

DFID RESEARCH STRATEGY 2008-2013
Working Paper Series: Economic Growth



THIS WORKING PAPER ON ECONOMIC GROWTH IS ONE OF A SERIES OF 10 PAPERS PUBLISHED ALONGSIDE DFID'S RESEARCH STRATEGY 2008-2013. IT PRESENTS THE CASE FOR DFID-FUNDED RESEARCH ON ECONOMIC GROWTH – DRAWING ON THE RESPONSES GIVEN DURING A GLOBAL CONSULTATION THAT DFID CONVENED IN 2007 ABOUT ITS FUTURE RESEARCH.

The purpose of the Working Papers is two fold: to record the key issues raised during the consultation; and to spell out DFID's decisions on new directions, as informed by the consultation. As such, they constitute an important part of the feedback process, and provide an opportunity to clearly articulate DFID's strategic response to the consultations and to other global drivers of research. They also provide guidance to those implementing DFID's research strategy in the future.

Each Working Paper reviews the current state of DFID's research on a given theme, highlights the key questions asked during the consultation process, and documents the main feedback received. The Papers then tease out the implications of the consultation findings on DFID's work, and end by spelling out DFID's future directions on each priority theme. Where possible, each Paper makes clear how DFID has drawn upon the consultation responses to shape its plans.

Other titles in the series are: Sustainable Agriculture, including Infrastructure; Climate Change; Better Health: Education; Political and Social Science Research; Stimulating Demand for Research; Research Communication; Capacity Building; and Mainstreaming Gender in Research. Note that issues which are not directly addressed under this paper may appear in others (for example the impact of agriculture on climate change is largely addressed in the paper on Agriculture).

More information on DFID funded research can be found on the website www.Research4Development.info. This also offers the facility to sign up for e-mail alerts covering different sectors.

SUMMARY

There is broad acceptance that rapid and sustained growth is the single most important way to reduce poverty. Growth accounts for more than 80 percent of poverty reduction and has lifted 500 million above the poverty line since 1980. In the 1990s growth rates in the developing world out-paced those in the developed world for the first time. Better growth performance in poor countries is therefore central to achieving the Millennium Development Goals (MDGs). Yet ensuring that more countries achieve and sustain high per capita growth rates remains key.

Past DFID-funded research has focused on the role of agriculture in improving livelihoods and contributing to growth, and has sought to address the institutional and political context as well as infrastructure needed to spur growth. However gaps in knowledge exist in a number of areas, including: how best to sustain growth; how to increase productivity in developing countries; how to extend opportunities for the poor to participate in growth; how to tackle exclusion and inequality; how best to achieve low-carbon growth; and better understanding of the role of institutions and good governance in fostering economic growth.

The consultation process highlighted a number of areas in which research will be important for greater global knowledge on the drivers, obstacles and policy options for sustained and inclusive growth in developing countries. These include the need for: focused research on the drivers and obstacles to growth in specific contexts; recognition of the pivotal role of agriculture in fostering growth; greater knowledge on human capital and appropriate skills; improved infrastructure, especially transport; new knowledge on the impacts of climate change, migration and urbanisation; the role of trade and regional integration; and understanding of the role of emerging economies in fostering growth in poor countries.

Generating greater knowledge on how best to achieve strong and sustained growth in different country contexts will be a central objective of DFID's new Research Strategy. It will support research that develops technical and methodological knowledge on the drivers and constraints to growth, provide analytical and policy support to developing countries and help build individual and institutional capacity on economics and growth research. The primary vehicle for identifying, designing, implementing and evaluating research on economic growth will be a new International Growth Centre.

DFID will also seek to make a distinct contribution in areas of growth research in the following areas: governance and growth; infrastructure and growth; education, work, skills and economic growth; climate change and low-carbon growth; and the social dimensions of inclusive growth. DFID will seek to improve knowledge on the future opportunities and challenges of emerging development trends likely to be faced by developing countries, and on what this will mean for economic growth and poverty reduction.

WHERE WE ARE NOW

1. There is broad acceptance that rapid and sustained growth is the single most important way to reduce poverty and so better growth performance in poor countries is clearly central to achieving the Millennium Development Goals (MDGs). Evidence has shown growth accounts for more than 80 percent of poverty reduction¹, and has lifted 500 million above the poverty line since 1980. Less than 20% was as a result of changes in inequality. Generating greater knowledge on how best to achieve and sustain growth in different country contexts will be a central objective of DFID's Research Strategy.
2. Our knowledge of economic growth is incomplete. Economic growth is a necessary but not sufficient means of tackling poverty. It is possible to identify necessary conditions, but to go beyond this requires getting into country detail. Sustaining growth will be a continuous challenge for developing country governments (as it is in developed countries) and policies must be kept under constant review.

