, 1992).

²⁴ See note 1. The two background documents for this seminar were: *Comparative Study of the Impacts of Donor-initiated Programmes on Research Capacity in the South* (Bautista et al., 2001), and *Research and Technology for Development through ACP–EU Policy Dialogue* (Bijker et al., 2001).

regarded as leading to ‘patent injustice’. At least in the context of the MMRPs, there has been some consensus on such injustices. Location-specific identification of denials of these rights form the basis of the research, which involves multidisciplinary interactions and linkages, involving non-researchers who have a stake in these locations or issues. The unifying links underlying the MMRPs are therefore their focus on demand-led, location-specific and multidisciplinary research, and the involvement of non-researchers, with the aim of strengthening the local research capacity (de Lange 1995).

Unlike most conventional supply-driven research programmes in the South, the Southern partners are fully autonomous in that they set their own research agenda, implement the research, and thus own the research results. Local stakeholders are responsible for identifying priorities and implementing the research in a participatory process. The MMRPs are therefore demand-led by design; the donor is merely a facilitator.

In terms of their socio-political and historical development experiences, the MMRP countries differ considerably. In Asia, Vietnam adopted a Soviet-style centralised planning system after reunification, and has been moving towards a market-based economy, but in view of the nature of the communist system, there has been very little space for the development of civil society organisations. Bangladesh adopted a democratic system of governance after independence in 1971, but has witnessed a degree of political instability. Under India’s more or less stable democratic system, the state of Kerala has a long tradition of left-wing politics, and its indicators of development are significantly different from the rest of the country. Table 1 shows some indicators of human development for the MMRP countries.

Table 1. Selected indicators of human development for the MMRP countries, 1999.

Indicator	Bangladesh	Bolivia	Egypt	India (Kerala) ^a	Nicaragua	Mali	Tanzania	Uganda	Vietnam
Adult literacy rate, age 15 & above (%)	40.8	85.0	54.6	56.5 (90.0)	68.2	39.8	74.7	66.1	93.1
Combined primary, secondary & tertiary enrolment ratio	37	70	76	55 (55) ^b	63	28	32	45	67
Life expectancy at birth (years)	58.9	62.0	66.9	62.9 (72.0)	68.1	51.2	51.1	43.2	67.8
Infant mortality rate (per 1000 live births)	58	64	41	70 (15)	38	143	90	83	31
Physicians per 100,000 people	20	130	202	48 (149)	86	5	4	N.A	48
GDP per capita (US\$, purchasing power parity)	1483	2355	3426	2248 (2902)	2279	753	501	1167	1860
GNP per capita (current US\$, World Bank Atlas Method) ^c	370	990	1380	440 (–)	400	240	260	320	370
Life expectancy index	0.57	0.62	0.70	0.63 (0.87)	0.72	0.44	0.44	0.30	0.71
Education index	0.39	0.80	0.62	0.56 (0.78)	0.66	0.36	0.61	0.59	0.84
GDP index	0.45	0.53	0.59	0.52 (0.56)	0.52	0.34	0.27	0.41	0.49
Human development index (HDI)	0.470	0.648	0.635	0.571 (0.736)	0.635	0.378	0.436	0.435	0.682
HDI rank	132	104	106	115 (–)	105	153	140	141	101

^a Figures for Kerala computed from official data for the period 1998-99.

^b 1998 data, students aged 6–22.

^c World Bank, World Development Indicator Database, July 2001.

Source: UNDP, *Human Development Report 2001*, for the period 1999.

In Africa, Tanzania has long enjoyed political stability and in recent years has moved away from its earlier socialist to a capitalist system. In other countries the political systems and forms of governance have evolved in different ways. Some have given fostered the spread of vibrant civil society organisations (Bangladesh and India), while in others they are very weak (Tanzania and Vietnam). Despite such variations, an important common link across these countries is that all of them are having to deal with the impacts of economic reforms and globalisation, albeit at different levels of intensity. They have also experienced decentralisation of governance with the devolution of power and democratic processes of institution building. In terms of research capacity, the situation is relatively good in some countries and very poor in others, as is evident from some science and technology indicators for these countries shown in Table 2.

Table 2. Selected science and technology indicators for the MMRP countries, 1999.

Indicators	Bangladesh	Bolivia	Egypt	India	Nicaragua	Mali	Tanzania	Uganda	Vietnam
Technology index rank	No rank	46	57	63	64	No rank	70	No rank	No rank
Technology achievement index (value)	–	0.277	0.236	0.201	0.185	–	0.080	–	–
Internet hosts (per 1000 people)	–	0.3	0.1	0.1	0.4	–	–	–	–
Telephones (fixed line & cellular per 1000 people)	5	113	77	28	39	–	6	5	31
Electricity consumption (kWh per capita)	81	409	861	384	281	–	54	–	232
Gross tertiary science enrolment ratio (%)	–	7.7	2.9	1.7	3.8	–	0.2	0.3	–
Scientists & engineers in R&D (per 100,000 people)	52	172	459	149	204	–	70	21	–

Source: UNDP, *Human Development Report 2001*.

