



ISLAMIC DEVELOPMENT BANK

***BRAIN DRAIN IN IDB MEMBER COUNTRIES:
Trends and Developmental Impact***

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LIST OF ACRONYMS AND ABBREVIATIONS

ALO	-	Arab Labour Organization
ANSD	-	Agence Nationale de la Statistique et de la Démographie, Senegal
APS	-	Agence de Presse Sénégalaise
ARADEC	-	Association for Community Development
BE&OE	-	Bureau of Emigration and Overseas Employment, Pakistan
BHS	-	Senegalese Bank for Habitat
BSDA	-	Senegalese Copyrights Bureau
CAPMAS	-	Central Agency for Public Mobilization and Statistics, Egypt
CFA	-	Confédération du Franc Africain
CODESRIA	-	Council for the Development of Social Science Research in Africa
CODEV	-	Initiative de Codéveloppement
CREA	-	Center for Research in Applied Economics, Senegal
ECO	-	Economic Cooperation Organization
EDF	-	European Development Fund
FDI	-	Foreign Direct Investment
GDP	-	Gross Domestic product
GNI	-	Gross National Income
HEC	-	Higher Education Commission of Pakistan
ICPD	-	International Conference on Population and Development
IDB	-	Islamic Development Bank
ICT	-	Information and Communication Technologies
ILO	-	International Labour Organization
IMF	-	International Monetary Fund
IMIS	-	Integrated Migration Information System
IMP	-	International Migration Policy Programme
IOM	-	International Organization for Migration
LDC	-	Least developed country
LDMC	-	Least developed member country
LEMC	-	Labour-exporting member country
LIMC	-	Labour-importing member country
MDG	-	Millennium Development Goal
MENA	-	Middle East and North Africa
MIDA	-	Migration for Development in Africa
NGO	-	Non-governmental organization
NHS	-	National Households Survey
ODA	-	Official Development Assistance
OEC	-	Overseas Employment Corporation, Pakistan
OECD	-	Organization for Economic Cooperation and Development
OIC	-	Organization of Islamic Conference
OPF	-	Overseas Pakistanis Foundation, Pakistan
PRSP	-	Poverty Reduction Strategy Paper
SEMACO	-	Senegal Management Consultant
SME	-	Small and medium enterprise
SONATEL	-	National Telecommunications Company, Senegal
TOKTEN	-	Transfer of Knowledge Through Expatriate Nationals
UCAD	-	Université Cheick Anta Diop de Dakar
UEMOA	-	Union Economique et Monétaire Ouest Africaine
UGBS	-	Université Gaston Berger de Saint Louis, Senegal
UN	-	United Nations
UNCTAD	-	United Nations Conference for Trade and Development
UNDP	-	United Nations Development Programme

UNFPA	-	United Nations Fund for Population Activities
UNHCR	-	United Nations High Commissioner for Refugees
UNOPS	-	United Nations Office for Project Services
WTO	-	World Trade Organization
ZAC	-	Zones d'aménagement concerté, Senegal

FOREWORD

Educated people are perhaps the most important asset and source of sustained competitive advantage for any country. This is even more so for member countries of the Islamic Development Bank (IDB) as, due to low literacy rate, the highly-skilled labour for them in general, and for the least developed countries among them in particular, is direly required for their socio-economic development. Over the past few decades, however, emigration of highly-skilled labour, a phenomena generally referred to as brain drain, from IDB member countries in search of better opportunities is depriving them of the essential human capital. In some cases, the extent of brain drain has indeed increased over time and is posing a serious development challenge. Consequently, international migration and brain drain have come to gain a prominent place on the global agenda as well as on the agenda of the Organization of the Islamic Conference (OIC).

Despite the far-reaching implications of brain drain on member countries' economies, unfortunately, information about this subject is generally sketchy. In particular, the effects of brain drain on countries of origin have not been widely studied, nor is much known about the policies and strategies of member countries in this important area. The present paper has attempted to fill this information gap about IDB member countries.

Given the data limitations and divergences in the way brain drain is conceptualized, the paper tries to provide a preliminary assessment of brain drain in member countries as a whole and in three selected countries, taken as case studies, to illuminate the specific characteristics of countries with different levels of brain drain. One of the important contributions of this paper is that it presents an overall picture of brain drain of member countries using their aggregate data not covered in any other study. In addition, it also analyses various aspects of intra-migration among IDB member countries, thereby providing useful policy insight.

While the paper did not recommend specific policy actions, it does identify priority areas for cooperation among member countries notably in information and knowledge sharing, creation of new specialized institutions and strengthening the existing ones, and innovative partnership with expatriates.

It is hoped that the findings and ideas presented in the paper will be found useful by readers in general and those in member countries in particular.

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EXECUTIVE SUMMARY

With the increasing number of highly-skilled migrants, brain drain has gained an increased interest among member countries. Recently, the Third Extraordinary Session of the Islamic Summit Conference held in Makkah Al Mukarramah, 5-6 Dhul Qada 1426H (7-8 December 2005) adopted a “*Ten-Year Programme of Action to Meet the Challenges Facing the Muslim Ummah in the 21st Century*”, which recommended to “*assimilate highly-qualified Muslims within the Muslim World, develop a comprehensive strategy in order to utilize their expertise and prevent brain migration phenomenon*”.

The current demographic, human, social and economic realities of member countries as a group show why the issue of brain drain is taking on a new significance in the context of growing youth population, limited human development and slow economic growth. Firstly, the total population of member countries represents more than one fifth of the world population and the average annual growth rate of this population has been significantly higher during the last fifteen years compared to developed countries. Unlike these countries, member countries are not facing the issue of ageing population which may explain some of the migration flows. Secondly, the member countries have witnessed some improvement in the area of human development. However, despite this improvement, per capita GNI and Human Development Index as well as tertiary education enrolment ratio remain low compared to OECD countries. Thirdly, the annual GDP growth rate of member countries as a group varied from year to year and continues to be vulnerable to both internal and external factors. Compared to the world average, the investment in terms of gross fixed capital formation as percentage of GDP remains insufficient for accelerating the rate of growth and generating adequate level of employment which may help retain more people at home looking for employment opportunities abroad. According to available data, the levels of unemployment are high in many member countries. All these realities may explain the high number of people looking for employment and tertiary education opportunities abroad.

Trends in Brain Drain

The growing importance of brain drain raises the issue of definition and measurement. Obviously, it is difficult to capture all its aspects in one single and simple definition. In particular, the phenomenon cannot not be easily defined and measured by comprehending the general perception that brain drain only occurs if skilled people, such as engineers, doctors, nurses, and so on, migrate while they are needed and have suitable job opportunities in their countries. Conventionally, brain drain is measured in terms of highly-skilled migration rate, which is the share of a country’s labour force having tertiary education that has migrated. Since the main destination of migrants from member countries is OECD countries, the information on these flows may be obtained from the OECD online database. According to this database, around 12 million migrants, including around 2 million highly-skilled migrants, born in member countries are resident in OECD countries. In addition, available studies show that, in 1990, 17 member countries had highly-skilled migration rates exceeding 10 percent. Among these countries, 10 are African countries. Furthermore, small member countries, in terms of population and GDP, tend to have extremely high brain drain. After 1990, there is a general consensus that

skilled migration to OECD countries has accelerated. In 2000, while 12 member countries had moderate rates of highly-skilled migration (between 5 percent and 10 percent), 25 member countries had high or very high rates of highly-skilled migration (more than 10 percent). Moreover, 29 member countries out of 49 with comparable data experienced an increase of their skilled migration rate in the 1990s. All this clearly indicates that skilled migration from member countries to OECD increased between 1990 and 2000. In 2000, the highly-skilled migration rate for OIC member countries as a group was 7.1 percent.

Level of Intra-Migration and Intra-Brain Drain

There are general indications that migration among developing countries, including member countries, is growing. In addition, based on the case studies, some indications on intra-migration, including of highly-skilled labour, between the selected member countries and other member countries may be given. Firstly, for Senegal, the UEMOA countries, all of which are member countries, account for 14 percent of Senegalese migrants. Côte d'Ivoire is the preferred destination with 6.6 percent, followed by Guinea Bissau (3.2 percent) and Mali (2.4 percent). Other member countries with traditionally big Senegalese communities are Gambia, Mauritania, Gabon, and Egypt. Secondly, for Egypt, the Gulf countries constitute the preferable destination for migrant labour, particularly Saudi Arabia. In 2002, the stock of Egyptian migrant labour in Saudi Arabia was about 1.35 million, and for the year 2005 alone out of 250,244 contracts for Egyptians to work in Gulf countries 136,468 contracts went to Saudi Arabia, and out of these 38,657 (or 28.3 percent) were for highly-qualified Egyptians. Thirdly, for Pakistan, the estimated stock of overseas Pakistanis in the Gulf countries was around 3.5 million in 2004. About 10 percent of this stock comprises highly-skilled migrants.

Major Causes of Brain Drain

There is no single, well-developed theory to explain the volume and direction of the migration movements. Economic as well as political and social factors play roles in the interpretation of empirical evidences about migration. On the supply side, the major reasons cited for international migration and for the wide variation in high-skilled migration rates among labour-exporting countries include income gaps between labour-importing and exporting countries, lack of employment opportunities in labour-exporting countries, political instability, poor investment climates that limit the productive employment of high-skilled workers, and inadequate educational policies which have resulted in a large supply of university graduates for whom no suitable jobs exist. On the demand side, the need for migrant workers in many labour-importing countries has been stressed as one fundamental factor driving migration.

Impact of Brain Drain on Member Countries

So far, the empirical relationship between migration and economic development is still debatable and controversial. Based on correlations between brain drain and some development indicators in member countries, it appears that the overall impact of brain drain on development is negative and has detrimental effect on human capital and poverty alleviation, which is consistent with the traditional brain drain literature. Furthermore, the correlations between brain drain on the one hand, and productivity, FDI, trade and investment on the other hand yield the expected signs

but are statistically not significant. Finally, although remittances are positively correlated with migration in general, brain drain is negatively correlated with remittances. This could be possibly attributed to the fact that the remitting behaviour of highly-skilled migrants is different from low-skilled migrants. In general, low-skilled migrants remitted more due to their spending in the destination country as compared to highly-skilled migrants who spend more by living in standard commensurate with their qualification.

Specific Impact of Remittances

The remittances represent an important source of finance for member countries as a group. Between 1990 and 2003, the volume of remittances presented an increasing trend. In 2003, remittances corresponded to 183 percent of total ODA received and they were equivalent to about 146 percent of FDI. It remains difficult to quantitatively assess the poverty impact of remittances in member countries because of data scarcity. Tentatively, the relationships between remittances and some development indicators in member countries had been assessed using correlations. First, remittances are positively correlated with human development, income and private consumption while negatively correlated with poverty in member countries. Second, there is no significant relationship between remittances and investment or savings. This suggests that remittances in member countries are mostly used for consumption rather than investment or savings. These preliminary results are consistent with the literature on the development impact of remittances. In fact, there is considerable empirical evidence which show that remittances increase the total income available for consumption and contribute to poverty reduction. Furthermore, whether remittances lead to increased investment is debatable and empirical results are mixed.

Impact of Intra-Migration on Intra-Trade

It is important to understand the relationship between the movement of people and the movement of goods among member countries. Similar to the net impact on the world economy, it is difficult to assess the net impact of international migration on regional economy. However, some conclusions may be drawn if specific factors driving migration and brain drain are taken into consideration. For instance, since there are discrepancies in per capita incomes between labour-exporting member countries (LEMCs) and labour-importing member countries (LIMCs), a positive impact on the overall output and income of member countries as a group may be expected when migrants are relocated to higher and more developed member countries. Based on available data on directions of trade and migration among member countries, correlations were estimated for three selected member countries. The results indicate a positive and statistically significant correlation between the volume of intra-trade and the stock of intra-migration for these countries.

Migration Strategies and Policies

At national level, since in many LEMCs the migration of skilled people is one of the major threats to their economic development, some measures have been already taken to reduce or convert the brain drain into gain. Among others, efforts have been made for expanding the role of the expatriates of these countries in economic development. This is one important way to directly involve the skilled people living

abroad in promoting and financing developmental projects and programmes and not only in transferring remittances. However, it appears that member countries covered by the case studies recognize that they have not adopted comprehensive written migration policies though the institutions established at governmental level, including at ministerial level, have taken some initiatives and adopted various programmes to reduce the negative impact of brain drain. In particular, these institutions are involved in the management of technical assistance and cooperation programmes. As indicated in the case studies, these programmes have already been beneficial to some of the LIMCs. However, the number of agreements or memoranda of understanding in this area remains very limited and, therefore, more cooperation is needed in order to enhance the exchange of expertise and skills among member countries. In addition, many LEMCs have already adopted programmes to retain key workers for the development of their economies and the competitiveness of their enterprises as it is the case for computer scientists and statisticians in Senegal. Finally, concerning remittances, the measures taken by LEMCs aim at improving the developmental impact of remittances. The selected member countries as well as their development partners do not consider remittances as a substitute for official development aid. They recognize that remittances are private funds which should be treated like other private income.

While at national level some concrete actions and programmes have been adopted by member countries, it appears that the subject of brain drain has not gained prominence in the regional agendas in general. In this respect, it is to be noted that during the discussion on this subject with relevant institutions in the member countries visited, international rather than regional initiatives have been highlighted. At OIC level, after the Third Extraordinary Summit, it is expected that international migration will become a major focus of discussion among member countries. Concerning IDB Group, while international migration was not so far a major subject of attention within the Group, more has been done in reality within the framework of its normal technical and financial activities. Directly, its various technical assistance and cooperation programmes have been designed to encourage the use of available expertise within member countries. Indirectly, international migration and brain drain have been addressed through various developmental projects financed by the Bank. These projects aimed at fostering economic development and social progress in member countries and, therefore, may help in generating employment opportunities, including for skilled people.

Challenges and Opportunities for Cooperation on Migration and Brain Drain

In promoting their cooperation on issues related to migration and brain drain, the same general challenges for promoting cooperation are faced by member countries. These countries as well as their regional institutions lack adequate data on direction of migration, brain drain and remittances which are needed to engage in an efficient dialogue for strengthening cooperation in this area. Besides the lack of statistics, there are not enough empirical studies on the linkages between international migration and economic development in general as well as between intra-migration on the one hand and intra-trade and investment on the other hand. Besides the lack of information, there are other barriers which constitute actual challenges to the exchange of skills and expertise among member countries. In this context, one of the barriers, which is often stressed in gatherings such as business fora and conferences, is the issue of visa requirements. This explains the importance of the recommendation

of the Summit on the need to facilitate the freedom of movement of businessmen and investors across borders among member countries. The challenge for these countries is to fully implement this recommendation within the next decade. More challenging than the movement of skilled workers is to ensure work permit and skill equivalence to them in all member countries.

While member countries are facing serious challenges, they can also benefit from new opportunities for enhancing their cooperation on issues related to intra-migration. After the OIC Extraordinary Summit, there is now increased awareness of the importance for adequately regulating and managing the movement of highly-skilled labour among member countries. The adoption of the “*Ten-Year Programme of Action*” provides a good opportunity for undertaking specific actions in order to particularly facilitate the freedom of movement of businessmen and investors across the borders of member countries as well as to assimilate highly-qualified people within these countries. In addition, other factors may facilitate such movement, including the liberalization of trade in services and the increasing outsourcing of services combined with the shift of FDI to services.

Priority Areas of Cooperation

The following eight major priority areas for cooperation among member countries may be identified:

Information and Knowledge Sharing: Cooperation on migration statistics should be considered as one of the areas of cooperation between member countries which needs to be strengthened and where the regional institutions can play an important role. In particular, concerning the intra-migration of highly-skilled workers, efforts should be made to collect comprehensive data on the scale and characteristics of flows and stocks of skilled and highly-skilled workers among member countries. Concerning cooperation in the area of research, it should aim at building knowledge on how to accommodate migration and brain drain for the benefit of LEMCs and LIMCs, where some socio-economic trends may move in opposite directions. In practice, the regional institutions at OIC level should explore the possibility of launching a programme for sharing and expanding information and knowledge in the area of migration and brain drain. Under this programme, studies, surveys and other statistical services may be financed.

Strategies and Policies: Cooperation on migration and brain drain issues should focus on devising regional “*win-win*” policies for both LEMCs and LIMCs. In this regard, while migration is a sensitive and complex matter, it is important to recognize that it is also a reality that must be dealt with collectively by member countries in order to better strengthen their socio-economic ties. In this context, it is crucial to consider intra-migration, particularly of highly-skilled workers, as an important policy issue in the agendas of OIC and its specialized organs. Considering that improved knowledge and understanding of the issues related to intra-migration are necessary for developing adequate policies by both LIMCs and LEMCs, the regional institutions at OIC level should help in creating awareness, discussing problems and achieving policy convergence in this crucial area of cooperation.

Institutional Development: At OIC level, the cooperation for building the capacities for dealing with issues related to brain drain may be given priority. Among others, this requires strengthening COMSTECH and enhancing existing programmes and initiatives such as those under the IDB Group. However, there is no specialized agency for intra-migration. Accordingly, besides strengthening existing arrangements, it is important to explore ways and means for launching a new one in order to implement the specific recommendations on brain drain contained in the OIC Ten-Year Programme of Action. This arrangement may be conceived in form of a federation or union of national specialized migration organizations. It will serve as a platform for discussing migration and brain drain issues and building consensus on questions related to the movement of persons both at regional and international levels.

Tertiary Education Reform: It is now recognized that efforts should be made to adopt appropriate planning and reforms for improving the tertiary education system in member countries, including improving infrastructure and research facilities. Firstly, this will better adjust the number and quality of graduates to the real needs of the economy of these countries. Secondly, it will provide adequate tertiary education opportunities and prevent or reduce migration for study purpose which constitutes an important source of migration of highly-skilled people. Thirdly, it should improve research and working conditions environment and make it conducive for maintaining and attracting highly-skilled labour in member countries. Cooperation among member countries in the area of tertiary education reform may take various forms. Among others, these include sharing of experience or technical assistance for capacity building from more advanced member countries in this field. In addition, the possibility of promoting joint universities, research institutes and centres of excellence should be explored.

Innovative Partnerships with Expatriates: The increased awareness about brain drain issues at OIC level will contribute to helping LEMCs to transform their brain drain into gain through more effective partnerships with expatriates. Among others, regional institutions should continue to organize investment conferences and business fora aimed at promoting active participation of the expatriates in the economic development. In addition, they may explore innovative partnerships between these expatriates and home country entrepreneurs. The objective should be to help harness the networking and marketing skills of these expatriates and accelerate formation of entrepreneurial networks to link highly-skilled expatriates to entrepreneurs in member countries looking for opportunities to develop new business partnerships.

Technical Assistance Cooperation: The promotion of technical assistance cooperation among member countries can serve as an effective tool for assimilating highly-skilled labour within these countries. The existing technical assistance programmes have already contributed to an exchange of expertise among member countries. However, the high level of brain drain to developed countries from many LEMCs indicates that the present volume of technical assistance cooperation is far below the potential level. Accordingly, the regional institutions at OIC level may explore ways and means for better coordinating between the national technical assistance programmes in member countries. In addition, they may launch in collaboration with member countries bilateral or multilateral technical assistance funds with the purpose to transfer the expertise and skills available to other member countries. These funds will help mobilize additional resources for expanding and

financing at regional level successful programmes implemented so far at local or national level such as TOKTEN.