¹ David Dollar, Aart Kraay "Growth is good for the poor", World Bank Policy Research Working Paper (2001)

3. There is a need for greater research on how to achieve high and sustained growth needed to meet the MDGs and reduce global poverty in the poorest countries. Research on economic growth can improve our understanding of the nature, impact and constraints to economic growth and poverty reduction in developing countries. There are gaps in knowledge on: how best to sustain growth; how to increase productivity in developing countries; how to extend opportunities for the poor to participate in growth: how to tackle exclusion and inequality; how best to achieve low-carbon growth; and better our understanding the role of institutions and good governance in fostering economic growth.
4. In the 1990s, for the first time, growth rates in the developing world out-paced those in the developed world, leading to a decline in aggregate poverty rates and the number of people living on less than a dollar a day. A key issue is to ensure that more countries achieve high per capita growth rates and that when this is achieved, it is sustained - particularly in Africa.
5. To reduce poverty and improve the quality of life in developing countries will require sustained economic growth. The extent of poverty reduction depends on the degree to which the poor participate in the growth process and share in its proceeds. Improvements in human, physical and social capital of the poor are key to increasing their ability to participate in growth. It is clear that both the pace and pattern of growth matter for poverty reduction. The challenge for policy is to combine growth promoting policies with the right policies for assuring that the poor fully participate in economic development. The challenge for research is to improve our knowledge and understanding of what policies, technologies and investments matter for sustained and inclusive growth in different country contexts.
6. The Government's 2006 White Paper "Making Governance Work for the Poor" stresses the importance of new knowledge and evidenced-based policies for development which are fundamental to growth and poverty reduction. The 2000 White Paper "Making Globalisation Work for the Poor" focused on managing the process of globalisation and the role of trade in helping developing countries to boost their economic growth and reduce poverty. The objective of DFID funded research is to promote the production and uptake of technologies and policies that will contribute to growth, poverty reduction and the achievement of the MDGs.
7. Our past research on growth has focused on the role of agriculture in improving livelihoods and contributing to growth. DFID funded research has also sought to address the institutional and political context for growth as well as the importance of infrastructure (primarily transport but also energy and water and sanitation). We have also supported multilateral research initiatives that carry out research on growth and poverty reduction.
8. The World Bank's key lesson from the 1990s was the need to 'get the politics behind the economics right'. Effective states and better governance are important to economic growth. States which are more politically stable are more likely to encourage domestic investment, nurture entrepreneurial activity, attract investment and generate long term economic growth and poverty reduction. Rodrik, Hausmann and Prichett's work on growth spurts also suggests that institutions are important for sustaining growth over the medium/longer-term.

9. In response to this recognised gap in the understanding of institutions for pro-poor growth, two Research Programme Consortia – Institutions for Pro-Poor Growth (IPPG) and Institutions for Growth (IFG) – have now been commissioned to produce new policy-relevant research in this area. These programmes will deliver new knowledge on the economic, political, social and cultural institutions that enhance or constrain pro-poor growth.
10. In addition, the DFID Research Funding Framework 2005-07 identified the need to support work undertaken by other partners and donors. This includes support to the World Bank on its analytical work on growth and economics. This is principally through the multi donor Knowledge for Change Programme (KCP), which supports research on development issues where new knowledge can help to formulate policies with a greater impact on poverty. DFID also provides support to the World Institute for Development Economics Research. This has included support to research on migration, spatial aspects of growth, conflict, and inequality.
11. DFID supports research that seeks to enhance the contribution of transport investments to economic growth. For example, the Global Transport Knowledge Partnership (gTKP) aims to disseminate the lessons learned from transport research and encourages their use by practitioners and policy-makers in developing countries.
12. Infrastructure research also includes the Energy Research Programme Consortium, which aims to increase understanding about the role of energy, water and bio-energy in improving livelihoods and increasing food security. Other research is helping to improve evidence-based learning on how poor people can benefit from more effective water supply and sanitation financing, delivery and sustainability.
13. All DFID's research programmes aim to contribute to increased global knowledge on issues that are critical for poverty reduction and economic growth in developing countries. DFID-funded research programmes in sustainable agriculture, and through our support to the Consultative Group on International Agricultural Research (CGIAR), will improve knowledge on how best to achieve and sustain inclusive growth through agricultural development. DFID also funds research that supports improvements in the human and social capital of poor people and generates new policy-relevant knowledge. This is crucial to enabling the poor to participate in the development process and contribute to inclusive growth.