The organisation of the se MMRPs is left to selected institutions in the respective countries. Some are hosted by established research institutes, but have functional and financial autonomy; others are run by non-governmental organisations (NGOs) set up for the purpose. In each country, the host organisation was chosen to allow for maximum flexibility in programme implementation. Responsibility for guiding and implementing the research is left to national steering committees representing stakeholder groups, and supported by a programme office. The programmes have also developed various mechanisms for monitoring and evaluating the research they support, although there has been an ongoing dialogue among the programmes on the type of indicators to be used for measuring the quality of research, in view of the emphasis on societal relevance.

Whether the MMRPs have moved towards realising their intended objectives was first examined in mid-term joint reviews (except for Egypt and Mali). The reviewers concluded that the programmes have established their own identities and have demonstrated their capacity to organise demand-led research. Recently, DGIS carried out a comparative study of the MMRPs and other donor-initiated research programmes to assess their contributions to promoting demand-led research (Bautista *et al.* 2001).²⁵ Only the programme in Kerala has tried to conceptualise and assess the utilisation of knowledge generated in the research it undertakes.²⁶

²⁵ The individual country reports are available on the DGIS website. A synthesis of the reports can be obtained from DGIS, Division for Research and Communication, Ministry of Foreign Affairs, the Netherlands.

²⁶ See the Annual Report of the Kerala Research Programme on Local Level Development, No.5, 2000-2001, chapter 3, pp.45-93.

The MMRPs aim to redress the asymmetry in North–South research partnerships by enhancing the capacity of the South to make their own policy decisions, and to carry out demand-led research to address the issues of poverty alleviation, the environment and gender equality. Kerala, Tanzania and Vietnam have independently chosen to work on the problem of the over-exploitation of rivers for sand mining, indicating that these countries face similar development issues, even though they are far removed in terms of politics, socio-economics, culture and ecology. Similarly, Bolivia and Kerala have independently chosen to fund research on decentralisation. If these lessons were to be pooled together and analyzed in a comparative perspective, they would certainly yield valuable insights into issues such as property rights and their management that could be used elsewhere. Unfortunately, networking among the MMRPs, to pool ideas and compare local knowledge, has so far been limited. The MMRPs have not been equally effective in undertaking multidisciplinary research, a problem that can be attributed to ‘the narrow disciplinary functioning of most universities and research institutes and the weakness of the social science community’ (Bautista *et al.*, 2001: 12). The MMRPs’ experiences also differ in terms of the efficiency of establishing linkages among stakeholders in policy, action and research. The capacity for demand-led research is weak in the South in general, and even weaker in countries where the socio-political and institutional circumstances are not conducive to such research. Although the systems approach to the organisation of research allows them flexibility to develop innovative procedures and processes of knowledge generation, not all the MMRPs have opted to do so. Only the programmes in Bangladesh, Bolivia, Kerala and Nicaragua have been successful in developing novel participatory research methodologies, no doubt facilitated by the presence of active and vibrant civil organisations in those countries.

According to Bautista *et al.*, the MMRPs’ mode of organising research is more appropriate in terms of knowledge generation geared to solving local development problems. However, finding ways to assess the quality of such an innovative mode of knowledge generation has been a source of disquiet for all programmes. Clearly, peer review recognition, publications in international journals etc., cannot be used as yardsticks to assess the quality of such unconventional research. In general, disciplinary territoriality does not permit any space for multidisciplinary research of this kind. International journals, for example, tend to publish work in narrow academic disciplines rather than trans-disciplinary research. Conventional research is often undertaken by academic researchers who do not take the trouble to ensure stakeholder participation. Innovative research, on the other hand, is usually done by activists who have become researchers, or by researchers who have turned to activism, who generally have little interest in the process of documentation and report writing. Academics who are willing to guide or collaborate with such ‘barefoot’ researchers would no doubt improve the quality of this kind of research under MMRPs, but the research environment in most of these countries does not encourage such collaboration. Both academics committed to activism, and activists involved in academic research can contribute relevant knowledge that can bring about social transformation. In Bolivia, Kerala and Nicaragua there is some capacity for this, but even here, the basic infrastructure for research and science and technology needs to be greatly improved to bridge the knowledge gap. Other MMRP countries are further behind in this respect.

In short, in their brief period of existence the MMRPs have made valuable contributions to the creation of a culture of demand-led research. They have also generated significant knowledge that is relevant to the development of their respective societies and have contributed to the building and strengthening the research capacities and capabilities of individuals and institutions. Their experiences point to the fact that countries the South can build their own capabilities for demand-led research without intellectual inputs from the North. In the light of such encouraging experiences, we now examine the relevance and characteristics of knowledge generation through demand-led research.