Addressing Migration in Development Financing: Within the OIC family, IDB Group has a comparative advantage in mobilizing adequate resources and allocating them to convert brain drain into gain and to contribute to solving the problems of poverty, lack of employment opportunity, and other issues that induce people to migrate. In general, it is expected that increased awareness of the implications of brain drain and migration will translate into the incorporation of this element in the country assessment and programming as well as risk management undertaken by the IDB Group. On the one hand, in project preparation, the migration factor should not be ignored and its impact on poverty reduction, human capital development, labour market competitiveness, and private sector development in both LEMCs and LIMCs should be assessed. On the other hand, migration factor should also be included in risk analyses undertaken by the IDB Group.

Enhancing the Contribution of Islamic Banking and Finance: At OIC level, the IDB Group may contribute, through its efforts to promote Islamic finance and banking, to improving the financial framework that can affect whether and how migrants remit their earnings abroad. Through its collaboration with Islamic financial institutions, the IDB Group has the potential to develop incentives and mechanisms for the repatriation and productive investment of remittances which constitute an important source of finance for LEMCs. In this regard, suitable modes of finance should be designed for both mobilizing and utilizing these remittances. These modes should take into consideration the specific nature of this kind of transfer which are private funds.

BRAIN DRAIN IN IDB MEMBER COUNTRIES: Trends and Developmental Impact

INTRODUCTION

International migration and brain drain have prompted a great deal of political and technical debate in the international community recently as well as increased interest among member countries¹ as the number of highly-skilled migrants has increased, and the economic, social and political implications of migration for their economies have begun to assert themselves. Recently, the Third Extraordinary Session of the Islamic Summit Conference held in Makkah Al Mukarramah, 5-6 Dhul Qada 1426H (7-8 December 2005) adopted a “*Ten-Year Programme of Action to Meet the Challenges Facing the Muslim Ummah in the 21st century*”. Among others, the Programme of Action recommended to “*assimilate highly-qualified Muslims within the Muslim World, develop a comprehensive strategy in order to utilize their expertise and prevent brain migration phenomenon*”.

However, despite the importance gained by the subject of international migration and brain drain in the national, regional and international agendas, it is difficult to capture all its aspects in one single study. In addition, the growing importance of brain drain raises the issue of measurement and lack of comprehensive statistics which make difficult the formulation and implementation of adequate strategies and policies in this crucial area without a solid information basis.

Nevertheless, some information on member countries can be used on the basis of available databases and studies on global trends in international migration as well as on brain drain from these countries to OECD countries. According to this information, current trends indicate that migration flows involving both labour-importing and exporting member countries are high. In particular, there are tendencies of migration from member countries to developed countries. These tendencies continue to be driven by income gaps and the rising number of young adults seeking better opportunities abroad. However, current trends also show that migration between developing countries, including intra-migration among member countries is growing.

Obviously, understanding the developmental ramifications of international migration, especially of brain drain, is of particular importance to many member countries, especially for the least developed member countries (LDMCs) because of the significant number of “*elite migrants*” from these countries. Although these countries have benefited from the international migration in terms of remittances, recent studies show that brain drain impacted their economies in terms of loss of the human capital needed for economic development.

While the main challenge for member countries is ultimately to adopt sound economic strategies and policies for accelerating growth, reducing poverty and achieving social progress, their national migration policies should be considered as part of these economic policies for development rather than as independent or substitute policies. Similarly, their regional cooperation on migration and brain drain

¹ In this paper “member countries” means “IDB member countries”.

related issues should be part of their overall regional economic cooperation and integration strategies, policies and programmes.

Following the Third Extraordinary Session of the Islamic Summit Conference, there is now increased awareness about the importance of the migration issues. The adoption of the “*Ten-Year Programme of Action*” provides a good opportunity for undertaking specific actions in order to facilitate the freedom of movement of businessmen and investors across the borders of member countries as well as to assimilate highly-qualified people within these countries. It is timely for member countries to develop a comprehensive strategy in order to utilize their expertise and prevent brain migration phenomenon as recommended by the Summit for the first time.

Purpose of the Occasional Paper

This paper has several objectives. Generally, its main purpose is to analyze the current situation in member countries with regard to brain drain and identify its negative/positive effects on their socio-economic performance. To this end, the paper takes stock of available knowledge concerning the scale, composition and direction of migration from these countries to developed countries during the recent period. It also reviews the national strategies and policies aimed at reducing brain drain or converting it into brain gain in the light of recent developments and in the context of the existing literature on the subject.

In addition, the paper attempts to assess the impact of intra-migration on both labour-exporting member countries (LEMCs) and labour-importing member countries (LIMCs). In this respect, it focuses on identifying “*win-win*” policies for the two groups. Among others, it assesses the possibility of collaboration among member countries to attract scientists and engineers from member countries and to expand the role of their diasporas² in economic development.

Scope and coverage of the Occasional Paper

The scope of the paper is mainly determined by the definition of brain drain, the availability of reliable data and the ultimate objective of the paper itself.

Firstly, “*brain drain*” is used to describe irreversible transfer of human capital/resources and skills between countries due to international migration. However, it is difficult to capture all its aspects in one single and simple definition. In particular, the phenomenon cannot not be easily defined and measured by comprehending the general perception that brain drain only occurs if skilled people, such as engineers, doctors, nurses, and so on, migrate while they are needed and have suitable job opportunities in their countries. Conventionally, there is brain drain when a significant proportion of the best educated or tertiary-educated population has migrated. In some recent studies, this proportion is 10 percent or more.³ The

² This paper uses the word “*diaspora*” as a common term used in the literature on migration. In general, Webster’s New World Dictionary, 1988 defines diaspora as “*any scattering of people with a common origin, background, beliefs, etc.*”.

³ See Adams, R. H.Jr., 2003, “*International Migration, Remittances, and the Brain Drain: A Study of 24 Labour-Exporting Countries*”, Policy Research working Paper, World Bank.

identification of brain drain will, therefore, require comprehensive data on migrants by skill category as well as data on the numbers and proportions of corresponding people who remained at home.

Secondly, data on international migration in general and brain drain in particular remains insufficient both at national, international and regional levels. At the national level, most labour-exporting countries do not collect data on their migrants. At the international level, there is no consistent set of statistics on the number or skill characteristics of international migrants. At the regional level, it seems that no attempt has been made to collect comprehensive data for member countries as a group.

Thirdly, since the ultimate objective of the Occasional Paper is to explore areas of cooperation between member countries by assessing the impact of intra-migration on both LEMCs and LIMCs, the paper does not analyze in detail the impact on developed countries, particularly USA, Europe and other OECD countries. Also, it does not look in detail at the impact on migrants themselves though this dimension is very important, as the effects of migration on both LEMCs and LIMCs ultimately depend on their degree of success.

Methodology and Modalities

The preparation of the Occasional paper required the following three major actions:

- i) Preparation of a survey of available studies covering LEMCs and LIMCs,
- ii) Collection of relevant data on international migration, brain drain and intra-migration, and
- iii) Discussion of policies, programmes and measures for reducing brain drain and converting it into gain in selected LEMCs.

As stated above, data on international migration remains insufficient. However, the paper presents a survey of recent studies, using estimates of migration and educational attainment based mainly on OECD records. This survey focuses on available data on major LEMCs. This set of data is used in order to assess the developmental consequences of brain drain from LEMCs to OECD region.⁴ Unfortunately, the other important labour-importing region after OECD region, namely the Gulf region, has not been sufficiently covered by available studies because of a lack of published statistics. This makes the assessment of the level of intra-migration and intra-brain drain rather difficult.

Field visits were undertaken to selected LEMCs in order to discuss national strategies and policies for reducing brain drain and converting it into gain. In this regard, one LEMC from each of the major regions providing labour to OECD countries as well as to the Gulf region, namely, Pakistan from the Asian region and Egypt from the Arab region were visited. In addition, Senegal was also visited in order to cover issues related to brain drain in Sub-Saharan African region. It is to be noted that these three countries were selected based on the severity of highly-skilled

⁴ The 30 OECD member countries are: Australia, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, UK and USA.

migration. As it will be seen later, Senegal is severely affected, Pakistan is moderately affected and Egypt is lowly affected by brain drain.

Structure of the Paper

The paper is organized in three parts. Part One contains two chapters and deals with trends in brain drain and its economic impact. Chapter One provides information on recent trends in brain drain, including data on intra-migration and intra-brain drain. Chapter Two examines the impact of brain drain on both labour-importing and exporting member countries after identifying its major causes. Part Two contains three chapters and presents the three case studies. Chapter Three discusses how to reverse a severe brain drain in Senegal. Chapter four describes the efforts of Pakistan to convert brain drain into gain. Chapter Five deals with the experience of Egypt to enhance gain from migration, including of highly qualified and skilled labour. Part Three contains two chapters and is devoted to migration policies and cooperation among member countries in this crucial area. Chapter Six reviews the current national migration policies and strategies adopted by labour-importing and exporting countries and highlights the major challenges and best practices in this field. It also looks at the regional and international migration arrangements while Chapter Seven identifies the challenges, opportunities and priority areas of cooperation among member countries on intra-migration. The last chapter of the paper concludes.

PART ONE

TRENDS IN BRAIN DRAIN AND ITS ECONOMIC IMPACT

CHAPTER ONE

RECENT TRENDS IN BRAIN DRAIN

The use of the term “*brain drain*” started in the late 1960s when growth in the migration of skilled labour from developing to developed countries began to accelerate. Recently, there has been a revival of the debate on brain drain because it appears that the migration of skilled labour from developing countries, including member countries, has again accelerated over the last decade. This acceleration was mainly associated with the growth of information and knowledge-intensive activities and aggressive migration policies and incentives adopted by many developed countries to attract skilled labour.

The extent of migration and brain drain cannot be determined accurately without reliable statistics. While some information based on available databases and studies on global trends in migration as well as on brain drain from member countries to OECD countries is available, it is difficult to find sufficient statistics on intra-migration and brain drain among member countries. Before analyzing these trends, there is a need to highlight the major demographic, human and economic indicators of member countries in order to explain their macro-economic environment and give indication on why it encourages migrants, including highly-skilled, to look for opportunities abroad.

1.1 OVERVIEW OF DEMOGRAPHIC, HUMAN AND ECONOMIC TRENDS

The main purpose of this brief overview is to describe the recent past and current demographic, human, social and economic realities of member countries as a group. It shows why the issue of international migration and brain drain is taking on a new significance in the context of growing youth population, improving education, and increasing integration in the world economy.

1.1.1 Demographic Indicators

The total population of member countries increased from 1,036 million in 1990 to 1,383 million in 2004 as shown in Table 1.1. During the last fifteen years, it increased by 1.9 percent yearly. Currently, it represents around 22 percent of the world population. As indicated in Annex 1.1, seven countries, namely Bangladesh, Egypt, Indonesia, Iran, Nigeria, Pakistan and Turkey have a combined population representing around 62 percent of the total population of member countries in 2004. As expected, compared to OECD countries, the average annual growth rate of member countries’ population has been significantly higher during the last fifteen years.

Table 1.1: Major Demographic Indicators of Member Countries, 1990-2004

Countries	Population (million)			Population Growth Rate (%)		Age Composition (%-2004)	
	1990	2000	2004	1990-1999	2000-04	15-64 years	65+years
Member	1,036	1,281	1,383	1.9	1.9	59.7	3.9
Developing	4,366	5,098	5,375	1.6	1.3	63.7	5.8
OECD	1,044	1,130	1,161	0.7	0.6	67.2	15.0
World	5,253	6,052	6,348	1.4	1.2	64.3	7.2

Source: IDB Statistical Monograph No .26, 2006.

Unlike many developed countries, member countries are not facing the issue of ageing population which may explain some of the migration flows. In 2004, the old age group (65+ years) had not reached 10 percent of total population in any member country and was, on average, around 4 percent for member countries as a group. The major component of this population is the working age group (15-64 years) which represents on average 60 percent of total population, while the remaining 36 percent is composed of children up to 14 years of age.

1.1.2 Human Development Indicators

The member countries have witnessed some improvement in the area of human development, including in the area of tertiary education which is very relevant to the discussion on brain drain issues. In this respect, the average ratio of enrolment in tertiary education has doubled between 2000 and 2003, while the average ratio of enrolment in secondary schools has almost remained unchanged during the same period as shown in Table 1.2. However, despite this improvement, the tertiary education enrolment ratio remained low compared to those in developing and OECD countries. This may explain the high number of people looking for tertiary education opportunities abroad. Unfortunately, as it will be seen later in the case studies, many migrants for education purpose do not return after finishing their studies.

Generally, non-returning students and highly-qualified and skilled people are attracted by better quality of life and better human environment in high income countries. In this regard, despite the improvement in member countries in terms of per capita GNI and Human Development Index during the last few years, the levels of these indicators were very low compared to their levels in OECD countries. Except for some member countries which have higher per capita GNI and are in high human development category, the other countries are in medium and low human development categories and are ranked very low.

Table 1.2: Major Human Development Indicators of Member Countries, 1990-2004

Countries	School Enrollment (% gross)						Per Capita GNI			Human Index
	Secondary			Tertiary			1990	2000	2004	2003
	1990	2000	2003	1990	2000	2003				
Member	40	52	52	8	6	12	903	1,074	1,447	0.590
Developing	47	60	--	9	16	--	847	1,156	1,502	0.694
OECD	94	106		50	69		20,394	27,564	33,547	0.910
World	55	68	--	13	21	--	4,074	5,243	6,329	0.741

Source: IDB Statistical Monograph No.26, 2006.

1.1.3 Economic Performance

The annual GDP growth rate of member countries as a group varied from year to year. Table 1.3 indicates that the GDP growth peaked in 1990, but for the year 2004, the estimated growth rate was around 5.8 percent. This growth rate continues to be vulnerable to both internal and external factors.

Compared to the world average, the investment in terms of gross fixed capital formation as percentage of GDP remains insufficient for accelerating the rate of growth and generating adequate level of employment which may help retain more people at home who are looking for employment opportunities abroad. According to available data, the levels of unemployment are high in many member countries. In 2005, the estimated unemployment rate for MENA region and Sub-Saharan Africa were 13.2 percent and 9.7 percent, respectively. These unemployment rates were much higher than the world average of 6.3 percent.⁵

Table 1.3: Major Macro-economic Performance of Member Countries, 1990-2004

Countries	Annual GDP Growth Rate (%)			Gross Fixed Capital Formation (% of GDP)		
	1990	2000	2004	1990	2000	2004
Member	8.4	5.4	5.8	21	20	20
Developing	1.8	5.2	6.8	22	23	24
OECD	3.1	3.6	3.3	23	22	--
World	2.9	4.0	4.1	23	22	--

Source: IDB Statistical Monograph No.26, 2006.

1.2 TRENDS IN MIGRATION AND BRAIN DRAIN

The growing importance of brain drain raises the issue of definition and measurement, which, in turn, is linked to the definition and measurement of international migration. However, brain drain raises additional technical measurement issues which will be examined later. Obviously, without clear and standard definition and comprehensive statistics, it is difficult to properly address the concerns raised by migration and brain drain, monitor changes over time and provide countries and concerned institutions with a solid information basis for the formulation and implementation of adequate strategies and policies in this crucial area.

1.2.1 Issues of Measurement of International Migration and Brain Drain

Although the subject of international migration has gained prominence in both international and national agendas, it is difficult to capture all its aspects in a simple definition. Countries and institutions use different definitions despite the efforts made especially by the United Nations to harmonize the concept of international migration. These efforts started in 1976 and, later, during the 1990s, a process of revision was initiated to further improve statistics on international migration. Many institutions collaborated in these efforts, including the International Labour Organization (ILO), the Organization for Economic Cooperation and Development (OECD) as well as representatives of the statistical offices of selected countries. The two major difficulties faced in this context are the existence of a variety of sources of data,

⁵ ILO, 2006, "Global Employment Trends", Brief January, 2006, Geneva.

including population censuses, labour force surveys, administrative sources and specific surveys on the one hand, and the divergence in definitions on the other hand.

Variety of Sources of Data

Population censuses are the major sources of data. However, while these censuses are exhaustive in coverage and are conducted using standard activity classifications, they are carried out infrequently. In addition, they do not always provide the desired information such as on the actual length of stay of migrants. On the other hand, labour force surveys provide a good source of information for making international and regional comparisons, but they also raise problems due, among others, to sample size and representativity. The administrative sources provide relevant data on international migration and brain drain on the basis of information related to work permits or visas, but do not make use of the concepts, definitions and classifications necessary for recording international statistics. Finally, the specific surveys can track the highly-skilled migrants but are not broadly used, developed, and harmonised.

Divergence in Definitions

In general, since the information available on international migration in terms of migration stocks, migration flows, length of stay, return rates, etc., is insufficient, an extra difficulty is faced in measuring brain drain. The quantification of the movement of skilled individuals across countries and the measurement of brain drain associated with this movement remain unsatisfactory. While national authorities have maintained limited databases on migration, these databases do not use the same definitions, especially concerning the nature of migration and skill or education categories. Regarding the nature of migration, there is divergence in distinguishing permanent migration from temporary migration, although the United Nations has recommended defining a migrant in terms of residence by time; with short term being less than a year and long term more than 12 months. Concerning skill or education categories, the actual definitions adopted by national authorities vary widely. In addition, it is not easy to measure brain drain because of difficulty in clearly distinguishing work-related migration from migration linked to education enrolment in developed countries.

1.2.2 General Trends in International Migration

The main destination of migrants, including highly-skilled migrants, is OECD countries. The information on these flows may be obtained from the OECD online “*Database on Immigrants and Expatriates in OECD Countries*” which provides internationally comparable data on foreign-born population for all countries of the OECD. According to OECD, while international migration towards OECD countries has shown a tendency to stabilize from 2002-03 after several years of increase, the share of migration for work purpose, particularly of skilled workers, is increasing.⁶ Table 1.4 shows that around 12 million migrants born in member countries are resident in OECD countries. Compared to the total population of member countries, this stock of migrants corresponds to an overall migration rate of 0.8 percent, which is lower than the average migration rate of developing countries.

⁶ OECD, 2005, “*Trends in International Migration 2004*”.

Table 1.4: Migrants Born in Member Countries Resident in OECD Countries*

Countries	Population		Foreign-Born Migrants In OECD Countries		Overall Migration Rates (%)
	Number (millions)	%	Number (millions)	%	
Member	1,383	25.9	11.7	18.8	0.85
Developing**	5,344	100.0	62.1	100.0	1.16

Notes: *Excluding Turkey

**Excluding developing countries which are OECD members.

Sources: -OECD online "Database on Immigrants and Expatriates in OECD Countries", updated November 2005.

-IDB Statistical Monograph No.26, 2006.