WHAT THE CONSULTATION ASKED

14. DFID recognises the need to build on existing growth research and to put growth at the heart of our relationships with developing countries. In the consultation we asked how we could build on the strengths of the current research programme and how the new research strategy can help countries deal with emerging issues that are likely to shape their development. The drivers and obstacles to growth cut across all the issues covered within the consultation. What we heard echoed this.

Page 5. Paragraph 9 The 2 RPCs are now known as Improving Institutions for Pro-Poor growth (IPPG) and Improving Institutions for Pro-Poor Growth in Africa and South Asia (iiG Oxford)

WHAT WE HEARD

15. Economic growth permeated the consultation responses. This reflects the cross-cutting nature of research required to deepen the understanding of growth and its importance to social, political, and economic development and poverty reduction. The e-consultation, in-country consultation and internal consultations raised a number of areas where research will be important for greater global knowledge on the drivers, obstacles and policy options for sustained and inclusive growth in developing countries.

“... any sustainable solution to poverty in Africa must be built on economic growth”
E-consultation respondent.

16. A number of respondents commented on the terminology of growth and the need to move to a broader growth agenda in which **equitable and inclusive growth** are central to DFID’s research. High and sustained growth that leads to reductions in poverty is critical, but many recognize that distributional impact of economic growth is important for the objective of accelerating poverty reduction in the poorest countries.

17. The consultation also highlighted the need for increased knowledge on the **drivers and obstacles to growth in different country contexts**. In this area, agriculture, economic diversification, the development of the private sector, institutions and governance, and inequality and exclusion were raised on a number of occasions.

“What is or can be the role for interdisciplinary research (e.g. exploring the interconnection between economic growth, health, education, sustainable livelihoods and good governance)?”
E-consultation respondent.

18. Throughout the consultation, **agriculture** has been seen as the dominant sector and the basis for development and economic growth in developing countries. In short term, investing in making agriculture more productive was seen as the most viable option to stimulate growth, but the development of other competitive sectors is vital for longer term growth and the absorption of the rural labour force. Any serious attempt at poverty reduction, creating employment or spurring economic growth must have agricultural and rural development as key priorities.

“DFID should also support research and build capacity in understanding policymaking and political process in formulating and implementing policies and strategies for promoting pro-poor agricultural growth.” E-consultation respondent.

19. A number of respondents highlighted the need to improve agricultural productivity in order to increase its contribution to economic growth and poverty reduction. In particular, the development and adoption of simple and low-cost technologies was seen as important, with investment and research into the development of **new technologies** specific to the agricultural sector highlighted as essential.

“Is agriculture to be the source of economic opportunity and growth, or does the pathway out of African poverty lie in strengthening the linkages between farming and other livelihood activities?” E-consultation respondent.

20. Increased knowledge on how to strengthen the linkages between agriculture and non-farm markets and employment, and how to enhance the contribution of agriculture to growth was raised by many respondents.

21. **Economic diversification** and the need to develop non-farm employment opportunities, particularly in rural areas, were identified by a number of respondents. There is a need to explore the potential for pro-poor sustainable growth through moving beyond agriculture to deliver growth. The links between agricultural development and a sustainable move to a more manufacturing-based economy was raised, and the lessons from countries that have successfully achieved this, as well as the policies that could support this transition, were identified as critical research needs.

“How can viable alternatives (or complementary activities) to agriculture-based livelihoods [such as] diversification into rural non farm employment, rural small town growth, urbanisation, internal and cross-border migration strategies be promoted for African smallholders? What works where, and why? Can success stories be identified, and how can these lessons be transferred?” E-consultation respondent.

22. A better understanding of agro-processing, small-scale industry and services, manufacturing, and tourism sectors as well as improved knowledge on the linkages in the economy is required. Greater knowledge on how best to encourage the development of non-farm sector in rural areas and how the private and public sectors can cooperate to support this was raised in the in-country consultations. Research was also needed on how markets (in particular labour and financial) could be made to work for the poor to support this. A more detailed discussion of agricultural and rural issues can be found in the Working Paper on Agriculture and Renewable Natural Resources.