6 Knowledge Generation through Demand-led Research

Demand-led research refers to activities that will enable people to realise their own development, through research systems that could unleash the development potential of the South. The emerging development context – particularly the shift towards market-oriented economic systems and to more liberal forms of governance – has expanded the scope for policy dialogue among the various interest groups. It has also brought about a shift from donor-initiated to local ownership of development policies in the South, with a view to enhancing accountability and transparency, and thus their effectiveness. In order to generate the knowledge base needed to inform such policies, it is necessary to build the science and technology capacities and capabilities in the South, and this will require increased investment education at all levels.²⁷

More importantly, science and technology will only have socio-economic impacts if attention is paid to ensuring their social relevance and acceptance.²⁸ Thus, science and technology have to play a role not only in prescribing policies and solving problems, but also in making the solutions socially acceptable, equitable and sustainable in terms of capacity creation and capability enhancement. Can the prevailing approaches to science and technology policies accommodate such wide-ranging societal functions? The answer is both yes and no; the debates on modes of knowledge production remain active and unresolved.

To what extent is the conventional mode of knowledge generation capable of addressing these new challenges? It is indisputable that since the industrial revolution science and technology have transformed human life by leaps and bounds. For instance, the technology of the green revolution has made substantial contributions to increasing food production and reducing hunger and malnutrition across the developing world. What is characteristic of such knowledge production and diffusion is that it presupposes that basic knowledge trickles down into applied knowledge and technological and social innovation. Such linear ‘science push’ models have been widely criticised as naïve, and their validity has been questioned, particularly in the context of the South. Part of the reason for these criticisms stems from the fact that such technologies have widened the gap between rich and poor countries, and within the poor countries have accelerated the degradation of the local resource base, without contributing to sustainable development. Similarly, many of the theories of modernisation of developing economies, formulated in the decades of development planning and founded on such science push models, have met with failure. Alternative modes of knowledge generation are needed that can address practical problems or meet development needs, in which the demand influences the supply.

New schools of thinking have emerged in which new concepts of knowledge production are being explored, together with new research methods and techniques, and better-adapted organisational and institutional structures. One influential contribution was made by Gibbons *et al.* (1994), who introduced the idea that there are in fact two modes of knowledge production. Alongside the

²⁷ Some East Asian countries that adopted these strategies have succeeded in building their capacities and turning the global flow of knowledge to their advantage. In some countries, higher education has expanded, but its quality is generally poor, and where it is good, it has contributed to the flow of human resources to the North. The classic example is the flow of computer personnel from India and China to the North. Bridging the knowledge gap between North and South will remain difficult unless conscious and concerted efforts are undertaken as a matter of priority.

²⁸ ‘On the one hand, scientific language has to become less obscure and dialogue between civil society, decision makers and researchers must be stepped up. Meanwhile, knowledge should be made widely available taking supply (available results) and demand (questions from the recipients) into account. It is wrong to say that scientific knowledge is too complex for large scale dissemination ... learning how to improve one’s situation in concrete terms is a very real requirement of the Southern societies. To close the “technoscience” gap between the rich and the poor countries, and people of different educational levels, the best approach would be to combine the mechanisms for consulting beneficiaries and the strategic circulation of results as quickly as possible. For the researchers in the developing world, therefore, the challenge is not the accumulation of a long list of papers published in prestigious scientific journals, but actually demonstrating that developing countries have a need for specific and autonomous technological research and development’ (Retout, 1998: 76).

conventional mode 1, as described above, there is a second mode of knowledge production, in which social accountability is more important than academic accountability. Mode 2 is characterised by:

- basic and applied research that addresses societal needs, implying that solutions are discovered in the context of application;
- trans-disciplinary research that integrates knowledge and skills from different disciplines, as well as from other sources;
- heterogeneous networks in which the producers of knowledge work together and closely interact with the potential end users; and
- a different mode of quality assessment based not only on peer review and scientific criteria, but also on societal criteria.

In mode 2 the emphasis is on societal needs and the interaction between the demand for and supply of research, or between the producers and the users of knowledge. It regards the ways in which knowledge is absorbed, communicated and applied by stakeholders and beneficiaries as just as important as the generation of knowledge itself. It also assumes that the results of research will be more relevant and useful if representatives of user groups are involved in the research, in terms of needs assessment, priority setting and implementation. This division of the mode of knowledge production into two distinct categories has been described as the conflict between two ideologies for the control of development-oriented research (Box, 2001: 17). In historical perspective, one can see some substance in this argument.

In recent decades (especially in the 1970s and 1980s), scientists, activists and students have re-evaluated the relevance of mode 1 for solving the basic problems of development faced by the South. Some, frustrated with this knowledge system, have abandoned it and turned to activism to try to assist the rural poor (Kothari, 1984: 50-51).²⁹ They believe that only methodologies developed by scholars in the South with local funding can address development problems, and that other arrangements can, at best, deal with the symptoms, but not the causes of poverty (Roy, 1983: 61-62). The differences in ideologies between the two modes of knowledge production need to be located in this wider context.