At country level, the overall migration rate is less than 1 percent for 37 member countries as shown in Annex 1.4. While this rate is between 1 and 10 percent for 17 member countries, it reaches around 20 percent for Albania and 44 percent for Suriname. This suggests that there is a negative correlation between the overall migration rate and the size of the economy both in terms of population and GDP.

Higher migration rates are obtained if the analysis focuses on the category of population with the age 15 years and more (15+). In this case, this migration rate is more than 1 percent of total population in the same category for member countries as a group. At country level, the rate is higher for all countries compared to the overall migration rate as indicated in Annex 1.5. These rates better reflect the migration for both education and work purposes.

Table 1.5: Migrants Aged 15+ Born in Member Countries Resident in OECD Countries*

Countries	Population		Foreign-Born Migrants 15+ in OECD Countries		15+ Migration Rates (%)
	Number (millions)	%	Number (millions)	%	
Member	814	21.9	10.8	20.7	1.33
Developing**	3,714	100.0	52.1	100.0	1.40

Notes: * Excluding Turkey

**Excluding developing countries which are OECD members.

Sources: -OECD online "Database on Immigrants and Expatriates in OECD Countries", updated November 2005.

-IDB Statistical Monograph No.26, 2006.

Among the migrants from member countries aged 15+, the highly-educated people represent 22 percent. This rate gives an indication about brain drain from these countries to OECD countries.

**Table 1.6: Migrants Aged 15+ Born in Member Countries Resident in OECD Countries*
By Skills Level**

Countries	Migrants Aged 15+		Foreign-Born Migrants Aged 15+ in OECD Countries (thousands)				15+ Migration Rates (%)
	Number (thousands)	%	Low	Medium	High	Unknown	
Member	10,844	20.7	5,213	2,909	2,389	330	1.33
Developing**	52,082	100.0	18,893	17,170	12,251	3,767	1.40

Notes: * Excluding Turkey

**Excluding developing countries which are OECD members.

Low: Less than upper secondary (below 11-13 years of elementary and secondary schooling).

Medium: Upper secondary schooling and post-secondary non-tertiary.

High: "Academic" tertiary, "Vocational" tertiary and "Advanced" research.

Sources: -OECD online "Database on Immigrants and Expatriates in OECD Countries", updated November 2005.

-IDB Statistical Monograph No.26, 2006.

1.2.3 Estimated Brain Drain in Member Countries

In many available studies, efforts were made to collect data on brain drain and its variations. The data on migrants are presented by their skills, destinations within OECD countries, and the numbers and proportions of corresponding people who remained at home. The highly-skilled migration rate is, therefore, the proportion of working age individuals with at least tertiary educational attainment (13 years and above), born in a given country but living in another country. These studies used as primary sources of information the US census or OECD countries' census data, along with household surveys, to capture the magnitude of the global brain drain and to assess the costs and benefits for developing countries. A survey of these studies was made, focussing on member countries. In particular, this survey provides data on brain drain for the years 1990 and 2000.

Estimated Brain Drain in 1990

It is possible to give an idea about the situation of brain drain of some member countries in 1990 on the basis of the well-known study on skilled migration by Carrington and Detragiache.⁷ This study estimated the migration rate on the basis of USA census and OECD migration statistics for the immigrant stocks and Barro-Lee⁸ education data for the size of educated population in the sending country. By definition, the highly-skilled migration rate is the measure of the intensity of migration as a share of a country's labour force having tertiary education that has migrated. Besides some technical shortcomings,⁹ the study did not cover all member countries and did not take into account skilled migration to Gulf region which may constitute a significant proportion of the total migration for member countries like

⁷ Carrington, William J. and Detragiache, Enrica, 1998, "How big is the brain drain?", IMF working Paper WP/98/102.

⁸ Barro, R. and J. Lee. 2000. "International data on Educational Attainment: updates and implications." NBER Working Paper n°7911.

⁹ These technical shortcomings included the following : (i) Possible deficiencies of the basic data used, (ii) Immigration to the USA comprised all types of migration, not only employment-based, (iii) Number of educated migrants to OECD countries was estimated directly but on the basis of the education level of migrants to USA, and (iv) Estimates of educated population by Barro and Lee were partly based on historical enrolment data, and it was not clear whether the migrants were included in these estimates or not.

Bangladesh, Pakistan, Egypt, etc. However, this study was the first attempt to provide estimates of brain drain for 61 countries, including 20 member countries.

Docquier and Marfouk have attempted to refine Carrington and Detragiache's method by incorporating additional statistical sources.¹⁰ They provide estimates of skilled workers' emigration rates to OECD countries for about 170 countries in 1990 and 190 countries in 2000. This study provides one of the best available estimates of brain drain in 1990, and gives an idea about the situation in 49 member countries.

Figure 1.1 provides the skilled migration rates to OECD countries for 49 member countries in 1990. Seventeen member countries have highly-skilled migration rates exceeding 10 percent in 1990. It also appears that most member countries suffering from brain drain towards OECD countries are in Africa. Among the 17 member countries with skilled migration rate over 10 percent, 10 are African countries. Furthermore, small member countries, in terms of population and GDP, tend to have extremely high brain drain. This is the case of small countries like Suriname (92 percent), Gambia (76 percent), and Somalia (48.9 percent). Finally, the GCC countries have the lowest skilled migration rate to OECD countries with Oman (0.3 percent), UAE (0.5 percent), Saudi Arabia (0.7 percent) and Qatar (2.1 percent) among the five member countries with the lowest rates in 1990.

Estimated Brain Drain in 2000

There is a general consensus that skilled migration from developing countries and transition economies to OECD countries has accelerated after 1990. On the basis of available data from census and labour force surveys, Salt¹¹ has arrived at some estimates showing that the stocks of highly-skilled foreign workers in OECD countries have increased since 1990. It also appears that the flows of the highly-skilled workers have been increasing at a higher rate than those of less skilled migrants. In 1997, the labour force survey data for the European Union as a whole showed that highly-skilled migrants, as defined by categories 1-3 of the International Standard of Classification of Occupations (ISCO) which include managers, professionals and associate professionals, accounted for around 38 percent of the total migration inflows into employment.

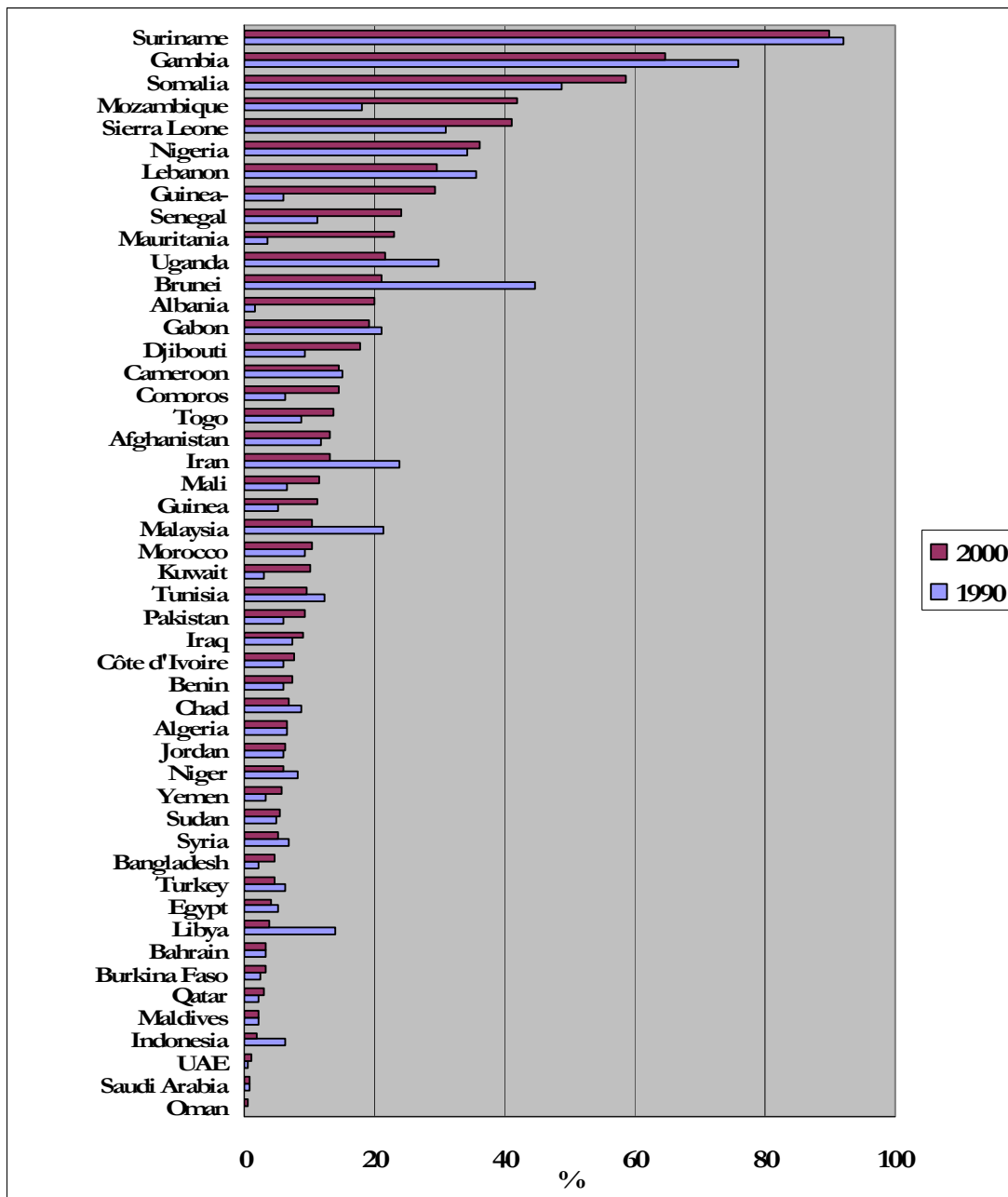
For the year 2000, one frequently quoted study estimating brain drain was of the World Bank 2003 which provided data for 24 large labour-exporting countries.¹² It showed that the vast majority of migrants to OECD countries had a secondary or high school education or higher. However, the study also indicated that while those migrants were well-educated, they were not necessarily among the best educated. The study estimated that for many labour-exporting countries, including member countries, less than 10 percent of the best educated or tertiary-educated population had migrated.

¹⁰ Docquier, F., and A. Marfouk. 2004. *Measuring the International Mobility of Skilled Workers*, Release 1.0, Policy Research Working Paper No. 3382. World Bank, Washington, DC.

¹¹ Salt, John, 1997, *International Movements of the Highly-skilled*, Directorate for Education, Employment, Labour and Social Affairs, International Migration Unit, Occasional Papers N°3, OECD.

¹² Adams (2003).

Figure 1.1: Highly-Skilled Migration Rate for Member Countries to OECD Countries, 1990 and 2000



Source: Data from Docquier and Marfouk (2004).

Another source of information on brain drain is the OECD online “*Database on Immigrants and Expatriates in OECD Countries*” which provides internationally comparable data on migrants in OECD countries by level of education. More specifically, two estimates of the highly-skilled migration rate among the population 15 years and over of 30 member countries to OECD countries are provided for 2000 (see Annex 1.6).

Finally, Docquier and Marfouk provided estimates of skilled workers’ emigration rates to OECD countries for 55 member countries in 2000, which enable us to make comparison over time and have an idea on the trend of brain drain in

member countries. Table 1.7 gives these estimates as well as the variation between 1990 and 2000.

Table 1.7: Highly-Skilled Migration Rates of Member Countries to OECD Countries, 1990-2000

Country	1990	2000	Variation in percentage points*	Variation* (%)
Afghanistan	11.7	13.2	1.5	12.8
Albania	1.6	20.0*	-	-
Algeria	6.7	6.5	-0.2	-3.0
Azerbaijan	--	2.6	--	--
Bahrain	3.3	3.4	0.1	3.0
Bangladesh	2.3	4.7	2.4	104.3
Benin	6.1	7.5	1.4	23.0
Brunei	44.6	21.0	-23.6	-52.9
Burkina Faso	2.6	3.3*	-	-
Cameroon	15.2	14.6	-0.6	-3.9
Chad	8.7	6.9	-1.8	-20.7
Comoros	6.4	14.5	8.1	126.6
Côte d'Ivoire	6.1	7.8	1.7	27.9
Djibouti	9.4	17.8	8.4	89.4
Egypt	5.3	4.2	-1.1	-20.8
Gabon	21.2	19.3	-1.9	-9.0
Gambia	76.0	64.7	-11.3	-14.9
Guinea	5.1	11.1	6.0	117.6
Guinea-Bissau	5.9	29.4	23.5	398.3
Indonesia	6.2	2.0*	-	-
Iran	23.7	13.1	-10.6	-44.7
Iraq	7.3	9.1	1.8	24.7
Jordan	6.0	6.4	0.4	6.7
Kazakhstan	--	1.1	--	--
Kuwait	3.0	10.0	7.0	233.3
Kyrgyzstan	--	0.7	--	--
Lebanon	35.6	29.7	-5.9	-16.6
Libya	13.9	3.8	-10.1	-72.7
Malaysia	21.5	10.4	-11.1	-51.6
Maldives	2.3	2.2	-0.1	-4.3
Mali	6.6	11.5	4.9	74.2
Mauritania	3.5	23.1	19.6	560.0
Morocco	9.3	10.3	1.0	10.8
Mozambique	18.2	42.0	23.8	130.8
Niger	8.3	6.1	-2.2	-26.5
Nigeria	34.3	36.1	1.8	5.2
Oman	0.3	0.5	0.2	66.7
Pakistan	6.1	9.2	3.1	50.8
Palestine	--	--	--	--
Qatar	2.1	2.9	0.8	38.1
Saudi Arabia	0.7	0.7	0.0	0.0
Senegal	11.1	24.1*	-	-
Sierra Leone	31.0	41.0	10.0	32.3
Somalia	48.9	58.6	9.7	19.8
Sudan	5.0	5.6	0.6	12.0
Suriname	92.0	89.9	-2.1	-2.3
Syria	6.9	5.2	-1.7	-24.6
Tajikistan	--	0.7	--	--
Togo	8.9	13.6	4.7	52.8
Tunisia	12.3	9.6	-2.7	-22.0
Turkey	6.3	4.6	-1.7	-27.0
Turkmenistan	--	0.1	--	--
UAE	0.5	1.2	0.7	140.0
Uganda	29.9	21.6	-8.3	-27.8
Uzbekistan	--	1.0	--	--
Yemen	3.3	5.7	2.4	72.7

Note: *Figures "Non reliable", that is, at least one observation is based on less than 70 percent of information

Source: Docquier and Marfouk (2004)

Based on their level of brain drain in 2000, member countries may be classified into four categories: very high, high, moderate, and low brain drain as shown in Table 1.8. Eighteen member countries, including Egypt, have low rates of highly-skilled migration (below 5 percent). Twelve member countries, including Pakistan, have moderate rates of highly-skilled migration (between 5 percent and 10 percent). Twelve member countries, including Senegal, have high rates of highly-skilled migration (between 10 percent and 20 percent). Finally, 13 member countries, many of which are small countries, have very high rates of highly-skilled migration (20 percent and over).

Table 1.8: Classification of Member Countries by Level of Brain Drain, 2000

Level of Brain Drain	Member Country
Very High (20≤Brain Drain)	Suriname, Gambia, Somalia, Mozambique, Sierra Leone, Nigeria, Lebanon, Guinea Bissau, Senegal, Mauritania, Uganda, Brunei, Albania
High (10≤Brain Drain<20)	Gabon, Djibouti, Cameroon, Comoros, Togo, Afghanistan, Iran, Mali, Guinea, Malaysia, Morocco, Kuwait
Moderate (5≤Brain Drain<10)	Tunisia, Pakistan, Iraq, Cote d'Ivoire, Benin, Chad, Algeria, Jordan, Niger, Yemen, Sudan, Syria
Low (0<Brain Drain<5)	Bangladesh, Turkey, Egypt, Libya, Bahrain, Burkina Faso, Qatar, Azerbaijan, Maldives, Indonesia, UAE, Kazakhstan, Uzbekistan, Saudi Arabia, Tajikistan, Oman, Turkmenistan, Palestine

Source: Classification based on data from Docquier and Marfouk (2004)

Similar to the overall migration rates, this classification suggests that there is a negative correlation between the highly-skilled migration rates and the size of the economy both in terms of population and GDP. Figures 1.2 and 1.3 below show a negative correlation between brain drain and the size of the economy.

Figure 1.2: Highly-Skilled Migration Rate Vs. Population, 2000

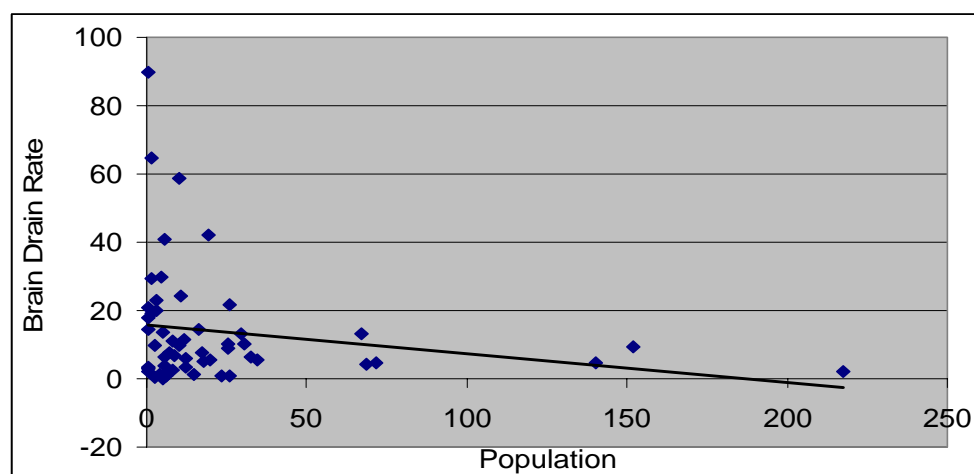
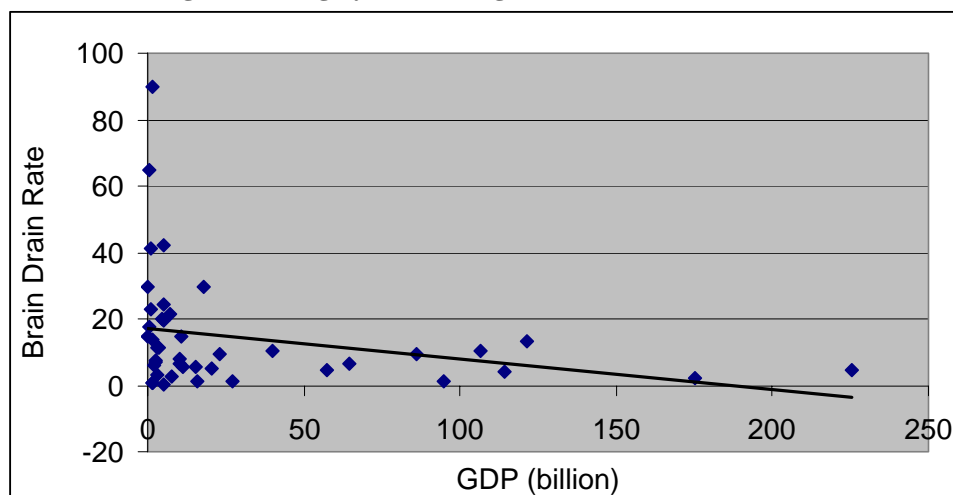


Figure 1.3: Highly-Skilled Migration Rate Vs. GDP, 2000

Furthermore, 29 member countries out of 49 with comparable data experienced an increase in their migration rate of skilled workers in the 1990s. The number of member countries with skilled migration rate exceeding 10 percent also increased from 17 in 1990 to 25 in 2000 (see Figure 1.1). All this clearly indicates that skilled migration from member countries to OECD increased between 1990 and 2000.