23. A number of commentators raised the issue of the **private sector** and its importance to economic growth. It was felt that a greater understanding of private sector development and ways of supporting entrepreneurship and small-medium enterprises in different country contexts was required, as well as understanding of the contribution this can have to growth. This would require improved knowledge about what policies and processes are key to encouraging greater competition, investment, and private sector development to deliver jobs and shared growth.

24. Greater knowledge on **the human capital and appropriate skills** required for economic diversification and supporting non-farm employment was highlighted as a need, particularly at the in-country consultations. This was also raised in relation to successful private sector development and addressing the phenomenon of jobless growth. It was felt that a wide range of labour skills are needed, including education at all levels as well as technical and vocational training. This was required to catalyse the private sector, increase productivity, and enable poor people to participate in the changing labour market and also develop income-generating activities. Further information can be found in the Working Paper on Education.
25. In an increasingly globalised world, respondents recognised that economic growth in developing countries would have to come from greater **integration into global markets and regional development**. It was felt that research would be needed to consider the best opportunities for export growth and trade opportunities in different country contexts, and for trade within and between countries and regions. The issue was also raised in relation to what this would mean for developing countries' access to new ideas, skills, and science and technology. Improved knowledge on product development, marketing, and the development of markets to stimulate innovation and knowledge utilisation would support moves to high value export crops/products and income generating cash crops.
26. A number of issues were also raised to support greater diversification and regional integration, including the need for improved **infrastructure**. Sustainable infrastructure and services play an essential role in helping people escape poverty and facilitating inclusive growth, yet the quality and quantity of infrastructure is a key constraint to growth in many developing countries. Developing country respondents expressed real concern about the way the lack of sustainable infrastructure would affect the pattern of development in health, education, land use and food security.
- "The provision of good, research based, infrastructure is directly proportional to economic growth." E-consultation respondent.
27. Trade within and between countries and regions was seen as critical for poverty alleviation and growth, with adequate **transport links** highlighted as a key issue. **Infrastructure** was seen as a principal means for distributing the benefits of growth, promoting regional integration, trade and enhancing agricultural production. How to ensure that interventions of major investors in infrastructure, especially in Africa, are sustainable and deliver value for money was a major issue raised during the consultations. Questions were also asked as to why progress is being made in water and sanitation provision in some places and not others. Respondents felt that research could help to unpick this issue, including the role of power agendas and self-interest in the provision of infrastructure.

28. Much of the infrastructure-related feedback received was cross-sectoral. Clean water and sanitation was seen as often more relevant to better health than pharmaceutical remedies. There was considerable interest in the links between infrastructure and other sectors and the generating growth associated with non-infrastructure sector. Examples included using agricultural waste as an energy fuel, and developing good policy and practice in allocating and efficiently using irrigation water. The resilience of infrastructure to climate change was seen as a significant issue requiring more knowledge and policy development.
29. There was broad support for DFID's proposed focus on how growth can be achieved in equitable, socially responsible and sustainable ways in Africa. **Social exclusion** and how to support the inclusion of poor people in the growth process were raised by a number of respondents.

"Distributional issues are critical... how different strategies affect distribution across groups, across income classes and across gender." E-consultation respondent.

30. A number of respondents raised issues around the obstacles and difficulties that certain groups face in participating in markets and taking advantage of available opportunities as well as socio-political processes. These included the access to and participation in social services, financial markets, and labour markets. Lack of access to good health facilities was seen by in-country consultations as a particular obstacle to growth and productivity.
31. A number of issues were raised around this, including its impact on rural and urban poverty, livelihood strategies and the development of markets. Many respondents commented on the issue of inequality, addressing its persistence, rural-urban inequality and the policies required to address inequality. Overall, it was felt that there is a pressing need for more research on the **links between equity, social exclusion and growth**. Further issues raised in this area can be found in the Working Paper on Political and Social Science Research.

"One key issue facing the world is that of the growing inequality in almost all countries. A second associated one - especially in developing countries - is that of employment (or the lack of it). The two together make an explosive mix." E-consultation respondent.

32. Developing countries face a rapidly changing global economy. Future growth will need to be based on an increasingly globalised world which offers new opportunities but also new challenges. Understanding and adapting to the challenges and opportunities of emerging development trends was seen as important for poverty reduction and sustainable growth in developing countries.

"How can developing countries use the issue [of climate change] as an opportunity? Can models of development be designed which involve growth and environmental responsibility?" E-consultation respondent.