The organisation and implementation of mode 2 knowledge production present a number of problems, however. Will researchers be able to cope with the demands of social accountability? If a number of stakeholders are involved in the research process, who will decide what to do, when, and whether they are doing the right thing? Since this mode involves the active participation of non-professionals, how can their contributions be acknowledged? Do they have a right to profit from the prestige and profit accompanying the research? In participatory mode 2 research non-professionals can make significant contributions, but an interactive approach is required, with no power differentials. Social activists, who are at their best in such interactive research, may not be interested in producing research reports, preferring to use the results to further their work with communities. They may also lack data analysis and report writing skills. Therefore, the process of conducting research will have to include strategies for enhancing the analytical and methodological skills of these non-professional researchers. Even if their inputs are low, they may contribute to a certain degree to enhancing the capabilities of the activists.

It is also significant that in some parts of the world alternative science movements have emerged in response to the failure of the linear mode 1 to address the basic issues of development. In the Indian state of Kerala, for example, the People's Science Movement is working to popularise science for social change, and has undertaken a large number of action research projects (Zachariah and Sooryamoorthy, 1994). The significance of such movements is that they recognise the use of science for empowering people. Although this could be seen very much within the logical framework of mode 2, what it attempts to establish is that ordinary people can understand and work with science provided it is communicated in a language they can understand. The creation of new channels of

²⁹ Some scholars have criticized the conventional mode of research for 'objectifying' communities and appropriating their knowledge, without becoming involved in their problems. Research, they argue, has to be turned into a 'tool of mobilization' (Fernandes, 1998: 299).

communication may be a means to establish linkages between formal science and traditional knowledge. The distance between them is large and significant, and it needs to be bridged. It requires productive dialogue between the practitioners of formal science and of local knowledge. In this process, how local knowledge is codified and what safeguards are put in place to protect the interests of the local practitioners are of critical importance.

Scientific quality versus societal relevance is an area of contention between the two modes of knowledge production. It is easier to measure the scientific quality of mode 1 research, since there are already well established norms and procedures. However, given the fluid nature of mode 2, a number of indicators will have to be used alongside scientific quality in order to capture its full significance (Bautista *et al.*, 2001). More importantly, such indicators should include the impacts of changes unleashed by the research process not only on the researchers, but also at the societal level.

Despite the issues and problems connected with the two modes of knowledge production, we believe that the two modes will have to be treated as parts of the research system, each of which can draw upon the experiences of the other. However, in the sequence in which science policy and programmes have developed, mode 2 has not received due recognition. Since mode 2 research makes significant contributions to demand-led research, attempts should be made to promote it, to ensure that it becomes part of the mainstream. However, there is a tendency to equate mode 2 research with demand-led research, which arises from a lack of conceptual clarity.

7 Conceptualising Demand-led Research and Capacity Building

From the above discussion, it is clear that the South should move towards mode 2 knowledge production. In view of its importance for development, the North should promote demand-led research in North–South research collaboration, incorporating elements of the MMRPs. However, the MMRPs and similar programmes need greater clarity with regard to the concept of demand-led research in order to develop strategies and interventions for capacity building.

One of the assumptions underlying demand-led research is that agenda setting and prioritisation through stakeholder participation will reflect the societal need for knowledge. This may not necessarily be the case, however, since the ‘needs’ of the deprived and marginalised may not always be articulated as demands. At times, the demands expressed by those in positions of power may cause further deprivation or environmental degradation or may be antithetical to women’s interests. Sometimes sectarian groups with powerful financial, organisational and leadership capacities may mobilise public opinion, altering local demands. Articulated demands may also change over time, and new interest groups may emerge. Therefore, any capacity that is built up should ultimately enable the researchers to understand and interpret what indeed is demand-led research. Such a judicious, discretionary capacity in a development context cannot exist separate from an ethical stance. For example, in contexts where cultural values articulated by a powerful minority clash with universal notions of human rights, the interpretation of demand will depend greatly on a local research capability that is judicious and discretionary from an ethical standpoint. This local research capability finds expression when researchers can facilitate public debate among researchers, non-researchers, policymakers and other end users, highlighting the multiple interests and positions of power in society. When such power asymmetries become visible, the researchers may have to move beyond the role of facilitators of public debate and adopt a pro-active role to negotiate on behalf of the powerless and help articulate their needs as demands.

In order to obtain the information they will need to develop such discretionary capabilities, the researchers will have to interact closely in local life. This will require them to maintain a certain

degree of objectivity, while retaining an activist's desire to facilitate societal change. In societies undergoing drastic transformation, they will have to constantly update their knowledge and information. They should also have a broad perspective on societal development and change and a clear conceptualisation of demand-led research. In order to highlight some of these elements, in the following we draw upon Sen's ideas on capability.