It is also noteworthy that some member countries have significantly reduced their skilled migration rates to OECD. These include Brunei, Gambia, Malaysia, Iran, Libya, Uganda, and Lebanon. The differences between these countries indicate that the reduction in skilled migration rates in these countries is explained by various political, economic and social factors both external and internal.

In 2006, Docquier and Marfouk updated their initial estimates of brain drain (shown in Table 1.7) based on country groupings. They found that the highly-skilled migration rate for Sub-Saharan Africa is 12.9 percent, for Arab countries the rate is at 7.8 percent and for OIC member countries the rate is 7.1 percent.¹³

Unfortunately, comparable data on brain drain cannot be provided at more disaggregated level, namely by professional category such as engineers, doctors, and so on. However, some indications that point to the extent and gravity of brain drain at national and regional level may be given. For instance, according to UNDP estimates, by 1976, 23 percent of engineers, 50 percent of doctors, and 15 percent of B.Sc. holders had emigrated from Arab countries. Roughly 25 percent of 300,000 first degree graduates from Arab universities in 1995/96 emigrated. Between 1998 and 2000, more than 15,000 Arab doctors migrated.¹⁴

1.3 LEVEL OF INTRA-MIGRATION AND INTRA-BRAIN DRAIN

As expected, since it is difficult to measure the international mobility particularly of skilled workers, there is every reason to believe that measuring intra-

¹³ Docquier, F., and Marfouk, A., 2006, "International Migration by Education Attainment, 1990–2000", In Caglar Ozden and Maurice Schiff, Eds., *International Migration, Remittances, and the Brain Drain*. World Bank, 2006.

¹⁴ UNDP, 2003, "Arab Human Development Report".

migration and intra-brain drain is even more difficult. However, some indications will be given on the basis of available information on directions of migration flows. In addition, more information will be provided for three countries visited within the framework of this paper. But, before analysing the level of intra-migration and brain drain, there is a need to take into consideration the socio-economic diversity among member countries. In this regard, as stated in the introduction, it is useful to divide these countries into two categories, namely LEMCs and LIMCs. The group of LIMCs is composed of Gulf countries, and some other oil-exporting and high-income countries, including Brunei, Côte D'Ivoire, Gabon, Libya and Malaysia, while the group of LEMCs includes the remaining countries.

1.3.1 Economic Diversity among Member Countries

The same general economic factors driving migration from member countries to OECD countries may be retained for explaining the flow of workers from LEMCs to LIMCs. In this regard, Table 1.9 indicates that on average, LEMCs have larger population and lower per capita income than LIMCs.

Table 1.9: Major Socio-Economic Indicators of LEMCs and LIMCs

Indicator	MCs	LEMCs	LIMCs
Mid-Year Population, 2004 (millions)	1379	1274	105
Population Growth Rate, 2000-2004 (%)	1.9	1.9	2.0
Age Composition, 2004 (15-64 years)	59.3	60.5	60.3
School Enrolment, 2003 (tertiary-% gross)	12.0	12.0	17.0
Per Capita GNI, 2004 (US\$)	1,447	1,046.7	5,437.4
GDP Growth Rate, 2004 (%)	5.8	7.7	7.0
Gross Fixed Capital Formation, 2004 (%GDP)	20.0	21.0	19

Sources: Calculations based on data from IDB Statistical Monograph No. 26, 2006.

1.3.2 Trends in Intra-Migration

The same general issues may be raised concerning the measurement of intra-migration and brain drain among member countries. These include, among others, the definition and identification of highly qualified foreign workers. Unfortunately, the various possible means by which the migration stock and flows of highly-skilled workers can be gauged, including, most notably, censuses, registration data, labour force surveys, administrative data, specific surveys and case studies, have not provided an entirely satisfactory means of measurement for directions of migration flows.

General Indications on Intra-Migration

There are general indications that migration among developing countries is growing. For instance, according to the World Bank, since South-South remittance flows make up between 30 and 45 percent of total remittances received by developing

countries¹⁵, it is possible to consider that this reflects the fact that over half of migrants from developing countries migrate to other developing countries.

Concerning intra-migration among member countries, the Gulf region is the preferable destination for migrants from several LEMCs. Despite the 1991 Gulf War and attempts to localize jobs, official estimates of gross migration to the six GCC countries continued to climb in the 1990s and diversify across countries of origin, amounting to a stock of nearly 10 million workers by 2000.¹⁶ As shown in Table 1.10, the number of migrant labour in 2001 for instance was about 4.8 million, excluding UAE. With 3 million foreign workers, Saudi Arabia has the lion's share of migrant labour. Most of these migrants are coming from MENA countries and from other member countries such as Sudan, Pakistan, Bangladesh, and Indonesia.

Table 1. 10 :Labour Force in Gulf States, 1996-2003

(Thousand persons)

Country	Labour	1996	1997	1998	1999	2000	2001	2002	2003
UAE	Citizen								
	Non-Citizen								
	Total	1,273.0	1,366.0	1,621.0	1,760.0	1,909.0	2,079.0	2,269.0	2,485.0
Bahrain	Citizen	103.5	106.5	115.3	119.5	123.8	127.2		136.5
	Non-Citizen	168.6	176.7	166.4	171.6	176.9	181.2		193.6
	Total	272.1	283.2	281.7	291.1	300.7	308.4	308.3	330.1
KSA	Citizen				2,823.7	2,943.4	3,029.7	3,148.7	
	Non-Citizen				3,023.2	3043.7	3,060.1	3,092.9	
	Total				5,864.9	5,987.1	6,089.8	6,241.6	
Oman	Citizen				127.6	137.4	147.6	159.1	174.2
	Non-Citizen				506.2	523.7	557.1	572.4	431.1
	Total	615.0	630.9	634.8	633.8	661.1	704.8	731.5	605.3
Qatar	Citizen						31.0	33.3	35.9
	Non-Citizen						26.3	41.3	44.2
	Total	276.5	285.4	293	316.5	316.5	67.3	74.6	80.1
Kuwait	Citizen	184.5	196.8	206.2	217.6	227.6	238.2	258.5	272.6
	Non-Citizen	955.4	1,011.1	1,026.6	1,030.5	979.6	976	1,061.6	1,146.1
	Total	1,139.9	1,207.9	1232.8	1,248.1	1,207.2	1,214.2	1,320.1	1,418.7

Source: Council of Gulf States

Intra-Migration among Selected Member Countries

Based on OECD database and the case studies, some indications on intra-migration and brain drain between Turkey and selected member countries are given in Table 1.11. Firstly, as can be seen from the Table, around 23 percent of migrants aged 15+ born in member countries and resident in Turkey are highly-skilled. Among the 30 OECD countries, Turkey is the 15th country with the highest number of highly-skilled migrants from member countries.

¹⁵ World Bank, 2006, "Global Economic Prospects(GEP), 2006: Economic Implications of Remittances and Migration" .

¹⁶Lucas, R.E.B. 2004. "International Migration to the High Income Countries: Some Consequences for Economic Development in the Sending Countries", paper presented in the Annual Bank Conference on Development Economics – Europe. Brussels, May 2004.

Table 1.11: Migrants Aged 15+ Born in Member Countries Resident in Turkey by Skills Category

Country	High	Low	Medium	Unknown	Total
Azerbaijan	4,109	5,062	4,417	386	13,974
Iran	2,785	4,418	3,133	821	11,157
Afghanistan	473	6,085	1,044	807	8,409
Iraq	2,497	2,601	1,590	318	7,006
Uzbekistan	1,200	2,643	2,449	303	6,595
Syria	873	2,557	1,016	379	4,825
Kazakhstan	1,138	927	1,735	121	3,921
Albania	352	1,302	1,097	159	2,910
Libya	232	1,307	1,002	94	2,635
Turkmenistan	292	362	1,199	56	1,909
Saudi Arabia	146	916	476	108	1,646
Kyrgyz Republic	460	216	738	27	1,441
Lebanon	249	442	270	46	1,007
Pakistan	262	442	172	40	916
Palestine	220	130	343	9	702
Jordan	272	164	181	26	643
Egypt	298	123	185	17	623
Algeria	165	211	219	19	614
Tunisia	158	150	159	10	477
Total	16,181	30,058	21,425	3,746	71,410

Source: OECD online database on immigrants and foreign born expatriates, updated 2005

Secondly, for Senegal, the UEMOA countries, all of which are member countries, account for 14 percent of Senegalese migrants. Cote d'Ivoire is the preferred destination with 6.6 percent, followed by Guinea Bissau (3.2 percent) and Mali (2.4 percent). Other member countries with traditionally big Senegalese communities are Gambia, Mauritania, Gabon, and Egypt.

Thirdly, for Egypt, the Gulf countries constitute the preferable destination for migrant labour, particularly Saudi Arabia. In 2002, the stock of Egyptian migrant labour in Saudi Arabia was about 1.35 million, and for the year 2005 alone out of 250,244 contracts for Egyptians to work in Gulf countries 136,468 contracts were for Saudi Arabia and out of these 38,657 were for highly-qualified Egyptians.¹⁷

Finally, for Pakistan, the statistics show that outflows to the Gulf countries fluctuate from year to year. For example, the number of Pakistani workers who proceeded to Kuwait was 400 in 2001 but reached to 12,087 in 2003 and then declined to 6,895 in 2005. Likewise, 18,421 Pakistani workers proceeded to U.A.E in 2001, whereas, in 2003, the number was 61,329 which decline to 47,441 in 2005. According to some estimates, around 90 percent of Pakistani workers proceeding for employment in Gulf countries are from semi-skilled to low-skilled categories.

Before identifying the causes and exploring the economic implications of migration in general and brain drain in particular, this chapter may be concluded by highlighting the need for more efforts by specialized entities, including within the OIC group to improve the availability, reliability, national and regional comparability of statistics in this field.

¹⁷ Egyptian Ministry of Interior, Permissions for Work Abroad, 2005.

CHAPTER TWO

IMPACT OF BRAIN DRAIN ON MEMBER COUNTRIES

The political and technical debate on causes and impact of brain drain on growth and development has become more intense recently. While there is a consensus on obvious causes such as the existence of income gaps and better opportunities abroad which attract more and more young adults from member countries, the assessment of the net effect of brain drain on development remains a rather difficult task. Many think that brain drain is a source of exploitation and loss of highly-skilled personnel which negatively affect development in many member countries. Others are of the opinion that brain drain and migration in general may positively impact development through increasing volume of remittances, reduced labour market pressures, and better access to international markets and technology.

2.1 MAJOR CAUSES OF BRAIN DRAIN

There is no single, well-developed theory to explain the volume and direction of the migration. Economic as well as political and social factors play roles in the interpretation of empirical evidences about migration, including some highlighted in the previous chapter. Since international migration may deprive a developing country of its most valued assets, the causes of this phenomenon need to be clearly identified and discussed. Specifically, the detailed list of causes may differ from one country to another. Concrete examples are provided in the case studies in Part Two of this paper. Generally, the major reasons cited for international migration and for the wide variation in high-skilled migration rates among labour-exporting countries are as follows:

- Income gaps between labour-importing and exporting countries,
- Lack of employment opportunities in labour-exporting countries,
- Political instability in labour-exporting countries,
- Geographical proximity to labour-importing countries,
- Size of the educated population of labour-exporting countries,
- Small size of population,
- Small economic scale,
- Poor investment climates that likely limit the productive employment of high-skilled workers, and
- Inadequate educational policies which have resulted in a large supply of university graduates for whom no suitable jobs exist.

Other factors driving migration may be added to this list. But, despite a growing literature on international migration and brain drain, these factors are still not well known. There are many complex forces that operate in labour-exporting and labour-importing countries, particularly those that bear on the expected benefits and costs of migrating. These factors are classified under two general categories: (i) “*push*”, or supply side factors affecting the interest and willingness to migrate, and (ii) “*pull*”, or demand side factors that affect the demand for migrants in the labour-importing countries.

2.1.1 Major Supply Side Causes

On the supply side, expected incomes disparities between labour-importing and labour-exporting countries are generally considered to be an important factor influencing the incentive to migrate. These disparities may be approximated by the per capita income in labour-exporting countries relative to those in labour importing countries.¹⁸ In this regard, data in Table 2.1 shows that there is clearly a strong incentive to migrate from LEMCs to both OECD countries and LIMCs. This incentive has even increased over time for OECD countries because the ratio of per capita income of LEMCs to that in OECD countries declined between 1990 and 2004.

Table 2.1: Relative Ratios of Per Capita GNI , 1990-2004

Countries	Per Capita GNI (US\$)			Relative Ratio of Per Capita GNI of LEMCs (%)		
	1990	2000	2004	1990	2000	2004
LEMCs	751	859	1,046.7			
LIMCs	4,670	6,199	5,437.4	16.1	13.9	19.0
Developing	847	1,156	1,502	88.3	76.0	62.7
OECD	20,394	27,564	33,547	3.7	3.1	2.7
World	4,074	5,243	6,329	18.5	16.5	14.6

Source: Calculations based on data from IDB Statistical Monograph No.26, 2006.

Besides relative income disparities, there are other economic factors that influence the expected costs and benefits of moving, including migration policies of labour-importing countries. In addition, there are socio-political factors that drive migration such as the political instability, presence of existing migrant networks, recent departures, family reunion programmes, settlement patterns of past migrants, family strategy to diversify sources of income, etc.

2.1.2 Major Demand Side Causes

On the demand side, the need for migrant workers in many labour-importing countries has been stressed as a fundamental factor driving migration. Many OECD countries continue to fill positions in the service sector and in import-competing industries through recourse to foreign labour. This was especially the case between the mid 1950s and the early 1970s when there were widespread labour shortages in countries like Australia, France, Germany and the United Kingdom which actively promoted immigration. The importance of this demand side force declined after the first oil shock in 1973. In recent years, there has been a shift in labour demand in OECD countries towards skilled workers such as technicians and engineers in the information, communication and technology producing and using industries. A number of OECD countries also allow migrants to enter temporarily as seasonal workers, particularly in the agricultural sector.

¹⁸ In this case average per capita incomes are used to compare the level in a specific LEMC and the level in the most important destination. In general, income inequalities within both countries are ignored. Moreover, the disparity in relative incomes for a given year is a static measure that does not capture the expected costs and benefits over the life of the migrant, which is considered by some researchers as the more relevant concept when assessing the incentive to migrate. See Coppel, Jonathan; Dumont, Jean-Christophe and Visco, Ignazio, 2001, "Trends in Immigration and Economic consequences", Economics Department Working papers No.284, OECD.

Obviously, brain drain is facilitated by both short and long term policies adopted by developed countries in order to attract scarce skilled labour, particularly from developing countries. There are two major reasons explaining the adoption of such policies by the developed countries. Firstly, these countries suffer from skill shortages resulting from the rapid technological change as well as from failure of the educational systems to cope with this change. In this case, foreign skilled labour constitute a substitute to local human capital. This substitution is also motivated by the desire of enterprises in developed countries to gain by reducing their wage costs and avoiding domestic wage pressure. Secondly, because of globalization and liberalization, the developed countries attract foreign skilled labour to improve their market access and knowledge and therefore to increase their productivity and competitiveness. In this case, foreign skilled labour constitute a complement to the local human capital, at least in the short term, by widening the skill or competence pool from which the enterprises of developed countries will select the best candidates to recruit.

On the other hand, there are factors that may reduce brain drain by encouraging return of highly-skilled workers. In this respect, as it is well known, recent global and regional developments, especially the September 2001 events in the USA, have impacted on member countries. It resulted in reverse migration of many professionals, including doctors, scientists and engineers. In addition, labour and students from many member countries have faced difficulties in accessing certain high-tech science and technology jobs or specialities in the West. As a result, many member countries are now facing the challenge of establishing national high-tech corporations and institutions to provide their nationals with opportunities to work and study in various advanced science and technology areas and utilize their skills and experience gained from working abroad.

2.2 IMPACT ON MEMBER COUNTRIES

By providing employment for both unskilled and skilled workers, migration offers a solution to domestic frustrations that might generate serious political problems, and provides a flow of remittances in foreign currencies. The consequences of international migration for development in labour-exporting and importing countries remain a subject of discussion and research. So far, the empirical relationship between migration and economic development is still debatable and controversial. The impact of international migration and brain drain may be assessed through the expected direct effect on migrants themselves before it is assessed at the level of the economy of both labour-exporting and importing countries.

2.2.1 Impact on Migrants

As already stated in the Introduction, the present paper does not analyze in detail the impact on migrants themselves though this dimension is very important, as the effects of migration on both labour-exporting and importing countries ultimately depend on their degree of success. However, it is generally considered that while the net benefit may be high, especially for highly-skilled migrants, it may also be low or even negative for many other migrants with lower education attainments. Following the recent developments, particularly the September 2001 events, it seems that the costs for the migrants and their families left in the countries of origin may not be balanced against the benefits of remittances.

Benefits for Migrants

There is a general agreement that the migrants and their families obtain positive economic gains from migration. In general terms, these gains are estimated to be large and considered as constituting the bulk of total gains from the international migration. These gains are as follows:

- i) ***High salaries:***
According to the World Bank, on average the wage levels for similar occupations adjusted for purchasing power in high-income countries are approximately five times those of low-income countries.¹⁹
- ii) ***Gains through remittances:***
By devoting a portion of income to remittances, the migrants may obtain gains by spending the money in their countries of origin, where the prices of non-traded goods are much lower.

Costs for Migrants

Besides the benefits from migration, the migrants incur substantial costs due mainly to inaccurate information when taking the decision to migrate. These costs may include the following:

- i) Psychological costs,
- ii) High risks, particularly for irregular migrants who may suffer from exploitation and abuse, and
- iii) Exorbitant fees paid by migrants.

2.2.2 Economic Impact of Exporting Labour

It is expected that if the international migration involves a movement of the best educated, it has negative repercussions for member countries exporting labour as the loss of highly-skilled individuals reduces their productivity and potential contribution to science and other technical or professional areas. But, as stated above, the impact on labour-exporting countries will depend on the proportion of the best educated in international migration affecting these countries. On the other hand, besides the costs of migration and brain drain, there are benefits such as remittances that have been the subject of extensive debate.