33. Many respondents noted the need for predicting the impacts of **climate change on growth**, and investigating options for low carbon growth pathways. Some stressed the need for research on whether economic growth can have low, or insignificant, negative environmental impact. Further issues related to this are noted in the Working Paper on Climate Change.

“DFID needs to pay close attention to ways of joining up its different research investments, so that for example issues around economic growth, urbanisation and migration also investigate the impacts on climate change.” E-consultation respondent.

34. **Migration and urbanisation** and the implications these have for growth and poverty reduction were seen by many as important issues to research. Understanding the social and economic impacts of urbanisation was raised by a number of respondents. Many saw a pressing need to understand the impact of urbanisation on economic growth and poverty reduction. A fuller discussion of urbanisation and migration issues can be found in the Working Paper on Political and Social Science Research.

“Regarding the impact of migration and sustainable growth, while there is a gradual overall shift of population to urban areas, the large rural populations in many countries ensure that large numbers of people will continue to be based in the countryside for many decades to come. This will be a countryside, however, that is increasingly linked with and integrated in the urban economy, and one where agricultural work is gradually losing its predominant position.” E-consultation respondent.

35. The importance of **good governance for economic growth** was highlighted, and there was a call for more research in this area. A better understanding of what governance conditions are essential for growth in different country contexts and how these are generated through political processes was identified as important. A number of comments were made relating to the socio-political processes of economic growth, and the need to increase our understanding of this complex issue. A number of respondents commented that improvements in governance are a result, as well as a cause, of economic development and growth.

“The big unanswered question cutting across the above topics is how to get the right kind of reforms to the institutional context affecting the possibility of pro-poor growth.” E-consultation respondent.

36. The need to identify what encourages the political and economic elites to seek sustained economic growth in developing countries was also raised. What is the politics of growth? It was felt that there are gaps in knowledge on the political and institutional environment for reform and the way reform and growth is affected by political power and leadership facilitating change.

37. A better understanding of the institutional and political context and what this means for economic growth – including whether it explains why some states are lagging behind – was seen as important. Post-conflict and fragile state economies were raised in relation to the need for a better understanding of the policies and sequencing of reform as a foundation of recovery and eventually growth. Further discussion of these issues can be found in the Working Paper on Political and Social Science Research.
38. The consultation emphasised challenges opportunities raised by the increased role of emerging economies in developing countries. Respondents commented on the need to better understand the role and influence that these economies have on economic development, trade and investment, and ultimately the growth prospects of developing countries. The emerging economies were seen as having important economic implications, but it was also noted that they are critical for creating global public goods. Research to better understanding the issues at hand was therefore seen as essential.

“The newly powerful economies will have an increasing influence in Africa and in developing Asia through their trade, investment and aid. Work should be conducted through collaborations between African researchers and researchers in China and India. Without understanding the motivations and policy goals of both private sector actors and policymakers in these two countries, it will be impossible to understand the rapidly changing nature of the engagement of China and India with Africa.” E-consultation respondent.

39. A number of contributors called for a better understanding of the lessons that could be learnt from the development of India and China, including around manufacturing-led development and inclusive growth. A growing need was highlighted to test whether these are applicable to developing countries, particularly in Africa. Some commentators felt the numerous lessons and experiences that are valuable for others need to be better communicated, and that research could play a role in this.

“The world is undergoing a shift in geo-politics in front of our eyes, with the enormous economic growth of India and China starting to be matched by political interests and strategies which will generate a much more multi-polar system, and a shift in development models and assumptions.” E-consultation respondent.

40. Several respondents commented that the trade and investment patterns of emerging economies, in particular China and India, would significantly affect growth and poverty reduction in other developing countries. A number of respondents also raised the impact of increasing development assistance provided by these non-traditional aid providers. Research to better understand these impacts was viewed as an important means of helping developing countries prepare appropriate policy responses.

“The positive and negative economic effects that China is having on the developing world and especially African nations through its demand for primary commodities and its prodigious manufacturing capability needs investigation. Indeed the sheer scale of the latter may now restrict the growth path options available to developing nations.” E-consultation respondent.

41. It was commented that emerging economies have an important role to play in developing **new low cost technologies and innovations** that would contribute to growth in developing countries. Greater knowledge on this and improved understanding of the lessons about the difficulties of balancing growth with lasting poverty reduction and more sustainable and equitable development path were considered to be important research themes.