Sen (1999) views human capability as an expression of freedom, as 'the ability of people to lead the lives they have reason to value and to enhance the real choices they have' (p.293). A variety of institutions – related to the operation of markets, administrative, political, legislative, judicial, as well as NGOs, the media and the community in general – contribute to the process of development through their effects on enhancing and sustaining individual freedoms. An in-depth understanding of the workings of these institutions requires an interpretation of freedom in its multiple dimensions. The organising principle for that integrated understanding is the 'overarching concern with the process of enhancing individual freedoms and the social commitment to help to bring that about' (pp.297-98). The report of the South Commission (1990) outlined a similar approach to development.³⁰

The above perspectives point to the fact that the purpose of research is not only to aid policy makers at different levels, but also to contribute to public discussion. Sen observed that the role of public discussion on both the practicalities and valuations of knowledge produced is crucial to the acknowledgement of injustice, and this in our view is central to demand-led research. Stakeholder participation in the various stages of research can provide such a forum for public discussion, enabling not just a needs-based research agenda that brings together expertise from various disciplines and spheres. It will also ensure that the knowledge generated is accessible to stakeholders and is shaped by their needs and interventions. Such a process of knowledge generation is not just an alternative means of development, but is development itself, as knowledge generation and empowerment go hand-in-hand. In order to unleash a process like this it is necessary to develop a new culture of research.

The notion of demand-led research, in our view, has the potential to create that new culture. However, it is understood and interpreted differently by the various donors supporting research and the national research systems in the South. In the case of MMRPs, the Netherlands government has conceptualised it as demand voiced by the South, compiled in an agenda that emerges from a dialogue between researchers and non-researchers, including policymakers, representatives of civil society, etc. In many North–South research partnerships, demand-led research is likely to be understood as research that addresses the needs of the Southern nations in the partnership. Underlying such a position there is an unexamined assumption that a country can voice the supposedly uniform needs of a population, irrespective of who voices them; an issue similar to the Ganuza dilemma (Ganuza 1990). This could happen because the Southern nation in question may unconsciously be juxtaposed against the dominating monolith that is 'the North'. At this level of perception, in relation and opposition to the North, the southern nation is constituted as a uniform entity, even though there are undoubtedly variations in the needs and the demands within it. The focus on location-specific research in the conceptualisation of MMRPs may rectify this problem to some extent, since location-specific deprivation may become visible only when judged against the national goals and in comparison with other locations.

We concede that 'location' is a complicated concept. Consider, for example, how one person's locational identity can vary. A Muslim in India can identify himself as an Indian national in relation to a Pakistani, as a Muslim in relation to a Hindu, as a North Indian in relation to a South Indian, or as a

³⁰ '... development is a process of self-reliant growth, achieved through the participation of the people acting in their own interests as they see them, and under their own control. Its first objective must be to end poverty, provide productive employment, and satisfy the basic needs of all the people, any surplus being fairly shared. This implies that basic goods and services such as food and shelter, basic education and health facilities, and clean water must be accessible to all. In addition, development presupposes a democratic structure of government, together with its supporting individual freedoms of speech, organization, and publication, as well as a system of justice which protects all the people from actions inconsistent with just laws that are known and publicly accepted' (South Commission, 1990, *The Challenge to the South*, pp.17-18).

Tamilian in relation to a Malayali. He can take an identity as an Indian together with other Indians, both Hindus and Muslims, and be opposed to the Pakistani Muslims in one situational context, while in another adopt a separatist identity as a member of the Muslim minority in India, as opposed to the Hindus in India, and express affinity with Muslims in Pakistan. These and many other variable expressions of identity can continue, complicating the conceptualisation of a 'community'. Thus, when such usually taken for granted concepts like 'location' and 'community' require resolution, an individual researcher's task of conceptualising demand-led research becomes very complex. Globalisation adds even further complexities.

The multiple nuances and meanings of demand-led research have not been subjected to critical scrutiny. This type of research belongs to a general domain of contested knowledge, in which researchers and non-researchers from different disciplinary backgrounds, with differing ideologies, social commitment, levels of awareness of deprivation, injustice and of rights, are involved in the exchange of knowledge, information and debate. This process may either result in the validation of knowledge, or it may remain unresolved in political debates, contributing to the processes of 'manufacturing consent' (Herman and Chomsky, 1984) that render suspicious any assurance of real knowledge and information to stakeholders. It is not easy to separate these ideas and processes. The notion of demands outlined here should be seen merely as an heuristic delineation to highlight the complexity of any conceptualisation of 'demand-led research'. However, it is important that such issues are raised in order to gain some clarity on what qualifies as demand-led research.