In addition, besides the reverse trend due to recent developments, the current debate on the brain drain identifies a “*brain cycle*” in which professionals live abroad for a number of years, but then return to their country of origin. In this way, human capital flows benefit both labour-exporting and importing countries, although this may be observed over an extended period of time. It is also useful to assess how important is the brain cycle, especially in intra-migration among member countries.

¹⁹ GEP (2006).

Costs of Brain Drain

A majority of analysts consider that brain drain is an exodus of human capital and, therefore, a curse for developing countries. There are costs which may reduce growth in labour-exporting countries by:

- Reducing productivity of colleagues, employees, and other workers because they lose the opportunity for training and mutually beneficial exchanges of ideas,
- Affecting key public services with positive externalities, such as education and health,
- Reducing opportunities to achieve economies of scale in skill-intensive activities,
- Losing return on high-skilled workers trained at public expense,
- Increasing the price of technical services,
- Losing the contributions of high-skilled emigration to improving governance and the quality of debate on public issues, encouraging education of children, and strengthening the administrative capacity of the state, and
- Aggravating the poor investment climate and limiting the potential benefits of economic reform.

The costs of brain drain for these countries are firstly estimated in terms of output and employment. Then, depending on the way in which education was financed, the costs are also estimated in terms of contribution through additional expenditures associated with public subsidies to education. The estimation of these costs is not easy because of many reasons. Among others, the changing nature of mobility of skilled labour may complicate the process of measurement of the negative impact of brain drain. In this respect, it seems that since IT skilled labour currently constitute the major proportion in brain drain, the major advances in communication technology have limited the extent to which skills are actually lost as is the case for software and network industry industry.

Economic Benefits

Many analysts have highlighted economic benefits of brain drain for labour-exporting countries. Theoretical advances have been made in understanding the linkages between brain drain and development. The traditional brain-drain literature has viewed the exodus of human capital as a curse for developing countries in terms of human capital depletion and retarding growth. However, it also recognized that brain drain does confer certain benefits, including increased trade, remittances, knowledge, foreign direct investment (FDI)—attributed in part to a “*diaspora*” effect. A benefit not considered in the traditional brain-drain literature is the brain drain-induced “*brain gain*”, which is now a central feature of the new brain-drain literature.²⁰ The gains are as follows:

²⁰ Seminal papers in the new brain-drain theory include Stark, Helmenstein, and Prskawetz (1997, 1998); Stark and Wang (2002); Stark (2004).

i) **Remittances:**

The flow of remittances is considered as the most important gain for labour-exporting countries. The major effects of remittances are that they:

- Directly increase the income of migrants' families,
- Help in smoothing consumption of migrants' families, especially in response to adverse events, such as crop failure or a health crisis,
- Help migrants' families to diversify their sources of income,
- Reduce migrants' families vulnerability to risks,
- Provide a source of savings and capital for investment,
- Increase migrants' families investments in education, entrepreneurship, and health,
- Increase social return on education,
- Improve country's creditworthiness for external borrowing by generating a steady stream of foreign exchange earnings, and
- Expand access to capital and lower borrowing costs through innovative financing mechanisms such as securitization of remittance flows.

ii) **Impact of “brain-drain-induced brain gain”:**

Recently, the new literature on brain drain has considered an additional benefit called “*brain drain-induced brain gain*”. This induced gain is due to higher wages earned abroad by skilled people which raise the expected return on education, and, therefore, induce additional investment in education.²¹

iii) **Working and labour market conditions :**

International migration can help relieve labour market pressures by offering a solution to insufficient employment opportunities in labour-exporting countries. It can also raise demand for the remaining low-skilled workers, leading to some combination of higher wages, lower unemployment, less underemployment, and greater labour force participation.

iv) **Diaspora:**

A well-educated diaspora can :

- Facilitate transfer of knowledge, access to technology and information,
- Ensure acquisition of skills by return migrants in the destination country,
- Facilitate access to foreign exchange,
- Improve business contacts for firms in the country of origin,
- Increase capital flows, including FDI partly attributed to a “*diaspora effect*”,²² and
- Increase trade flows.

Table 2.2 presents the bi-variate correlations between brain drain and some development indicators in member countries. It shows that the overall impact of brain drain on development is negative and has detrimental effect on human capital and poverty alleviation, which is consistent with traditional brain drain literature. Furthermore, the correlations between brain drain on the one hand, and productivity, FDI, trade and investment on the other hand yield the expected signs but are statistically not significant. Finally, although remittances are positively correlated with migration in general, brain drain is negatively correlated with remittances. This could possibly be attributed to the fact that the remitting behaviour of highly-skilled

²¹ Stark (2004).

²² Lucas (2004).

migrants is different from low-skilled migrants. In general, low-skilled migrants remitted more due to their spending in the destination country as compared to highly-skilled migrants who spend more by living in standard commensurate with their qualifications.

Table 2.2: Economic Impact of Brain Drain in Member Countries

Parameters	Brain Drain
Human Development Index (HDI)	-0.54 (0.01)**
Human Capital (Average years of schooling for population 15+)	-0.55 (0.01)**
Human Poverty Index (HPI)	0.44 (0.01)**
Productivity (GDP per worker)	-0.24 (0.26)
FDI (as a share of total investment)	0.40 (0.06)*
Trade Openness (Ratio of exports and imports to GDP)	0.10 (0.67)
Remittances per capita	-0.19 (0.39)

Notes: ** Significant at 1% level. * Significant at 10% level.

Sources: Calculations based on data from Docquier and Marfouk (2004), Human Development Indicators Online, Barro and Lee (2000), and World Development Indicators Online, 2005

Firstly, the assessment of the final impact of international migration and brain drain on economies exporting labour requires the assessment of specific impact of remittances. This, in turn, requires information on various parameters such as the level of remittances, the transfer channels and fees charged, uses to which remittances are put and their impact on recipient families and communities, incentives used by developing countries to attract remittances and how the level and use of these remittances are affected by the recipient country's macroeconomic policies.

Unfortunately, many member countries exporting labour do not report data on remittances, even those sent through formal channels, while others report remittances under other balance of payments entries. In addition, better information is available only on remittances from developed countries. According to the World Bank, the volume of remittances received by developing countries is estimated at US\$167 billion in 2005.²³ This volume has doubled in the past five years as a result of many factors, including the increase in the migrant stock and incomes, the expansion of networks and the reduction of costs of transfer of remittances, and the improvement in data recording. However, this volume is still underestimated because of transfer made through informal channels. According to available household surveys, these informal transfers correspond to 50 percent (or more) of formal flows.

Table 2.3 shows that remittances from emigrants represent an important source of finance for member countries as a group. In 2003, remittances corresponded to 183 percent of total ODA received by member countries and they were equivalent to about 146 percent of total FDI .

²³ GEP (2006).

Table 2.3: Relative Importance of Remittances in Member Countries, 2003

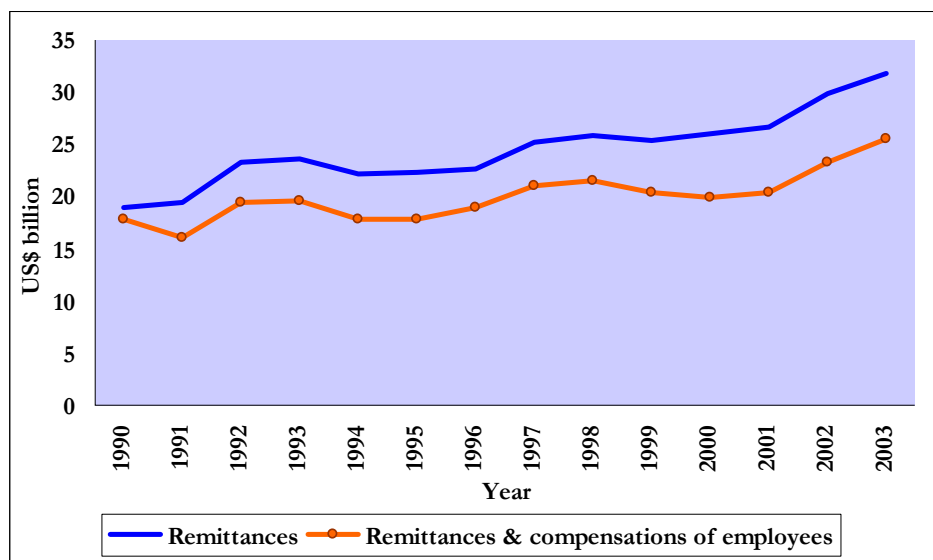
Country	Remittances		Remittances, as % of		
	US\$ million	%	Exports	ODA	FDI
Albania	889	2.7	76.2	259.7	499.4
Algeria	1,090	3.3	4.2	469.4	171.9
Azerbaijan	171	0.5	5.6	57.6	5.2
Bangladesh	3,191	9.7	43.2	229.0	1190.7
Benin	84	0.3	17.2	28.6	186.7
Burkina Faso	50	0.2	14.0	11.1	172.4
Cameroon	11	0.0	0.3	1.2	5.1
Comoros	12	0.0	29.7	49.0	1200.0
Cote d'Ivoire	141	0.4	2.2	55.9	85.5
Egypt	2,961	9.0	16.6	331.3	1249.4
Gabon	4	0.0	0.1	-	1.9
Gambia	40	0.1	24.9	66.9	160.0
Guinea	111	0.3	13.9	46.7	140.5
Guinea Bissau	18	0.1	25.4	12.4	450.0
Indonesia	1,489	4.5	2.3	85.4	-
Iran	340	1.0	1.0	255.5	70.5
Jordan	2,201	6.7	50.1	178.3	519.1
Kazakhstan	147	0.4	1.0	54.8	7.0
Kuwait	0	0.0	0.0	0.0	-
Kyrgyzstan	108	0.3	14.9	54.6	234.8
Lebanon	2,700	8.2	106.3	1182.4	754.2
Malaysia	987	3.0	0.8	904.3	39.9
Maldives	3	0.0	0.5	16.7	21.4
Mali	138	0.4	12.1	26.2	104.5
Mauritania	2	0.0	0.5	0.8	0.9
Morocco	3,614	11.0	25.6	691.3	156.2
Mozambique	69	0.2	7.0	6.7	20.5
Niger	8	0.0	1.8	1.8	72.7
Nigeria	1,677	5.1	5.7	528.0	77.2
Oman	39	0.1	0.3	87.6	7.4
Pakistan	3,964	12.0	28.5	371.0	742.3
Palestine	692	2.1	200.6	71.2	-
Saudi Arabia	0	0.0	0.0	0.0	0.0
Senegal	344	1.0	18.6	76.5	661.5
Sierra Leone	26	0.1	14.6	8.7	866.7
Sudan	1,224	3.7	42.3	197.0	90.7
Suriname	24	0.1	8.6	219.8	-
Syria	618	1.9	7.1	385.4	57.0
Tajikistan	146	0.4	17.7	101.3	456.3
Togo	103	0.3	17.3	229.8	302.9
Tunisia	1,250	3.8	11.6	409.2	214.0
Turkey	729	2.2	1.1	439.6	41.6
Uganda	295	0.9	37.9	30.7	139.8
Yemen	1,270	3.9	37.6	522.5	21166.7
IDB member countries	32,980	100.0	5.5	182.8	145.7
Developing Countries	116,607		5.0	153.1	70.1
World	173,103		1.9	223.5	27.4

Note: The total for IDB is calculated for 44 member countries for which data is available

Source: World Development Indicators 2005 database and World Investment Report 2005

Overall, workers' remittances in the member countries shown in the table totalled some US\$ 33 billion in 2003. Between 1990 and 2003, the volume of remittances presented an increasing trend as shown in figure 2.1.

Figure 2.1: Trends in Remittances in Member Countries, 1990-2003



Note: The total is calculated for 39 member countries for which data is available.

Source: Figure based on data from World Development Indicators Online, 2005

While there has been growing recognition of the global benefits of greater mobility of labour as well as of the positive effects of the emigration of skilled labour on labour-exporting countries, it remains difficult to quantitatively assess all these effects. In particular, measuring the poverty impact of remittances in member countries is difficult because of scarcity of data. In this regard, in order to calculate the income gains from remittances there is a need for assumptions concerning what migrants would have earned if they had stayed at home. However, the analyses of the available household survey data as well as cross-country regressions and simulations indicate that increases in remittances help in reducing the incidence of poverty. For instance, remittances have been associated with declines in poverty headcount ratio in several low-income countries, including by 11 percentage points in Uganda and 6 in Bangladesh.²⁴

Table 2.4 presents the relationships between remittances and some development indicators in member countries. First, remittances are positively correlated with human development, income and private consumption while negatively correlated with poverty in member countries. Second, there is no significant relationship between remittances and investment or savings. This suggests that remittances in member countries are mostly used for consumption rather than savings or investment.

These basic results conform to the empirical results found in the literature on the development impact of remittances. In fact, there is considerable empirical evidence that shows that remittances increase the total income available for

²⁴ GEP (2006).

consumption and contribute to poverty reduction.²⁵ However the issue whether remittances lead to increased investment is highly contentious and empirical results are mixed.²⁶

Table 2.4: Economic Impact of Remittances in Member Countries

Parameters	Remittances per capita
Human Development Index (HDI)	0.39 (0.01)**
Human Poverty Index (HPI)	-0.48 (0.01)**
GDP per capita	0.48 (0.01)**
Households consumption per capita	0.72 (0.01)**
Gross fixed capital formation per capita	0.27* (0.10)
Gross national savings per capita	-0.15 (0.45)

Note: ** Significant at 1% level. * Significant at 10% level

Source: Calculations based on data from World Development Indicators Online, 2005; and Human Development Indicators Online.

Finally, according to the recent literature on brain drain there are conditions under which the induced-brain gain may dominate the brain drain. In this case, the net brain gain contributes to raising welfare and growth in labour-exporting countries. In addition, it seems that this benefit may be derived by developing countries independent of other potential positive effects of brain drain on the level of education, whether through remittances or through the skills acquired by return migrants in the destination countries. However, while this new literature has led to a reconsideration of the impact of the brain drain on the economic welfare and growth in labour-exporting countries, it remains more theoretical than empirical.²⁷

A recent study, based on both partial and general equilibrium analyses, examined some of the underlying assumptions of the new brain-drain literature.²⁸ It showed that the impact of brain drain on welfare and growth is likely to be significantly smaller, and the likelihood of a negative impact is significantly greater, than what is reported in the literature. This is based on the observations that (a) the brain gain is smaller than what has been indicated in the new brain-drain literature, (b) the brain gain implies a smaller human capital gain, and (c) various negative effects of the brain gain on other sources of externalities, such as human capital, welfare, and growth, have not been taken into account.

²⁵ Adams (2003).

²⁶ Lucas (2004).

²⁷ Stark, O. 2004. "Rethinking the Brain Drain", World Development, 32(1): 15-22.

²⁸ Maurice Schiff. 2006. "Brain gain: Claims about its size and impact on welfare and growth are greatly exaggerated" in C. Ozden and M. Schiff (eds) *International Migration, Remittances, and the Brain Drain*, World Bank.

An earlier study²⁹, developed a simple model³⁰, which incorporates migration, foreign investment, and international trade, to empirically analyze the impact of migration in a wider perspective (i.e., migration, trade, and FDI are analyzed simultaneously). The model was applied to the relationship between Japan and seven countries in East Asia (China, Indonesia, Korea, Malaysia, the Philippines, Thailand and Taiwan). Through a series of simulation exercises, it was found that migration tends to have negative welfare effects on labour-importing countries, and positive welfare impact on labour-exporting countries. The simulation exercises also suggest that migration is inferior to trade liberalization as a means of bringing positive welfare effects, such as income creation and reduction of unemployment, to sending countries, because migration is the movement of human beings and therefore inherently involves higher adjustment costs than international trade which is a mere movement of goods across borders.

2.2.3 Economic Impact of Importing Labour

Similar to the impact on migrants themselves, the present paper as already stated in the Introduction, does not analyze in detail the impact of international migration and brain drain on labour-importing countries. However, this dimension is very important, as the effects of international as well as intra-migration ultimately depend on the net impact on the labour-importing countries. Briefly, it may be considered that while the net benefits of labour import may be high for LIMCs as it is the case for OECD countries, there are also costs for them.

It is generally believed that labour-importing countries enjoy significant economic gains from migration in terms of :

- i) Increased availability of labour force,
- ii) Increased labour-market flexibility ,
- iii) Higher returns to capital and reduced cost of production.
- iv) Lower prices for services such as child care, and
- v) Economies of scale and increased diversity.

As far as the costs or losses are concerned, besides social and political implications, it is often indicated that international migration may cause an erosion of wages or employment for some categories of workers.

2.3 IMPACT ON INTRA-TRADE AND INTRA-INVESTMENT

Similar to the net impact on the world economy, it is difficult to assess the net impact of international migration on regional economy. However, some conclusions may be drawn if we focus on specific factors driving migration and brain drain. For instance, as stated above there are differences in per capita incomes in LEMCs and LIMCs. These differences may likely have a positive impact on the overall output and income of member countries as a group, which would rise when migrants are relocated to higher and more developed member countries.³¹

²⁹ Junichi Goto. 2000. "International Migration and Trade Liberalization – Some lessons learned from Asia"

Discussion Paper No. 109, Research Institute for Economic and Business Administration, University of Kobe.

³⁰ The model is 2x2x2 Computable General Equilibrium (CGE) model.

³¹ But, this impact is not automatic and depends on the institutional frameworks and policies in the LIMCs, which are able to harness the economic potential of new arrivals. See Coppel, Dumont and Visco (2001).

The economic, social, and political implications of migration flows among member countries differ from those of the movement of goods or money among these countries. However, it is important to understand the relationship between all these kinds of flows involving people, trade and investment in order to enhance economic cooperation and integration among them.

Impact on Intra-Trade

As stated above, one of the major benefits of brain drain to developing countries highlighted in the traditional literature on the subject is increased trade for these countries. Accordingly, it is expected that intra-migration and intra-brain drain will result in increased intra-trade among member countries. Based on available data on directions of trade and migration among member countries, bi-variate correlations were estimated for the three selected member countries. The results indicate a positive and statistically significant correlation between the volume of intra-trade and the stock of intra-migration for these countries. The correlation coefficients were 0.78, 0.55, and 0.42 for Pakistan, Egypt and Turkey respectively.

Impact on Intra-Investment

As stated above, the brain drain may have a positive effect in terms of capital flows, including FDI which may be partly attributed to a “*diaspora effect*”. Accordingly, it is expected that a larger stock of migrants from LEMCs to the Gulf region and other LIMCs will result in greater outward FDI to these countries, essentially due to their skilled migrants. This means that brain drain may also have a positive effect on intra-investment among member countries.

However, despite attempt to determine the net economic effect of migration, it remains difficult to assess the developmental consequences of brain drain. The existence of theoretical models has not dissipated the ambiguities with respect to the welfare consequences of brain drain. More empirical work is, therefore, needed in this area, particularly with regard to the impact of intra-migration on economic cooperation among member countries and on intra-trade and intra-investment. In this regard, the field visits to Senegal, Pakistan and Egypt illustrate the impact of brain drain on their economies.