IMPLICATIONS AND FUTURE DIRECTIONS

42. Economic growth will be a central objective of DFID’s Research Strategy. As such, our research will focus on developing new knowledge and evidence on how to accelerate growth **and** enhance the participation of poor people in the opportunities that arise from growth. Our research will support the development of new knowledge and policies, technologies and innovations that will contribute to a greater understanding of the drivers and obstacles to economic growth in different country contexts. This will also require a greater understanding of the economic, social, legal and governance environments and processes that shape growth paths and the opportunities open to poor people to contribute to growth and the obstacles that prevent them from doing so.

43. The Research Strategy will support our latest policy and approach to put economic growth at the centre-stage of international development policy. This is in response to increased demand for support on growth from partner countries and the recognised need for further research on what matters for delivering economic growth in different country contexts.

44. DFID will support research that develops technical and methodological knowledge on the drivers and constraints to growth, provide analytical and policy support to developing countries and help build individual and institutional capacity on economics and growth research. The primary vehicle for identifying, designing, implementing and evaluating research on inclusive growth will be an International Growth Centre. DFID will also seek to make a distinct contribution in areas of growth research at global and regional level in the following areas: governance and growth; the regional dimensions of infrastructure and growth; education, work, skills and economic growth; climate change and low-carbon growth; and the social dimensions of inclusive growth. Finally, we will seek to improve knowledge on the future opportunities and challenges of emerging development trends likely to be faced by developing countries, and on what this will mean for inclusive growth and poverty reduction.

INTERNATIONAL GROWTH CENTRE

45. Questions and challenges remain as to how growth can be best achieved in individual country contexts and the policy actions that are needed to deliver growth and provide opportunities for the poor to participate. We believe that a much larger effort is needed. Key to our future approach will be putting the energy and expertise of the international research community at the service of country growth strategies, over the long term.
46. It is critical for country-led growth that developing countries are enabled to develop credible strategies for inclusive growth based on rigorous economic analysis of country circumstances and opportunities, assessments of the main constraints on growth, and analysis of prioritised sequencing of policy and institutional reforms.
47. DFID will help deliver world class research and demand-led analytical and policy support on growth to developing countries. An **International Growth Centre (IGC)** is in the process of being established to provide high-quality practical and responsive analytical and policy support to developing countries governments around constraints and opportunities to faster growth. The IGC will also deliver, commission and disseminate world class research on growth, enhancing analytic methodologies for understanding growth at the country level and broadening the understanding of economic growth successes and challenges in developing countries. Our knowledge of economic growth is extremely incomplete, and the IGC will facilitate a global network of experts to broker knowledge and dialogue on growth issues and approaches. Country specific analytic projects and cross-country research will be supported by research on emerging global or regional challenges related to fundamental components of growth such as agriculture, inclusion, infrastructure and low-carbon futures.

GROWTH RESEARCH AT GLOBAL AND REGIONAL LEVEL

48. In addition to the policy support and the methodological research carried out by the IGC, DFID will seek to make a distinct contribution to greater knowledge on key areas that have implications for achieving and sustaining growth at the global and regional level. We will assess the demand for additional research that responds to key drivers of growth, which may include: further research on the role of infrastructure in contributing to growth; understanding how patterns of governance matter for growth; greater knowledge on the social dimensions of inclusive growth; and research that links education outcomes to work, skills and economic growth.

INFRASTRUCTURE AND GROWTH

49. Inadequate and poorly maintained infrastructure is a significant growth constraint in most of DFID's priority countries but particularly in Africa. Better prioritising, sequencing and "bundling" of infrastructure investments could significantly enhance economic growth, if closely aligned to national interests and regional initiatives.

50. DFID will maintain some work on infrastructure particularly because of its role in contributing to growth and regional development. We will build on our research to ensure greater understanding of the impact of infrastructure innovation on poverty and growth.

51. Major areas of research in this area will include: maximising the benefits of an inter-connected Africa through transport corridor development, trans-boundary water management and regional energy exploitation; improving public health and achieving the water and sanitation MDG targets, entailing a more integrated approach in order to reduce the burden of water-borne diseases; enhancing the access and sustainability of local infrastructure services in order to add value to investments; Initiatives to support technical and policy innovation by regional water and sanitation programmes; and energy planning taking into account equitable access and low carbon targets. Further issues related to low carbon technologies are noted in the Working Paper on Climate Change.

GOVERNANCE AND GROWTH

52. DFID's current research work-programmes on the Institutions for Pro-Poor Growth have highlighted that political processes and institutions have a central role in growth processes. At the same time, there is much less clarity about what aspects of political governance matter most for growth and how the right institutional structures come about. More knowledge is needed about creating effective political institutions and understanding the incentives that make them work.