The realisation of demand-led research will require certain necessary conditions, including an atmosphere of democracy, civil rights, and political debates on social issues by an informed and pro-active public that is open to differences, but has reached a consensus on what constitutes injustice. Only when stakeholders can move towards the level where they can transform knowledge into inputs for societal change can we speak of a capability for demand-led research. Efforts to build the capacity to create such a congenial atmosphere are more likely to bear fruit in those states where these preconditions exist, regardless of internal disparities and deprivation. In countries where social movements have political overtones, social activism by researchers may be construed as political activism. Thus the organisational support for them and the knowledge generated by such research will depend largely on the support for their perceived political position. In countries with a well developed education system that is socially relevant, and where research institutions (public and private) and universities do not have a negative attitude to political activism, researchers may enjoy the freedom to pursue demand-led research. This freedom is unlikely under centralised dictatorial regimes that do not believe in autonomy for researchers or educational and research establishments.

The distinction between 'capacity building' and 'capability-building' for demand-led research is based on the understanding that capability involves the building up of subjective intrinsic abilities on a foundation of objective material and infrastructural conditions laid down in the process of capacity building. Only when that capacity is in place, if the necessary conditions prevail, can there be debate and consensus on 'patent injustices' that need to be rectified, and on priorities that need to be addressed. Building the foundations for demand-led research will require considerable investment, time and experience. It will require a proper understanding of national and/or local knowledge systems in their social context, and of the relationships between scientific institutions and policymaking bodies, democratic institutions and end users (RAWOO, 2001(b): 27). A distinction must also be made between strengthening research capacity in general, and strengthening research for development, including the capacity to identify problems, addressing the possibilities for doing research, the management of research institutions, and the relationship between research institutions and society.

Capacity building is needed at the individual and institutional levels, to foster the ability to assess and critically appraise ongoing research and translate it for local utilisation. Networking – at local, national and international levels, across disciplines, among academics, activists and policy makers and at the individual/group and institutional levels – is central to the process of capacity building. Such networks may focus on strengthening the infrastructure and/or technical know-how; updating existing knowledge; debates and exchanges on ongoing knowledge generation; linking up with the policy

process to ensure that the research recommendations are implemented; developing unconventional trans-disciplinary research linkages to allow for the cross-fertilisation of ideas on theory and methodologies, and exchanging knowledge generated by different disciplines to suit specific local research needs.

Within the context of demand-led research, the necessary capabilities also include the ability to define domestic priorities and to organise applied and strategic policy research. However, the development policies conceived in the South are not conducive to this, and the capacities that are available remain underutilised (Shrum, 1996). Some of the reasons for this include the lack of financial resources for investment (especially in the context of economic reforms, reduced state involvement in and responsibility for public sector research); the outflow of experienced researchers from the public to the private sector or to Northern institutions; the clash between domestic researchers and repressive states; and the dominance of foreign experts in domestic policy, etc.³¹

If these countries are to catch up with developments in science and technology, to bridge the knowledge gap, and to protect their interests in the emerging global context, considerable effort and increased public investment in science and technology is an urgent priority. The North can play a significant role by increasing the allocations of financial resources for science and technology development to the South. Unfortunately, there has been a progressive reduction in development aid for science and technology from the North to the South, and this trend needs to be reversed. Since resources are limited, North-South research partnerships will have to pay increasing attention to developing the capacity for demand-led research that will enable the South to formulate its own policies and strategies for development.

8 Concluding Remarks

This paper has examined the concept of demand-led research in the context of the failure of development experiences and the knowledge asymmetry between North and South. The concept has multiple meanings and dimensions, and cannot be rigorously defined. In view of the knowledge gap and the poor material conditions, nations in the South require considerable support from the North to build up the necessary capacity. Even with such support, however, these nations face an uphill task in realising the capability – a higher level of subjective intrinsic abilities built on the foundation of objective conditions laid down in the process of capacity building. Under conditions of freedom and civil liberties, individuals with such capabilities will be able to participate in democratic processes and come to their own decisions on how to rectify ‘patent injustices’. The ultimate purpose of demand-led research is to generate that empowering knowledge that will enable individuals to acquire the capabilities necessary to make informed choices of their own, without intellectual inputs from the North. Such knowledge generation can come about if governments and research institutions promote demand-led research to ensure it becomes part of the mainstream.

- Governments in the South can play an important role in promoting demand-led research, by increasing the proportion of gross domestic product allocated to socially responsive science and

³¹ According to a leading African social scientist, ‘Policy makers accuse researchers of irrelevance, ivory tower isolationism and negativism. Researchers in their turn accuse policy makers of reliance on foreign expertise, manipulative use of research results and lack of clarity about goals to which research should be harnessed. One may parenthetically note the irony in the fact that at the time when most African governments insisted on their national priorities, most of the experts were expatriates who were not bound by national priorities. Now that Africa has large numbers of social scientists, African governments have lost significant degrees of autonomy and in one way or another are pursuing objectives imposed by external financial institutions. Thus, two or three IMF experts sitting in a country’s reserve bank have more to say than the national association of economists about the direction of national policy’ (Mkandawire, 2000: 133).

technology in general, and to demand-led research in particular. These governments will have to consciously develop the conditions necessary for the capabilities to manifest themselves.