PART TWO

BRAIN DRAIN OR GAIN IN SELECTED MEMBER COUNTRIES

CHAPTER THREE

REVERSING A SEVERE BRAIN DRAIN IN SENEGAL

Developing a strong human capacity base has been a major component of Senegal's development strategy. This choice is clearly reflected in the substantial government resources allocated to education and training. In 2005, one-third of the government budget was devoted to the education sector. Despite these efforts, there are indications that Senegal is not taking advantage of the human capital it has built up over the years because a large proportion of highly-skilled Senegalese are migrating abroad. This case study seeks to understand the magnitude of brain drain, the implications, the immediate causes, and related policies and actions.

3.1 RECENT SOCIO-ECONOMIC TRENDS

Better Economic Performance

Senegal is classified among the Least Developed Countries (LDCs)³² but its per capita income of US\$ 670 is higher than the average of US\$ 600 for Sub-Saharan African countries and US\$ 510 for low-income countries. The Senegalese economy has been in a solid growth path for the last ten years. In fact, a rigorous economic reform programme initiated in 1994, including a 50 percent devaluation of the CFA franc, had turned the trajectory of the Senegalese economy from a negative growth rate to over 5 percent annual growth for the period 1995-2005.

Good macroeconomic policies are also reflected in Senegal's compliance to economic convergence criteria of the *Union Economique et Monétaire Ouest Africaine* (UEMOA). In fact, Senegal is the only UEMOA country that has met eight out of the nine criteria set for regional economic convergence in 2005 (see Table 3.1).

Table 3.1: Senegal's Compliance with UEMOA Economic Convergence Criteria

Criteria	UEMOA Target	Performance (2005)
Primary criteria		
Primary fiscal balance (% of GDP)	0 or more	0.6
Inflation (annual average; %)	3 or less	1.7
Foreign & domestic public debt (% of GDP)	70 or less	48.4
Accumulation of internal debt arrears	0	0.0
Accumulation of external debt arrears	0	0.0
Secondary criteria		
Public-sector pay/domestic revenue (%)	35 or less	30.8
Domestically financed investment/domestic revenue (%)	20 or more	34.8
Fiscal revenue (% of GDP)	17 or more	18.4
Current-account deficit excl. public transfers (% of GDP)	-5.0 or less	-6.5

Source: UEMOA, 2005

³² Senegal was classified as a lower-middle income country by the World Bank until the devaluation of the CFA franc in 1994. It was formally classified by the UN as one of the world's 49 Least Developed Countries (LDCs) in 2001. It is also classified by IDB as a LDMC.

Persistent Social Challenges

Poverty incidence among Senegalese declined by 11 percent between 1995 and 2002 but remained high with 57 percent of the population living in poverty in 2002.³³ In addition, more than half of total population of Senegal was below 20 years of age in 2005. This demographic structure accentuates the pressure on the labour market. Labour force participation rate³⁴ was 60 percent in 2002, and 90 percent of the active population was employed.³⁵ The corresponding unemployment rate of about 10 percent does not, however, reflect the reality in the labour market because 22 percent of the employed are underemployed and about 80 percent of employment is in the informal economy. In fact, 27 percent of the employed are poor workers who do not earn enough to meet their basic needs.³⁶

3.2 MIGRATION AND BRAIN DRAIN FROM SENEGAL

High Migration Rate

There are no sufficient national statistics on the number of Senegalese migrants, but sporadic evidence from various sources shows high migration rates from Senegal. According to the Ministry of Senegalese Expatriates, “*between 2.5 million and 3 million Senegalese live abroad*”.³⁷ Similarly, the 2002 National Households Survey (NHS) estimated that about 169,000 Senegalese had migrated abroad during the five-year period preceding the survey. Migration is a generalized phenomenon directly affecting most Senegalese households. Seventy percent of households have at least one member living abroad, and urban households are more affected than rural households. In fact, 76 percent of urban households have witnessed the departure of at least one member compared to 65 percent of the rural households. The percentage of households directly affected is 80 percent in Dakar and 75 percent in other cities. Senegalese migrants tend to be males (84 percent), young (68 percent are age 14-35 years), and from major urban centres (52 percent) such as Dakar and Saint Louis. Migrants from urban areas tend to be single (52 percent) while their counterparts from rural areas are in majority married.³⁸

The major destinations are Western Europe and the African countries which receive about 46 and 44 percent of the Senegalese migrants, respectively. North America accounts for only 7.5 percent of the Senegalese migrants. For historical reasons, France is the primary European destination with about 700,000 Senegalese migrants.³⁹ In 2005, the French Embassy in Dakar received 33,311 visa requests and approved 22,910 of them.⁴⁰ In recent years, Italy has also become an attractive destination for Senegalese migrants. In fact, with more than 47,762 migrants, Senegal

³³ The national poverty line was based on the consumption approach.

³⁴ The working age population is the number of people 10 years and over.

³⁵ Unemployed people are working-age people, who have not worked for at least an hour in the last 7 days and are actively seeking work.

³⁶ Majid, N. 2001, “*The Size of the Working Poor Population in Developing Countries*”, International Labour Organization, Employment Strategy Department, Geneva.

³⁷ Agence de Presse Sénégalaise (APS), 16 June 2005, “*Pas encore de chiffre exact sur le nombre de "modou modou"*”, <http://www.aps.sn/emmigration.htm>.

³⁸ Agence Nationale de la Statistique et la Démographie (ANSD), 2004, “*Enquête Sénégalaise Auprès de Ménages (ESAM) I'*”, <http://www.ansd.org>.

³⁹ Toure, C. 2003. “*Etude nationale sur l'exode des compétences au Sénégal.*” ILO, Dakar.

⁴⁰ Agence de Presse Sénégalaise (APS), 17 February 2005, “*Plus de 22000 visas accordés aux sénégalais en 2005, selon le consul général*”, <http://www.aps.sn/emmigration.htm>.

was among the top-10 countries with the highest number of migrants in Italy in 2003.⁴¹ Among the UEMOA countries, which account for one-third of Senegalese migrants in the African countries, Cote d'Ivoire (6.6 percent) is the preferred destination of the Senegalese migrants, followed by Guinea Bissau (3.2 percent) and Mali (2.4 percent). Other African countries with traditionally big Senegalese communities are Gambia, Mauritania, Gabon, and Egypt.

Skill-Intensive Senegalese Migration

Besides its magnitude, the Senegalese migration is characterized by its high skill content. In fact, a large proportion of Senegalese migrants is made up of highly-skilled professionals. A recent World Bank report placed Senegal in the top-30 countries with the highest rates of skilled migration.⁴² The report estimated that about 18 percent of Senegalese with tertiary education have migrated to OECD countries. This is higher than the average of 13 percent for Sub-Saharan Africa and 7 percent for the OIC member countries.

There are three broad categories of highly-skilled expatriates. Firstly, Senegalese students who stay abroad at the end of their studies are the primary source of brain drain. France remains the primary destination of Senegalese students. It is estimated that about 9,000 Senegalese students are currently in France and more than half of them would not return to Senegal at the completion of their studies.⁴³ A survey of PhDs holders from Sub-Saharan Africa trained in US and Canadian universities between 1986 and 1996 shows that 38 percent of the Senegalese PhDs did not return to Senegal. This is even higher than the Sub-Saharan average of 34 percent.⁴⁴ Furthermore, 56 percent of the Senegalese migrants in the United States have a tertiary education compared to the average of 40 percent for all migrants in the U.S.⁴⁵

Secondly, the recruitment of local technical school graduates by foreign companies is becoming a common practice in Senegal. This is particularly the case of the Polytechnic School (Ecole Supérieure Polytechnique) which offers training in Chemical Engineering and Applied Biology, Civil Engineering, Electric Engineering, Computer Science, and Mechanical Engineering. In 2005, two-third of the Polytechnic School graduates in computer science were recruited by foreign companies.

Finally, many experienced professionals, who have migrated in search of better opportunities abroad, constitute another important source of brain drain. As a result, Senegal is currently suffering from a shortage of human capacity in some areas, especially statisticians and IT experts.

⁴¹ Caritas, 2004, "*Immigration Statistical Dossier 2004*".

⁴² Docquier and Marfouk (2006). As Table 1.7 shows, initial estimates of highly-skilled migration rate from Senegal to OECD of 24 percent which were considered to be 'non reliable'.

⁴³ Wal Fadjri, 10 February 2006, "*Etudes en France: 1922 visas accordés au Sénégal*." <http://www.walf.sn>.

⁴⁴ Zeleza, P. T. 1998. "*African Labour and Intellectual Migrations to the North: Building New Transatlantic Bridges*."

⁴⁵ Ndulu, B.J., 2002, "*Human Capital Flight: Stratification, Globalization and the Challenges to Tertiary Education in Africa*," The World Bank, Washington, D. C.

Severely Affected Universities

The migration of the academic staff of the two state universities (Cheick Anta Diop University of Dakar (UCAD) and Gaston Berger University of Saint Louis (UGBS)) is a major concern echoed by government officials as well as international institutions. According to the Ministry of Education, UCAD and UGBS have lost more than 100 faculty members during the last decade.⁴⁶ Medical and applied sciences are among the most affected departments (Table 3.2). At the same time, the number of university students has significantly increased. At UCAD, for example, the number of students enrolled in different departments has more than doubled in the last decade while the number of faculty members staff increased by only 13 percent.

Table 3.2: Academic Staff Migration by Department during the Last Decade

Department	Migration of Faculty Members (Last 10 Years)	
	Number	Composition
Medicine and Pharmacy (UCAD)	29 including 5 professors	15 from Medicine, 7 from Pharmacy and 7 from Dentistry
Literature and Social Sciences (UCAD)	19 including 6 professors	5 from History, 3 from Geography, 3 from English, 2 from Philosophy, 2 from Literature, and 4 from other Social Sciences
Applied Sciences and Techniques (UCAD)	17 including 4 professors	13 from Mathematics, and 4 from other Applied Sciences
Law and Political Sciences (UCAD)	15 including 3 professors	
Economics and Management (UCAD)	10 including 1 professor	
Total UCAD*	90 including 19 professors	
UGBS	23	8 from Economics and Management, 7 from Applied Sciences and Techniques, 5 from Law and Political Sciences, and 3 from Literature and Social Sciences) 15 regular positions were vacant in November 2002.

Note: * Technical Institutes and Professional Schools are not included

Source: Ministry of Education, 2002

3.3 CONSEQUENCES OF BRAIN DRAIN

Loss of Substantial Investments in Human Capital

In the absence of significant natural resource endowments, Senegal has traditionally considered human capital as its primary asset, and has consequently invested substantial financial resources in improving the level of education and skills of its people. In 2005, more than 33 percent of Senegal's budget was devoted to education. This is even higher than the internationally recommended benchmark of 20 percent.⁴⁷

⁴⁶ Ministry of Education, 2002, "Rapport au Conseil Interministériel sur la fuite des cerveaux dans l'enseignement supérieur", Dakar.

⁴⁷ ANSD (2006).

A direct cost of the migration of highly-skilled individuals is the loss of investment in education. This loss corresponds to the investment in primary and secondary education, which lasts at least 13 years, and is even more important in the case of university professors whose training requires at least 20 years of investment. UNCTAD has estimated the annual cash value of an African skilled migrant at US\$184,000, based on 1979 prices,⁴⁸ and since 17 percent of Senegalese migrants in OECD countries are highly-skilled, the estimated loss is at least US\$ 30 billion annually.⁴⁹

Declining Quality of Tertiary Education

The Senegalese universities were known for the quality of the education and training they provided, but brain drain has eroded their capacity to provide quality training for current and future generations. In addition to the loss of costly investment, the migration of university professors has negative consequences on the quality of education provided by Senegalese universities. At UCAD, for example, the student-teacher ratio increased by 90 percent between 1995 and 2005 (see Table 3.3). Accordingly, student supervision and evaluation is insufficient, auditoriums are overcrowded, remaining professors lack motivation, research and publications have declined, and lectures are delivered by teaching assistants who do not always have the experience and the competence. The Literature and Social Sciences Department, which accounted for 43 percent of total enrolments in 2004, has the highest ratio with 107 students per teacher in 2004, followed by the Law and Political Sciences Department with 83 students per teacher. This has a direct consequence on the quality of education in these departments. In fact, the Literature and Social Sciences Department has the highest failure rate with 79 percent while the Technical Institutes and Professional Schools had failure rates between 23 percent and 1 percent in 1995.⁵⁰

Table 3.3: Number of Students and Academic Staff at UCAD

	1995	2005	Growth rate 1995-2005 (%)
Number of students	19,869	42,421	113.5
Number of faculty members	977	1,003	2.7
Student-teacher ratio	20	38	90.0

Source: UCAD

Dependence on Foreign Technical Assistance

Senegal is becoming more and more dependant on foreign technical assistance. It received US\$ 172 million in technical assistance in 2004.⁵¹ However, under current arrangements, this technical assistance could not replace the loss of human capital through brain drain. Technical assistance may have helped alleviate short-term capacity shortfalls but has often discouraged long-term efforts to build and retain local capacity in the public sector. In addition, for each foreign technical assistant, Senegal bears a direct cost, in terms of housing and tax exoneration. Therefore, it would be more cost-effective and sustainable if technical assistance

⁴⁸ Ndulu (2002).

⁴⁹ Docquier and Marfouk (2006).

⁵⁰ Samb, M., Diong, M., and B. Thiam. 1995. "Etude sur le suivi des diplômés de l'Université Cheikh Anta Diop de Dakar dans le milieu du travail." Dakar.

⁵¹ OECD. 2006. "DAC Online Database on Annual Aggregates." <http://www.oecd.org/dac/idsonline>.

arrangements were modified to allow and even encourage the use of beneficiary countries expatriates or reverse brain drain.

No Trade-Off between Remittances and Human Capital

Remittances amounted to about CFA franc 297 billion (US\$ 540 million) in 2005. It represented more than four times the net FDI inflows and 60 percent of ODA grants received by Senegal in 2000-2003. Furthermore, this official amount does not include the transfers made through informal channels and might reflect only one-quarter of the total transfers made by the Senegalese abroad. In fact, despite the increasing availability of official transfer services such as Western Union and Money Gram, most migrants use informal networks because they are less costly and do not require paperwork.⁵²

Remittances have a significant impact on the living standards of the family of the migrants. Seventy three percent of migrants send money to their families in Senegal, and 42 percent do so on a regular basis.⁵³ Most of these transfers are directed to household consumption. In fact, migrants' households tend to have higher consumption levels than the non-migrants households. For example, in Dakar, 85.2 percent of the migrants households have spending per head over CFA franc 225,000 (US\$ 320) compared to 69.2 percent of the non-migrants households. The same trend is observed in other cities and rural areas. Furthermore, investment from Senegalese migrants has significantly contributed to the growth of the construction sector. This sector grew by 13 percent in real terms in 2005, largely driven by investment from Senegalese expatriates. In some regions and communities, 90 percent of investments are made by Senegalese living abroad. However, in the case of Senegal, most of the remittances and investment is attributed to low skilled rather than highly-skilled migrants.⁵⁴ Therefore, the increasing role of remittances and migrants investment on economic growth and poverty reduction should not be viewed as a clear positive impact of brain drain itself.

Positive Impact on Trade, FDI, and Transfer of Technology

It is believed that brain drain creates a network effect that could help attract foreign investment, foster trade and transfer of technologies. In the case of Senegal, a global network of business between the Senegalese abroad and those remaining in the country has contributed to the flourishing of the trade sector. Senegalese abroad play the role of intermediaries in establishing commercial relations with foreign businesses and distributing foreign products in the local market and vice versa. In a context of imperfect information, these networks create a sense of trust and security, which are essential to commercial exchanges.

Regarding FDI, evidence shows that its impact on growth depends on the level of human capital in the host country. More specifically, FDI has a larger impact on growth than domestic investment when there is sufficient capability in the host country to absorb complex technologies that comes with it. In Senegal, the male population of 25 years and over has on average 0.64 years of secondary schooling.

⁵² Agence Nationale de la Statistique et la Démographie (ANSD), 2006, "*Situation Economique et Financière 2005 et Perspectives en 2006*", <http://www.ansd.org>.

⁵³ ANSD (2004).

⁵⁴ ANSD (2006).

This is more than the minimum stock of human capital (0.52 years) which is required to create the complementary effect between FDI and human capital.⁵⁵

3.4 CAUSES OF BRAIN DRAIN

Employment as Primary Motivation for Migration

The Senegalese labour market is characterized by high unemployment and underemployment, which have led to migration even in the absence of information on job prospects in labour-importing countries. Senegalese migrants hope to find employment that would enable them to support their family members. In this context, sending a family member abroad is often a collective decision of the family, which also contributes to its financing. This contribution is not seen as a gift but rather an investment or a loan that the migrant would reimburse accordingly.

Multifaceted Causes of Highly-Skilled Migration

Brain migration in Senegal is caused by a combination of several factors. First, the return to investment in human capital is relatively low in Senegal. This is attributable to the limited number of formal private sector jobs, and the inability of the public sector to develop recruitment and remuneration systems based on skill requirements and performances.

Private sector employment has significantly increased over the last fifteen years but still accounts for less than half of formal employment. Furthermore, about 80 percent of employment can be characterized as informal and, therefore, provides low wages and often no job security or benefits. The public sector is still a primary source of formal employment but its remuneration system does not discriminate on the basis of specialization or place a premium on technical skills. Therefore, the most talented civil servants are likely to leave for more appealing opportunities abroad. Furthermore, this creates a disincentive for students in local universities to pursue difficult but more developmental specializations. University graduates tend to have a background in the social sciences and lack technical skills. Finally, many Senegalese nationals who graduate from foreign universities do not return mainly because of the expectation that they would be unemployed or earn lower wages in Senegal. This is aggravated by the failure in the management of the scholarships programmes that does not systematically target the specializations needed by the country and safeguard against the non- return of beneficiaries.

Highly-skilled migrants are not solely motivated by financial gains but also by non-monetary reasons which affect job satisfaction and professional growth. In fact, the lack of necessary tools for professional practice, and the risks of professional atrophy or obsolescence are major contributing factors to the migration of the highly-skilled professionals. For example, besides financial causes, the migration of university professors is also caused by inadequate working conditions and professional growth. On the one hand, auditoriums are overcrowded, laboratories are in poor conditions and without equipments, and teaching materials are insufficient. Furthermore, universities are often perturbed by strikes of students and professors. On

⁵⁵ Borensztein, E., De Gregorio, J. and Lee, J-W. 1998, "How Does Foreign Direct Investment Affect Economic Growth?", *Journal of International Economics*, Vol. 45. pp 115 – 135.

the other hand, there is a career stagnation, which is partly due to lack of resources for research and publication and limited access to international scientific reviews. In addition, department reviews are not regularly published because of lack of financial resources, and workshops and seminars are no longer organized due to insufficient financial support. Furthermore, the slow promotion process creates a feeling of stagnation and frustration among faculty members. For example, only 240 out of the 1,040 faculty members of UCAD have tenure, and 40 percent of the faculty members retire without tenure. Finally, the absence of pressure and interaction with peers on the professional frontier increases the risk of professional obsolescence. All these factors reduce career perspectives and contribute to the migration of professors.⁵⁶

3.5 NATIONAL STRATEGY AND POLICIES

The strategy of the government towards the Senegalese expatriates has three components: management, protection, and promotion. Management consists of collecting information on the Senegalese living abroad: their number, location, and socioeconomic characteristics. Protection is provided through the embassies and consulates that are mandated to assist the Senegalese living abroad especially when they face legal, financial and social difficulties in the host countries. Finally, promotion activities mainly consist of encouraging and assisting expatriates in investing their savings in Senegal in order to contribute to revenue and employment generation.