53. We will fund further policy research to help governments and donors better understand how patterns of governance shape and are shaped by economic growth; who can influence these patterns; and how they can do it. We recognise that governance is crucial to economic and social development and affects all levels of society from the state to the household and the individual. We will seek to build on the current governance research areas in an effort to deepen understanding of power, politics and state society relations and how these shape the conditions that promote or hinder inclusive growth.

SOCIAL DIMENSIONS OF INCLUSIVE GROWTH

54. The challenge for developing countries is to develop more competitive markets and improve access to economic opportunities for the poor within those countries. But there has been little research to date examining how to strengthen the drivers and processes of socially-inclusive growth to confront exclusion effectively.

55. The relationship between social exclusion, inequality and growth pervades development and requires special research attention. We still do not know enough about promoting the inclusion of marginalised and disenfranchised groups in society and giving them a voice in decision-making; nor about how social exclusion impacts upon the potential for economic growth.

56. DFID will seek to improve understanding about the economic impact of social exclusion by examining how to overcome the barriers to economic empowerment and political participation faced by poor men and women. We will also consider ways to promote equity of opportunity, for instance in access to finance, labour markets and social provision.

57. We will support research that provides better understanding of the economic impact of social exclusion and inequality, and its role in determining the relationship between growth, employment and poverty. We will seek to improve understanding of and address knowledge gaps on why employment returns to growth are diminishing and the phenomena of 'jobless growth'.

EDUCATION AND GROWTH

58. The extent of poverty reduction depends on the degree to which the poor participate in the growth process and share in its proceeds. Improvements in human, physical and social capital of the poor are key to understanding their ability to participate in growth. There is a need to better understand the education and skills required for successful private sector development, to address the phenomenon of jobless growth, and to contribute to economic diversification and generating develop income-generating activities.

59. A wide range of labour skills are needed, including education at all levels as well as technical and vocational training. We will seek to improve our understanding of the right kinds of education and technical skills for the world of work and ensure labour markets provide opportunities for all, including women. Developing countries are investing increasingly in post-primary education as a strategy to promote economic growth. We will fund research to support plans that link education outcomes to the world of work, skills and economic growth. In particular new research will seek to help developing countries target investment in skills development to best effect, including understanding better the private sector's role.

HOW GROWTH RESEARCH CAN RESPOND TO FUTURE DEVELOPMENT TRENDS

60. We will do more to look forward to the future opportunities and challenges likely to be faced by developing countries, and to understand what this will mean for achieving growth and poverty reduction. Issues that may require greater knowledge and understanding could include: urbanisation and migration and the implications for growth; the impacts of emerging economies on developing countries growth; new knowledge on the relationship between growth and environmental change; economic diversification and regional growth; and the most effective and affordable new technologies that can contribute to growth.

URBANISATION AND MIGRATION

61. The pace of urbanisation has outstripped our understanding of how to increase its potential for growth and manage the implications for social cohesion, state-building, service delivery, poverty and social exclusion. Internal and regional migration and increasing urbanisation pose new challenges and opportunities for developing countries. This will need to be managed to ensure that governments can maximise the benefits, and reduce the costs for growth and poverty reduction.
62. It is clear that the process of urbanisation and urban economies are important for growth, poverty alleviation, job creation and a thriving private sector. DFID-funded research could help to improve our knowledge and understanding of urban labour markets, how to create functioning cities which generate decent employment, and what urbanisation will mean for the growth-poverty-inequality interrelationship in rural and urban areas.
63. Research areas that are likely to yield pay-offs include: understanding what growth-promoting models for urban development look like; how patterns of economic activity change geographically over time and relate to poverty and inequality; and how national development policies and development finance can adjust to reflect changing economic geography.

EMERGING ECONOMIES

64. A number of emerging economies are growing in terms of their influence and impact on development and poverty reduction in developing countries. Emerging economies are increasingly connected to low income countries through trade, investment, climate change, and by providing development finance.
65. DFID will seek to support research to increase global knowledge on the social, political and economic impacts of the emerging economies on poor countries, particularly in Africa. Research could help developing countries to address the challenges and exploit opportunities to deliver growth and poverty reduction that are likely to come from engaging with emerging economies.
66. There is also need to understand and apply lessons from the growth and poverty reduction achieved in emerging economies – requiring a greater understanding of the policies, socio-political processes and economic development in the emerging economies, and of whether these are applicable for African countries. DFID will consider how we can support lesson learning in this area to contribute to inclusive growth in developing countries.