- Governments in the North and international institutions should express their commitment to support and sustain demand-led research by increasing the allocation of financial resources on a long-term basis. They have the ethical responsibility to support innovative programmes such as the MMRPs in order to build the capacity for demand-led research in the South, and to create an atmosphere that will be conducive for mainstreaming demand-led research in the North.
- As the use of demand-led research in societal change is not widely known or discussed, programmes like the MMRPs should make immediate efforts to establish a network of demand-led research programmes and like-minded researchers, both to consolidate their experiences and to create a constituency aimed at strengthening their association. This constituency should strive to mobilise public opinion and policy support for the appropriate conditions for demand-led research in institutions of higher learning and research. To ensure the maximum utilisation of the knowledge generated through demand-led research, it is imperative that it is documented and disseminated to stakeholders.
- Institutions of higher learning and research could also encourage demand-led research by extending appropriate recognition and infrastructural support to researchers, organising appropriate training programmes to build a community of researchers capable of using participatory methodologies, and creating a database of the results of demand-led research.

Ultimately, the implementation of these recommendations will depend on the commitment and determination of, and the strategies adopted by both the North and the South to mainstream demand-led research. The elements of these strategies and the processes of implementation will depend on the conditions specific to the respective nations.

References

- Adams, Z., *Market, Plan and State: The Strengths and Weakness of Two World Economies*, London: M. E. Sharpe, 1987.
- Adams, F.G. and William, J., ed. *Public Policies in East Asian Development: Facing New Challenges*, Westport: Praeger, 1999.
- Bautista, M.C.R.B., Velho, L. and Kaplan, D., *Comparative Study of the Impacts of Donor-initiated Programmes on Research Capacity in the South*, The Hague: DGIS, Division for Research and Communication, 2001.
- Bijker, W., Leonard, C. and Gerwackers, *Research and Technology for Development (RTD), through EU-ACP Policy Dialogue: Scientific Background Methodology and Toolbox*, Maastricht: University of Maastricht, 2001.
- Box, L., *To and Fro: International Cooperation in Research and Research on International Co-operation*, Maastricht: Maastricht University, 2001.
- Bunders, J.F.G and Mukherjee, C., *North-South Research Partnerships: Redressing the Imbalance*, Paper presented at the European Conference on Research Partnerships for Sustainable Development, Leiden, 11-13 March 1997.
- Chakravarty, S., *Development Planning: The Indian Experience*, Oxford: Clarendon Press, 1987.
- Cohen, G.A., 'Equality of what? On welfare, goods and capabilities', in M. Nussbaum and A. Sen (Eds.) *The Quality of Life*, Oxford: Clarendon Press, 1993.
- De Lange, P., 'Societal direction and utilization of research: Rethinking the role of non-researchers', in M.S. Bagachwa (Ed.), *Proceedings of the Workshop on Research Programmes for Development*, Arusha, 19-23 June. DGIS-Funded Research Programmes for Development No. 2, The Hague: DGIS, pp.67-74.
- DGIS, *Research and Development White Paper*, The Hague: DGIS, 1992.
- DGIS, *Report of the Leusden Workshop: The case of the MMRPs: A Comparative Study of Different Approaches to Development Cooperation of DGIS-funded Research Programme for Development*, WOU, The Hague: DGIS, 1997.
- Dreze, J. and Sen, A., *India: Economic Development and Social Opportunity*, Delhi: Oxford University Press, 1995.
- Dreze, J. and Sen, A., *Hunger and Public Action*, Oxford: Clarendon Press, 1989.
- Drysdale, P. (Ed.), *Reforms and Recovery in East Asia: The Role of State and Economic Enterprise*, London: Routledge, 2000.
- Fernandes, W., 'Participatory research and action in India today', *Social Action*, 39(1) Jan-March, 1989.
- Fernandes, W., 'Experiments in creative research: Efforts to combine with participatory with conventional methodology', *Review of Development and Change*, 111(2), July-December 1998.
- Franke, R. and Chasin, B., *Kerala Development through Radical Reforms*, New Delhi: Promilla, 1994.
- Ganuzza, E., 'International co-operation: A Latin American perspective', in Schweigman and Bosma (Eds.) *Research and Development Cooperation: The Role of the Netherlands*, 1990.
- Gibbons, M. et al., *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*, London: Sage Publications, 1999.
- Hayward, J., *State and the Market Economy*, Sussex: Wheatsheaf, 1986.