Since 2002, the government has decided to give a more prominent role to the Senegalese diaspora in the development of the country. This strategic policy choice has been carried out through a set of measures to essentially strengthen institutional support provided to the diaspora and address their major concerns. Moreover, the government has decided to deal with the issue of brain drain by taking specific actions to retain the highly-skilled public servants such as statisticians and computer scientists. Finally, efforts have been made to address the root causes of the migration of university students, graduates, professors and researchers.

Addressing the Concerns of Migrants

Issues related to the Senegalese living abroad have traditionally fallen under the jurisdiction of the Ministry of Foreign Affairs. In August 2003, a new ministry, namely, Ministry of the Senegalese Expatriates was established to exclusively deal with issues related to the Senegalese diaspora. The main objective of the Ministry is to help the Senegalese diaspora become a real engine for the development of their country of origin. This includes facilitating the economic, social and cultural reinsertion of the expatriates through entrepreneurship and partnership with local residents.

The activities and actions of the Ministry are based on a consensual Action Plan adopted during a symposium which brought together representatives of various associations of expatriates, all ministries concerned, labour unions, and civil society in

⁵⁶ Ministry of Education (2002), and Dia, I., 2005, “*Déterminants, enjeux et perceptions des migrations scientifiques internationales africaines: le Sénégal*”, Global Migration Perspectives No. 3., April 2005.

July 2001. The Action Plan outlined a series of measures to address administrative, legal, social, economic and financial constraints faced by the Senegalese living abroad. Implementation has been slow but some measures to facilitate the economic reinsertion of migrants, such as easier access to land, are already in place. To speed up the implementation of the Action Plan, the Ministry is looking forward to forging partnerships with international and regional organizations such as organizations at OIC level.

Retaining Technical Expertise in Public Sector

To prevent the highly-qualified civil servants from migrating abroad or to shift to the private sector, the government has decided to grant a ‘*key position allowance*’ to computer scientists, statisticians, financials experts, etc..

Managing Tertiary Students Flows

As previously mentioned, student migration is the primary source of brain drain. Even the proportion of beneficiaries of government scholarships who return at the end of their education is low. After having neglected this form of brain drain for many years, the government has decided to address it through several measures:

- Scholarships are provided to all students who enrol for graduate studies in the two State universities. The objective is to encourage enrolment in masters and doctoral programmes that are available in local universities and, therefore, reduce the incentive for studying abroad and not returning home.
- The terms of the scholarships for doctoral studies provided by the French government were modified to request doctoral students to be sponsored by a Senegalese university and conduct two-third of their research in Senegal and one-third in France. The objective is to ensure that these doctoral students stay in touch with the Senegalese academic community and socio-economic realities, and return home at the end of their studies or research.
- There are plans for decentralizing tertiary education by establishing regional universities or colleges in the ten administrative regions of Senegal. These colleges would focus on providing short professional training programmes. They would contribute in decongesting the existing universities and retaining local skills for local development.

Reversing the Migration of Professors and Researchers

Improving the quality of tertiary education and research is one of the four main objectives of the Ten-Year Programme for Education and Training (2000-2010). More specifically, following a special cabinet meeting on brain drain in tertiary education held in December 2003, the government has adopted a set of measures.⁵⁷ One of the objectives of these measures was to improve the financial situation of the university professors by increasing their salary, allowing them to commercialize their expertise, and facilitating their access to housing. As a result, the salary of a

⁵⁷ Ministry of Education (2002).

university professor, has increased on average from CFA franc 400,000 (US\$ 575) per month in 2002 to CFA franc 650,000 (US\$ 1,180) per month in 2006.

The other objective of the measures was to improve the working conditions in the universities and the professional mobility of the university professors by creating a budget line for research in universities, establishing a Research Support Fund, replacing and increasing laboratory equipments, allowing professors to regularly teach in universities abroad, and reviewing the regulations governing the career of university professors.

3.6 INTERNATIONAL COOPERATION

There are ongoing or upcoming collaborative projects such as the TOKTEN, CODEV, and MIDA which seek to make use of Senegalese diaspora and contain the brain drain phenomenon through temporary return, virtual return using information technology, and economic return using investment.

Transfer of Technology Through Expatriate Nationals (TOKTEN)

The objective of the UNDP-funded TOKTEN project is to make the expertise of the Senegalese expatriates available to the local institutions that express the need. The beneficiary institutions are the national and local public institutions, the private sector, the local NGOs, and the civil society organizations.⁵⁸ Since the beginning of the project in 2002, a total of 60 experts have been selected; 31 experts in 2002-2004 and 29 experts in 2005. For obvious reasons, the two State universities (UCAD and UGBS) have been the major beneficiaries with 48 experts. It is noteworthy that the two experts selected for the National Telecommunications Company (SONATEL) were recruited at the end of their missions, the expert who helped establish the UCAD Foundation was appointed as its Director, and two experts were subsequently recruited as professors at UGBS.

The TOKTEN project has been successful but its resources are too limited compared to the needs. In May 2005, the Senegalese President openly expressed his interest in the project, in the presence of many development partners, and strongly urged them to financially support the project which is directly linked to the development strategy of his government. UNDP, which provided a total of US\$ 517,000 during 2002-2005 for the pilot phase that is ending in 2006, has decided to invite all donors to a roundtable in the second quarter of 2006 to discuss the future orientation of the project and its funding. UNDP hope that development financing institutions such as IDB Group would participate in the scaling-up of the project. The project coordination committee is also suggesting developing a framework for using the TOKTEN project in conducting technical assistance components of development projects. More specifically, instead of requiring the use of technical assistants from donor countries (in case of bilateral projects) or international assistants (for multilateral projects), the expertise of the Senegalese expatriates could be used through the TOKTEN. If carefully designed, this would contribute to reversing brain drain and reducing the dependence on foreign expertise.

⁵⁸ United Nations Development Programme (UNDP). 2001. "*Document d'approbation du projet TOKTEN.*" Dakar.

Co-development Initiatives (CODEV)

The CODEV project is based on the concept of co-development as “*a tool for mobilizing the initiatives, competencies and resources of the migrants in France who would like to contribute to the development of their country of origin*”. The project has the following three main components:

- *Make use of the highly-qualified diaspora:* Financing under this component includes: (i) short and medium term missions of Senegalese experts residing in France (around 150 experts per month); and (ii) acquisition of the equipment required by the missions.
- *Support migrants’ economic initiatives in Senegal:* The project will support migrants’ project in Senegal in the forms of technical assistance and capacity building during the design and the initial 12 months of the project.
- *Support local development in migrants’ region of origin:* The objective of this component is to support collective development project that are initiated by the migrants with the participation of the local populations.

The funding for the initial three years of the project has been provided by the French government for CFA franc 1.64 billion (US\$ 3 million) and the Senegalese government for CFA franc 149 million (US\$ 0.27 million). The Technical Assistance Department of the Ministry of International Cooperation, which is the coordinator of the project, has organized a workshop on February 15, 2006 in Dakar to identify the needs of local organizations and the available Senegalese experts living in France.⁵⁹

Migration for Development in Africa (MIDA)

MIDA is a programme designed by the IOM to help African countries benefit from the competencies of African expatriates. MIDA is a generic strategy with various configurations depending on country specific needs. It also takes into account the lessons learnt in previous programmes such as the Return of Qualified African Nationals (RQAN). For Senegal, Italy has financed a MIDA project for Euro 600 million. The project is being finalized and will be launched in 2006.⁶⁰ The project objective is to contribute to the socioeconomic development of Senegal through the identification and transfer of competences and financial resources of Senegalese expatriates in Italy, and the promotion of partnerships between the host and sending communities. More specifically, the project will:

- i) Provide advisory services, training, and assistance to Senegalese expatriates who are willing to :
 - Use their expertise, skills, personnel network, and financial resources to develop projects for the development of their communities in Senegal;
 - Be involved in sustainable development project that are sponsored by Italian local institutions (in partnership with the Italian private sector);

⁵⁹ Ministry of International Cooperation, 2006, “*Termes de références de l’atelier d’identification et de programmation des besoins en experts sénégalais hautement qualifiés établis en France*”, <http://www.senexpertise.gouv.sn> or <http://www.codev.gouv.sn>.

⁶⁰ International Organization for Migration (IOM). 2006. “*Mobilisation des Sénégalais de l’Extérieur et de leurs communautés d’accueil en Italie.*” Dakar.

- Put their savings in financial institutions that would channel them to investments in their country of origin; and
 - Benefit from credit programmes for SMEs provided in the Commodity Aid Programme;
- ii) Identify and promote synergies with viable development projects initiated by Italian local institutions, NGOs, and private sector with a decentralised cooperation and co-development approach.
 - iii) Develop partnerships with financial institutions to attract and channel migrants' remittances, and promote among financial institutions (Italian and Senegalese) a micro-credit mechanism that supports the initiatives of the Senegalese migrants in Italy.

With at least 18 percent of its highly-skilled citizens living abroad, Senegal suffers from a severe loss of human capital as a result of brain drain. This phenomenon affects various sectors as well as different groups of people. From Senegal's perspective, brain drain is, on aggregate, a negative externality, which drags down productivity and private sector development, and therefore lowers employment and economic growth. The direct consequences of brain drain are the loss of investment in education, the decline in the quality of services provided and particularly the quality of education and training, and the dependence on foreign technical capacity. The newly established Ministry of Senegalese Expatriates has adopted an Action Plan for addressing the major concerns of the expatriate community. All these initiatives show that Senegal, in collaboration with the international development community, is taking significant steps towards addressing the push factors that were identified as immediate causes of brain drain.

CHAPTER FOUR CONVERTING BRAIN DRAIN INTO GAIN IN PAKISTAN

For the last five decades, the migration of highly-skilled Pakistanis has been a constant phenomenon. According to the available data, Pakistan is classified as moderately affected from brain drain. However, the highly-skilled migration rate increased by more than 50 percent from 6.1 in 1990 to 9.2 in 2000 (see Tables 1.7 and 1.8). Pakistan is one of the member countries which is considered to have benefited from the migration of its people through remittances and involvement of its eminent expatriate professionals.

4.1 MIGRATION DRIVEN BY POVERTY AND UNEMPLOYMENT

The causes of migration of Pakistanis are not very different from those for other member countries. Principally, it is the prevalence of poverty, unemployment and underemployment which causes migration. Therefore, the migration of Pakistanis is driven mostly by economic reasons. However, in the case of the migration of highly-skilled, there are some other factors which induce migration such as a perceived lack of opportunities for different professionals to develop professionally and low salary scales.

Pakistan's social economic indicators lag behind some other developing countries with same level of per capita income.⁶¹ In 2004, Pakistan's population was estimated at 152 million with an annual growth rate of 2.4 percent.⁶² The latest figures estimate the labour force to be around 46.82 million of which 43.22 million is employed and 3.6 million is unemployed and unemployment rate stands at 6.8 percent.⁶³ Labour force participation rate is 30.4 percent.⁶⁴ The unemployment rate is highest among the 15-19 age group (around 13.2 percent) and lowest in the 35-39 age group (2.9 percent).⁶⁵ The unemployment for people with tertiary education (Bachelor degree and above) is 6.5 percent.

Poverty remains a serious concern in Pakistan. Poverty rates, which had fallen substantially in the 1980s and early 1990s, started to rise again towards the end of the decade.⁶⁶ A large segment of the population lives in poverty. According to the survey conducted in 1999, about 17 percent of the population was living below US\$ 1 a day and 73 percent of the population was living below US\$ 2 a day.⁶⁷ More importantly, differences in income per capita across regions have persisted or widened. Poverty varies significantly among rural and urban areas and from province to province, from a low of 24 percent in urban Sindh to 51 percent in rural Sindh. Underemployment, together with unemployment in Pakistan is very significant.

The effects of poverty and underemployment are reflected in the migration realities of the country. Two studies conducted in 1986 and 1987 in Pakistan showed that the migrants belonged to the low or lower-middle income groups and not from

⁶¹ World Bank (2006).

⁶² IDB (2005).

⁶³ Government of Pakistan, Finance Division, 2005, "*Pakistan Economic Survey 2004-2005*". Islamabad: Printing Corporation of Pakistan Press.

⁶⁴ Ibid

⁶⁵ Government of Pakistan, Statistics Division, 2004, "*Labour Force Survey 2003-2004, Twenty Fourth Issue*" (online), Available from: http://www.statpak.gov.pk/depts/fbs/publications/lfs2003_04/lfs2003_2004.html.

⁶⁶ World Bank, 2006

⁶⁷ Ibid

the poorest sections.⁶⁸ Another study based on a survey of 300 migrant and 300 non-migrant households in a high and a low out-migration district in Pakistan showed that while income levels, asset base, level of education, and access to information regarding employment opportunities abroad, recruiting agencies and migration networks were the main pre-conditions for migration, this was true for households falling within a certain range or band of socio-economic strata determined primarily by their asset base.⁶⁹

The households in high migration district, owned small subsistence agriculture farms and were heavily dependent on non-farm employment for their livelihood, whereas the households in low migration district, owned large agricultural farms depending mostly on agricultural income. The migrant households in high migration district were in a vulnerable situation of struggling to keep at the current levels of their livelihoods and hence migration provided them the opportunity to improve their livelihoods and asset base considerably.⁷⁰

Various studies have shown that underemployment in the agricultural and services sector in Pakistan is high.⁷¹ The migration from low-skilled to semi-skilled people from the agricultural sector is a reflection basically of underemployment in this area.

Factors Explaining Migration of Highly-Skilled

The migration of highly-skilled Pakistanis is motivated mainly by low salary scales and other perceived lack of opportunities in their professional careers. Specifically, the motivations to migrate among the highly-skilled people include comparative monetary benefits, lack of research and intellectual development infrastructure, quality of life, perception of better prospects for their children, and conducive environment.

One of the important factors behind the acceleration of brain drain is low income at home. Naturally, skilled and educated people expect reward of their hard work of studies and labour, but the absence of it make them feel disappointed. For instance, the value placed for a scientist with an advanced level degree in Pakistan is Grade 17, with a salary even insufficient to meet the basic requirements of a family. This low salary scale is often regarded as the major factor driving migration among this group to the developed countries with better incentives and opportunities for educated people.

In addition to low economic incentive, promotion process in Pakistan is considered to be rather slow. In the case of Pakistan, professionals who are going abroad also consist of a significant number of government servants and those belonging to the scientific community. These are the people who complain about the general attitude of society towards professionals, particularly scientists.

⁶⁸ Azam, F., 1991, "Labor Migration from Pakistan: Trends, Impacts and Implications", *Regional Development Dialogue* 12(3): 53-71.

⁶⁹ Azam, F. 1998, "International Migration Dynamics in High and Low Migration Districts of Pakistan", In *Emigration dynamics in developing countries*, edited by R. Appleyard, 147-175. Vermont: Ashgate.

⁷⁰ Ibid.

⁷¹ Gazdar, H., 2003, "A review of migration issues in Pakistan", In: *Migration, Development and Pro-Poor Policy Choices in Asia* . June 2003.

An important determinant of the international migration of scientists and technology experts is the inadequate availability of resources to conduct research and higher salary levels for researchers in recipient countries. At present, the provision of required resources for scientists such as, a research infrastructure and research grants is very poor. This, among other reasons, is a result of an average annual expenditure on education from 1997-98 to 2001-2002 of a mere 1.7 percent of the GDP.

4.2 MIGRATION HISTORY AND RECENT TRENDS

Migration History

The colonial past paved the way for Pakistanis to migrate into Britain which was in need of unskilled labour for reconstruction of its infrastructure after World War II. Therefore, the first wave of migration of Pakistanis was to United Kingdom which started in the late 1950s. These Pakistanis who entered into Britain took up unskilled jobs as there was the demand for such jobs. This migration started slowly and peaked in 1961 and 1962. At the same time, during the middle of the 20th century, there were far less restrictions from source countries as compared to now on traveling abroad, especially towards the United States and Europe. This flexibility in travel worldwide and demand in the West attracted a sizable number of people from Pakistan, both skilled and unskilled, to settle abroad.

This migration trend to the USA and Europe continued well until the 1970s which saw the oil boom in the Gulf region and North Africa. A massive need thus arose for both skilled and unskilled people. Pakistanis also availed this opportunity and migrated in their thousands to these countries. Highly educated and skilled/trained workers who had been migrating to the West had now the option to migrate to these oil-producing countries. Migration to the Gulf region took off in the early 1970s. By the early 1980s, some 2 million Pakistanis had migrated there. Initially, demand was for construction workers; later it switched to workers with skills in sectors such as transport, trade, social infrastructure and security services. Unlike migrants to developed countries, those in the Gulf included large numbers of uneducated people from rural areas; their remittances home directly impacted on poverty reduction.⁷²

Recent Migration Trends

Although systematic statistical information on migration in general and migrants in particular is not available, the government has reasonably reliable figures on migrants of all categories. There are two ways in which Pakistanis leave their country i.e., they either go to a foreign country for employment or they go as students. People proceeding abroad for employment have to register themselves with the official agency called Bureau of Emigration and Overseas Employment (BE&OE) of Pakistan. The government also has a state-managed agency, namely, Overseas Employment Corporation (OEC), which promotes employment opportunities for Pakistanis abroad and supplies manpower to foreign countries. BE&OE is the official source of statistics on Pakistanis leaving abroad for employment. Table 4.1 shows the stock of Pakistani migrants by region in 2004.

⁷² Gazdar (2003).

Table 4.1: Stock of Pakistani Migrants by Region, 2004

Region	Migrants	
	Number	Percentage
Africa	21,720	0.6
America (USA, Canada)	850,554	22.7
Asia and Far East	60,728	1.6
Australia and New Zealand	18,000	0.5
Europe	1,093,573	29.2
Middle East	1,701,804	45.4
World Total	3,746,379	100.0

Source: Estimated figures provide by Pakistani missions abroad to the Ministry of Labour, Pakistan

As shown in the above table, Middle East countries account for more than 45 percent of total stock of Pakistani migrants, while OECD countries constitute the main destination with more than 52 percent of the total stock. However, the above figures do not include those Pakistanis who went abroad as students and did not return afterwards. According to some estimates of the overall stock of expatriates, there are around 7-8 million Pakistanis living abroad.

Concerning the annual outflows of Pakistani migrants for employment purpose, these have averaged 123,651. As indicated in Table 4.2, the total outflows fluctuated during the period 1995-2004. Similarly, the outflows to Middle East countries followed the same pattern with a share exceeding 96 percent during the same period.