ENVIRONMENTAL AND CLIMATE CHANGE

67. Climate change poses new challenges for developing countries with respect to growth and poverty reduction. Future growth will need to be more carbon-efficient and environmentally sustainable. Greater global understanding on the relationship between growth, environmental change and poverty reduction would support the achievement of the MDGs and help developing countries in achieving sustainable growth.
68. Improved knowledge on the impact of environmental change on different social groups – both as a result of existing inequalities and because of climate change reinforcing inequality – is needed to achieve sustainable growth. We will support socio-economic and scientific research to help partner governments know their options for mitigating climate change and promoting environmentally sustainable, low-carbon growth.

ECONOMIC DIVERSIFICATION AND REGIONAL GROWTH

69. Given the trends in global and regional trade and commodity prices, African countries need to take a more active approach to encouraging economic diversification. This should be supported by a thriving manufacturing sector and private sector to provide jobs and trading opportunities.
70. Developing countries, particularly in Africa, need to create an enabling environment in which higher value-added activities can emerge. There are key researchable questions that could support countries in meeting this challenge. DFID will assess the demand for such research, and consider whether additional research is required, complementary to IGC research in this area.
71. Growth has a strong regional dimension. Regional development and growth are an African priority, yet remain under-researched. Better knowledge and research is needed to respond effectively to this demand. Regional economic integration through trade and investment is critical for economic development, job creation and inclusive economic growth, particularly in Africa. Reform of the global trading system and regional economic integration are issues that are important to many developing countries, and there is clear demand for research on these issues. Inadequate and poorly maintained infrastructure is a significant growth constraint in most of DFID's priority countries but particularly in Africa. Better prioritising, sequencing and bundling of infrastructure investments could significantly enhance economic growth and regional development.
72. DFID's research could play a role in addressing these. We will identify how best we can respond to developing country demand for research on how growth can be supported through regional economic development, including trade facilitation. We will also offer research support to regionally-led transport initiatives, to support regional growth and development.

NEW TECHNOLOGIES AND INFORMATION AND COMMUNICATION TECHNOLOGY

73. New and emerging cutting-edge technologies are being developed for industrialised markets. Many of these could have real relevance to the needs of poor people. Three of the key 'platform' technologies receiving significant investment are: biotechnology, information and communication technology (ICT) and nanotechnology. The research challenge for DFID is not developing these new technologies as such, but helping transfer them to developing countries and exploiting their potential to contribute to inclusive growth.
74. This convergence of new and traditional ICTs provides huge but as yet unexploited potential. For example, ICTs can enable the poor to participate in the growth process by improving access to markets, delivering education, and enhancing productivity. In order to realise their potential, what is needed is research into the most effective, safe and affordable approaches to applying these new technologies in developing country situations while ensuring the benefits are derived by the poorest. The application of affordable ICTs for the developing world will be a crucial part of this research agenda.

75. We will seek to support the transfer and application of new agricultural technologies that enhance and maintain productivity levels and contribute to growth. We will support horizon-scanning processes to help find the most effective, safe and affordable approaches to new and emerging technologies from which poor people can benefit and which can contribute to achieving sustainable growth in the poorest countries.

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The Department for International Development (DFID) will spend up to £1 billion on research between 2008-2013. DFID's Research Strategy describes how the money will be used for maximum impact on reducing poverty in developing countries.

This paper is one of ten Working Papers which were produced to accompany the Strategy. Their purpose was twofold: first to record the key issues raised during a global consultation that DFID convened in 2007 about its future research; and second to spell out DFID's decisions on new directions, as informed by the consultation.

Each Working Paper reviews the current state of DFID's research on a given theme, highlights the key questions asked during the consultation process, and documents the main feedback received. The Papers then tease out the implications of the consultation findings on DFID's work, and end by spelling out DFID's future directions on each priority theme. Where possible, each Paper makes clear how DFID has drawn upon the consultation responses to shape its plans.

The full series of Working Papers are: Economic Growth, including Infrastructure; Health; Sustainable Agriculture; Climate Change; Education; Political and Social Science Research; Stimulating Demand for Research; Research Communication; Capacity Building; and Mainstreaming Gender in Research.

More information on DFID funded research can be found on the website www.research4development.info. This also offers the facility to sign up for e-mail alerts covering different sectors.

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