- Herman, and Chomsky, N., *Manufacturing Consent: The Political Economy of the Mass Media*, London: Vintage, 1984.
- Kerala Research Programme on Local Level Development, Annual Report, No.5, 2000-2001. Thiruvananthapuram: Centre for Development Studies, 2001.
- Kothari, R., 'The non-party political process', in H. Sethi and S. Kothari (Centre for Development Studies), (Ed.) *The Non-Party Political Process: Uncertain Alternatives*, Delhi: Lokyan, 1983.
- Krishna, V.V., 'Science, Technology and Counter Hegemony- Some Reflections on the Contemporary Science Movements in India', in Shinn *et al.* (Eds.), *Science and Technology in a Developing World*, Dordrecht: Kluwer Academic Publishers, 1997, 375-411.
- McLuhan, M. and Powers, B.R., *The Global Village: Transformation in World Life and Media in the 21st Century*, New York: Oxford University Press, 1992.
- Mkandawire, T., *Problems and Prospects of Social Science in Africa: Social Science Sphere*, Oxford: Blackwell, 1996.
- Moazzem Hossain, *et al.*, *South Asian Economic Development: Transformation Opportunities and Challenges*, London: Routledge, 1999.
- Oommen, M.A., 'Dreze-Sen theory of public action and Kerala's development experience', Background paper for a national conference, *Education in Kerala's Development: Towards a New Agenda*, Thiruvananthapuram, 26-28 December, New Delhi: Institute of Social Sciences, 2000.
- Pollis, A., 'A new universalism', in A. Pollis and P. Schwab (Eds.), *Human Rights: New Perspectives, New Realities*, New Delhi: Viva Books, 2002.
- RAWOO, *Building and Strengthening Research Capacity in Southern Counties*, A study prepared for the RAWOO by Fritswils Publications, 1995.
- RAWOO, *Building Bridges in Research for Development, Review of 1997 and 1998*, The Hague: RAWOO, 1999.
- RAWOO, *North-South Research Partnerships: Issues and Challenges*, Trivandrum Experts Meeting, Publication No. 22, The Hague: RAWOO, 2001(a).
- RAWOO, *Research Capacity for Sustainable Development*, Report of the field study in Ghana, Kenya, and Kerala (India) conducted for RAWOO by Wesley Shrum, Publication No. 11, The Hague: RAWOO, 1996.
- RAWOO, *Utilization of Research for Development Cooperation: Linking Knowledge Production to Development Policy and Practice*, Publication No 21, The Hague: RAWOO, 2001(b).
- Retout, O., 'Do the developing countries need scientific research?', *Developing World*, Jan-Feb. 1998.
- Richter, F.J. (Ed.), *The East Asian Development Model: Economic Growth, Institutional Failure and the Aftermath of the Crisis*, Handmills: Macmillan, 2000.
- Robinson, E.A.G and Kidron, M. (Eds.), *Economic Development in South Asia*, Proceedings of a Conference held in Kandy, International Economic Association, 1970.
- Roll, Lord (Ed.), *The Mixed Economy*, London: Macmillan, 1980.
- Rowen, H.S. (Ed.), *Behind East Asian Growth: The Political and Social Foundations of Prosperity*, London: Routledge, 1998.
- Sen, A., 'Capacity and well being', in M. Nussbaum and A. Sen (Eds.), *The Quality of Life*, Oxford: Clarendon Press, 1993.
- Sen, A., *Development as Freedom*, New York: Knopf, 1999.
- Stiglitz, J.E., 'Knowledge as a public good', in I. Kaul *et al.*, *Global Public Goods: International Cooperation in the 21st Century*, New York: Oxford University Press, 1999.

- South Commission, *The Challenge to the South*, New York: Oxford University Press, 1990.
- Spencer, J., 'Anthropology, nationalism and culture in Sri Lanka', *Current Anthropology* 31(3) June, 1990.
- Swantz, M.L. and Tripp, M.A., 'Development for big fish or for small fish?: A study of contrasts in Tanzania's fishing sector', in F. Apfel-Marglin and S.A. Marglin (Eds.), *Decolonising Knowledge from Development to Dialogue*, Oxford: Clarendon Press, 1996.
- Tarigg, J. and Bhatt, M.R. (Eds.), *Understanding Vulnerability: South Asian Perspectives*, London: Intermediate Technology Publications, 1998.
- UNDP, *Human Development Report 2000-2001*, New York: Oxford University Press, 2001.
- World Bank, *Attacking Poverty: World Development Report 2000-2001*, New York: Oxford University Press, 2001.
- World Bank, *East Asia: The Road to Recovery*, Washington: World Bank Publications, 1998.
- World Bank, *Entering the 21st Century: World Development Report 1999-2000*, New York: Oxford University Press, 1999.
- Waardenburg, J.G., *Research, Developing Countries (DCs) and EU-DC Research Cooperation*, Background Note, European Conference on Research Partnerships for Sustainable Development, Leiden, 11-13 March 1997.
- Wade, R., *Governing the Market Economy: Theory and Role of Government in East Asian Industrialization*, Princeton, NJ: Princeton University Press, 1990.
- Wignaraja, P. et al., *Participatory Development: Learning from South Asia*, Karachi: Oxford University Press, 1991.
- Zacharia, M. and Sooryamoorthy, R., *Science for Social Revolution: Achievements and Dilemmas of a Development Movement: The Kerala Sastra Sahitya Parishat*, London: Zed Books, 1994.