Table 4.2 : Regional Trends of Migration Outflows from Pakistan, 1995-2004

Year	Outflows				
	Number		Share (%)		
	Total	Middle East	Middle East	Asia	Europe
1995	122,620	116,212	99.0	--	--
1996	127,784	118,840	99.3	--	--
1997	153,929	147,885	99.2	--	--
1998	104,044	100,325	99.6	--	--
1999	80,496	76,708	98.2	--	--
2000	110,136	104,463	96.9	1.3	2.0
2001	130,041	123,680	96.0	0.5	1.6
2002	149,127	144,592	98.0	0.4	0.8
2003	215,443	209,427	97.8	1.2	0.6
2004	174,864	168,077	96.7	1.5	1.3

Source: Bureau of Employment and Overseas Pakistanis, Pakistan

Generally, the available statistics show that while outflows to OECD countries are relatively stable, outflows to the Gulf countries tend to fluctuate from year to year. For example, the number of Pakistani workers who proceeded to Kuwait increased from 440 in 2001 to 12,087 in 2003 and then declined to 6,895 in 2005. Likewise, whereas 18,421 Pakistani workers proceeded to U.A.E in 2001, the number increased to 61,329 in 2003 and declined to 47,441 in 2005. About 90 percent of workers proceeding for employment abroad to the Gulf countries are from semi-skilled to low-skilled category. Table 4.3 shows the yearly outflows to the Gulf countries for the period 2001 to 2005.

Table 4.3: Migration Outflows of Pakistanis to the Gulf Countries, 2001-2005

Countries	Outflows					
	Year					Total
	2001	2002	2003	2004	2005	
U.A.E.	18,421	34,113	61,329	65,786	47,441	227,090
Bahrain	1,173	1,022	809	855	1,107	4,966
Kuwait	440	3,204	12,087	18,498	6,895	41,124
Oman	3,802	95	6,911	8,982	5,493	25,283
Qatar	1,633	480	367	2,383	1,005	5,868
Saudi Arabia	97,262	104,783	126,397	70,896	23,379	422,717

Source: Bureau of Emigration and Overseas Employment, Pakistan

The outflows of Pakistani migrants, especially those of the low-skilled labour, are subject to many external factors, such as, international demand which in turn depends on the global economic conditions, the unemployment situation in Pakistan and the policies of labour-importing countries.

Pakistan migration data is also classified according to skills levels into highly-qualified, highly-skilled, skilled, semi skilled and unskilled. Table 4.4 below shows that the outflow of highly-qualified migrants increased from 1,292 in 1995 to 3,291 in 2004. However, the share of highly-qualified migrants remains low at around 1.9 percent in 2004. Migrants in this category include those with either minimum tertiary education (a bachelor degree) or very high level of tertiary education, such as Master holders, PhD. holders and very specialized education. Similarly, from 1995 to 2004, the outflow of highly-skilled Pakistanis has been on the rise from 7,681 to 15,557. In 2004, the share of highly-skilled migrants was around 8.9 percent of total migration outflows. These people have tertiary education but may or may not hold very advanced tertiary education. Migrants in this category include secretaries, mechanics, nurses, etc..

Table 4.4 : Migration Outflows of Pakistanis by Skills Category, 1995-2004

Year	Outflows (Number)					
	Highly- Qualified	Highly- Skilled	Skilled	Semi Skilled	Unskilled	Total
1995	1,292	7,681	61,177	3,317	43,581	117,048
1996	1,794	10,168	59,816	5,385	42,466	119,629
1997	1,669	9,292	76,599	3,616	57,853	149,029
1998	2,024	8,230	50,122	1,925	38,405	100,706
1999	2,699	13,860	31,678	1,118	28,738	78,093
2000	2,999	10,292	54,110	2,125	38,207	107,733
2001	3,155	10,846	64,098	2,768	47,062	127,929
2002	2,618	14,778	74,968	3,236	51,822	147,422
2003	2,719	22,152	101,713	4,601	82,854	214,039
2004	3,291	15,557	77,033	3,840	74,103	173,824

Source: Bureau of Emigration and Overseas Employment, Pakistan

By professional category, engineers constitute the largest segment in the total outflows of highly-qualified and highly-skilled migrants during the period 2001-1005. As can be seen from Table 4.5, besides engineers, Pakistan has also experienced important losses of managers, accountants, doctors and nurses.

Table4.5 : Highly-Qualified and Highly-Skilled Pakistani Migrants by Professional Category, 2001-2005

Categories	2001	2002	2003	2004	2005	Total
Engineers	1,227	861	821	880	719	22,846
Doctors,	616	506	402	431	406	6,830
Nurses	341	406	350	342	253	5,729
Teachers	206	254	255	289	128	5,782
Accountants	372	341	443	613	446	13,683
Managers	734	656	798	1,078	998	10,398
Computer/Programmers/Analysts	583	404	354	371	345	3,580

Source: Bureau of Emigration and Overseas Employment, Pakistan

4.3 CONSEQUENCES OF MIGRATION OF HIGHLY-SKILLED PAKISTANIS

According to the official standpoint, the present the level of brain drain in Pakistan is not alarming. The consequences of the highly-skilled migration of Pakistanis for the government are, therefore, mostly positive and include gains from remittances and knowledge and skills transfer through eminent Pakistani expatriates.

Gains from Remittances

Manpower is the second biggest source of foreign exchange earnings for the country. Remittances from nationals working abroad totalled around US\$ 53 billion during the period 1972-2004. During the mid-1980s, they represented about 9 percent of GDP and were considered as "*an important factor in allowing Pakistan to sustain the highest growth in the South Asian subcontinent through most of the 1970s and 1980s*".⁷³ This share has declined over the years and accounts for around 4 percent of GDP now. In Pakistan, although inequalities increased between migrant and non-migrant households, the distribution of remittances appears to have spread benefits to a greater range of groups and areas. As a result, the government of Pakistan is focusing on increasing the flow of remittances from its migrants and channelling it to productive resources.

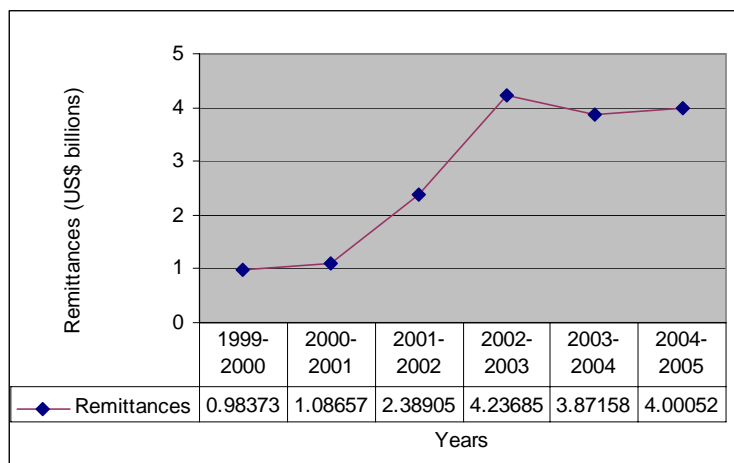
Trends in Remittances

Since 2000, remittances have been steadily increasing for Pakistan as can be seen from Figure 4.1. They increased from about US\$ 1 billion in the fiscal year 1999-2000 to around US\$ 4 billion in 2004-2005. By region, there was a nine-fold jump in remittances from the United States in financial year 2002/2003 compared to 2000/2001. The share of remittances from migrants in the United States increased from 13 percent to 30 percent of total remittances during this period. Although

⁷³ Addleton, J. S., 1992, "*Undermining the Centre: the Gulf Migration and Pakistan*", Karachi, Oxford University Press.

remittance from the Middle East region increased 2.7 times during the same period, there was a decline in its share in the total annual remittances from 68 percent to 45 percent. The remittances from European region, mostly from the United Kingdom, more than tripled during this period.

Figure 4.1: Trends in Remittances, 1999-2005



4.4 MIGRATION POLICIES AND PROGRAMMES

General Policy

Pakistan has encouraged international migration for two main reasons: it reduces unemployment and significantly adds to national income through cash remittances. Most government policies have, therefore, focused on encouraging and facilitating emigration for employment, providing protection to migrants and their families against hazards and exploitation, and providing incentives for facilitating flow of remittances. This policy is manifested clearly in the objectives of the BE&OE which are:⁷⁴

- Foreign Employment oriented emigration policies,
- Prosperous Pakistan by maximizing transparent foreign employment for Pakistani work force through legal channel,
- Protection of rights of migrant workers,
- Maximization of Manpower Export to lessen the pressure of unemployment at home, and
- To enhance home remittances to meet the deficit in balance of payment and development of National project.

The migration policy regimes followed by Pakistan did not have poverty reduction or improved livelihoods of migrants as one of their explicit objectives. In fact, the country development plans and poverty reduction strategy papers do not treat the migration phenomenon as part of the development challenge. Migration policy, therefore, has largely stood apart from the overall development framework, despite its

⁷⁴ BE&OE website :www.be&oe.gov.pk.

strong development and poverty reduction implications for individual migrants and the economy.⁷⁵

Migration Management

Pakistan has a “regulated” migration policy regime in which the government instructions and legislation on migration define standards and procedures to be followed by private recruiting agents for overseas recruitment or by individual migrants proceeding abroad on their own. However, besides the private recruiting agents, there is also a government recruiting agency, the Overseas Employment Corporation (OEC), which is mandated to find and promote employment opportunities for Pakistanis to other countries. Pakistan, therefore, follows a mix of the “regulated” and the “state-managed” models.⁷⁶

The emigration setup is a well functioning system constituted of an Emigration Ordinance, a Ministry and various other specialized institutions. Emigration Ordinance 1979 is the basic framework of emigration policies and rules. In line with this ordinance, the Ministry of Labour and Manpower & Overseas Pakistanis is the government body mandated to deal with matters relating to migration and welfare. The ministry achieves its objectives through its various organs/departments such as BE&OE, OEC and Overseas Pakistanis Foundation (OPF) which in turn perform different functions and activities.

Ensuring Migrant’s Welfare

The OPF is a foundation specially established to ensure the welfare of migrants and their families. OPF aims to ensure the migrants of their safety and comfort and thus allay their discomfort associated with migration. OPF is a good example of how migration can be made to benefit both the migrants and the country. It has introduced several welfare initiatives for the migrants, such as, looking after their families by opening schools and housing complexes in areas where migration is quite high. It also takes care of the migrants who may also be citizens of another country by providing them with expert advice and services while they are abroad and when they return home. It also has its representatives in various labour-importing countries who deal with the grievances of Pakistanis. This way, the government ensures that the migrants feel relatively at ease when they migrate and can feel a bondage with their country after long time too.

Involving Eminent Expatriates in Knowledge and Skills Transfer

The desire of the Government of Pakistan to increase the standard of its higher education and benefit from its highly-qualified people settled abroad is reflected in the mandate, policies and programmes of the Higher Education Commission (HEC). Under the aegis of HEC, foreign faculty members of Pakistani origin are encouraged to come and teach and transfer their expertise to the teachers and researchers in Pakistan and research institutes. To this end, HEC has launched a number of schemes to offer both permanent and short term employment to foreign faculty members in different public universities of Pakistan. These programmes help in skills and knowledge transfer where those prominent scholars who have gained skills, tools and

⁷⁵ Azam (2005).

⁷⁶ Ibid.

intellectual capacity from teaching and research abroad to transfer their skills to Pakistani teachers and students. In short, the phenomenon of brain drain can be reversed and turned into an advantage if mechanisms are put in place to benefit from the foreign trained professionals. According to HEC, the response to their programmes has been very good though no accurate data on the return of these faculty members are available. Foreign qualified Pakistanis with PhDs and post-doctorate have returned on both permanent and short term basis thus elevating the standard of higher education in the country.

Transfer of Knowledge Through Expatriate Nationals (TOKTEN) Programme

In order to benefit from the expertise of eminent Pakistani professionals settled abroad such as, scientists, doctors, and academicians, UNDP funded TOKTEN is being implemented with the following main objectives:

- To transfer latest know-how and cutting-edge technology from the developed countries to Pakistan through our Pakistani professionals working in the developed world,
- To reduce the impact of brain drain through short duration visits of expatriate consultants to Pakistan,
- To create a system whereby outstanding Pakistani experts serving abroad are enabled to make an effective contribution to our technical assistance needs, and
- To benefit from the advice of the experts while they are abroad through correspondence and supply of pertinent technical literature.

During the last 23 years of TOKTEN implementation in Pakistan, more than 700 expatriate experts have completed their assignments under the programme. These experts have been instrumental in building the capacities of private and public institutions through trainings, workshops, symposia, curriculum development, the introduction of new courses and donations of essential books and equipments.

Since the introduction of TOKTEN up to 2003, 834 consultancies had been carried out in various fields of specialization i.e., 257 in Applied Sciences, 204 in Medical Sciences, 192 in Natural Sciences, 132 in Social Sciences and 49 in Agricultural Sciences. Out of these, 427 consultants came from USA, 145 from Canada, 116 from U.K., 24 from Germany and 18 from Australia and 104 from rest of the world.

Recently, the National Talent Pool (NTP) has prepared a Project Document entitled Visits of expatriate Pakistani consultants for short duration assignments in Pakistan in line with UNDP funded Programme TOKTEN which has been approved by the Government. In view of the importance of TOKTEN Programme and its usefulness, it is planned to enhance the number of visiting overseas Pakistani Consultants under Programme with Government funding by 30 - 35 per year.⁷⁷

Pakistan's experience with the migrants workers has been a positive one. While it recognizes that brain drain is not a desirable outcome, it has focused on

⁷⁷ National Talent Pool of Pakistan's website

converting brain drain into gain by adopting policies and programmes aimed at countering the negative impact of the loss of human capital. Although the existing policies and programmes need further improvement, this experience may be shared by other labour-exporting member countries.

CHAPTER FIVE

ENHANCING GAIN FROM BRAIN DRAIN IN EGYPT

Several accounts from the Holy Quran informed us that Egypt was a significant destination for migrants.⁷⁸ Also, the widely quoted comment of Cleland that “*Egyptians don’t migrate*”⁷⁹ remained broadly true till the mid 20th century. The small-scale emigration that took place in the mid 1960s comprised exclusively of highly- skilled individuals, notably teachers, mainly to Iraq and the Gulf states. Also, during the 1960s emigration was authorized for the purpose of post-graduate study principally in the US and Europe. Many of these students did not return. Combined with other forms of highly-skilled migration, this raised concerns at the loss of skilled individuals. Studies of international emigration in the 1960s were sponsored by the Government to explore the potential negative effects of brain drain. Most of these studies reached neutral or cautiously positive conclusions as to the impact of emigration.⁸⁰

As shown earlier in Table 1.7 in Chapter 1, the highly-skilled Egyptians migration rate to OECD countries was 5.3 in 1990 and 4.2 in 2000. With these rates, Egypt was classified as a country with low level of brain drain (Table 1.8). In this context, the aim here is to examine the situation of migration of highly-skilled Egyptians, shed more light on intra-migration in member countries, highlight the causes and consequences of brain drain, and discuss policies and strategies.

5.1 DRIVING FORCES BEHIND BRAIN DRAIN IN EGYPT

The macro-structure of the economy plays a key role in inducing people to migrate. Rigid employment structure and limited job opportunities, low wage levels and economic prospects are factors that may help explain migration intensity. Egypt continued to have high unemployment rate coupled with over population and increasing number of university graduates. Egypt is characterized by rapid population growth. In less than 30 years, Egypt’s population had almost doubled. As of January 2003, Egypt’s population was about 70.5 million.⁸¹ The annual population growth rate is around 2 percent. Associated with rapid population growth is a high level of unemployment. The Central Agency of Public Mobilization and Statistics (CAPMAS) estimates unemployment at about 10.3 percent in 2004, which is slightly lower than the previous year due to increase in labour force by 2.6 percent.⁸²

Among other macro-structural push factors for migration are the existence of bureaucratic civil service structure (administrative overlapping, lack of sufficient financial resources), and the existence of an inadequate educational system. Most notable push factor for researchers and university staff is the lack of resources for

⁷⁸ “Then when they entered the presence of Joseph, he provided a home for his parents with himself, and said: ‘Enter ye Egypt (all) in safety if it please Allah.’” Quran, XII: 99

⁷⁹ Cleland, W. 1936. *The Population Problem in Egypt: A Study of Population Trends and Conditions in Modern Egypt*. Lancaster, Pennsylvania: Science Press Printing Company, p. 36.

⁸⁰ Kuraitem, A. and M. Hamdi 1966. *Brain Drain from the United Arab Republic*. Cairo: Department of Missions, Ministry of Higher Education. In fact this study was the first in Egypt to use the term ‘brain drain’

⁸¹ Central Bank of Egypt, *Monthly Statistical Bulletin*, February 2006. This figure is likely going to increase in the coming census in September 2006.

⁸² CAPMAS. 2005. *The Statistical Yearbook 2004*. Cairo: CAPMAS

scientific research (funding and provision of equipped laboratories), an unfavourable salary system and promotion system.⁸³

There also exist some macro-structural pull factors at destination countries which were mentioned earlier in Chapter Two. When looking at two sets of countries of destination for Egyptian migrants, OECD countries and Gulf countries, one finds that Gulf countries, and more generally Middle East and North Africa (MENA) countries, are preferred countries of destination and the reason appears to have more to do with historical migration legacies. On the other hand, Egyptian migration to OECD countries is mostly permanent due to open immigration policies. USA, Canada, Australia and UK are preferred destinations

Some of individual characteristics such as the migrant's age at the time of emigration, level of education, and occupation also play a role in the decision to migrate. The 1986 CAPMAS survey indicated that Egyptian migrants were exclusively males (97 percent). The age group was between 20 and 44 years old in 89 percent of cases.⁸⁴ Recent surveys during 2000 and 2003 confirm the same trend.⁸⁵ With respect to level of education, studies and survey reports have shown that the majority of migrants had at least secondary education. Table 5.2 for permanent migrants and Table 5.4 for temporary migrants to Arab countries confirm the same trends. This shows that migration depends on selectivity based on educational attainment.

5.2. TYPES OF BRAIN DRAIN IN EGYPT

To better understand the experience of Egypt, a typology of highly-skilled migration comprising the brain drain as well as brain export (intended and mostly temporary brain drain) is adopted.⁸⁶ Both types are manifested throughout migratory history of Egypt. Distinction here is made between permanent and temporary brain drain which are reflected upon below.⁸⁷

Permanent Brain Drain

The mid-1950s witnessed the beginning of Egyptian awareness of the role of migration as a labour distress mechanism for the increasing over-population. However, until mid-1966, the state imposed restrictions on the migration of technicians and skilled workers. After some of those restrictions were eased, a wave

⁸³ These factors are shared in many studies and reports. For instance, The First Conference for the Development of Scientific Research System. May 2005. Ministry of Higher Education, Egypt; Zohry (2003); Talani et al. (2003).

⁸⁴ CAPMAS. 1987. *Housing and Population Census 1986*. Cairo: Central Agency for Public Mobilization and Statistics.

⁸⁵ For example, Zohry (2003) reported the Eurostat survey of 1,943 Egyptian households conducted by CAPMAS and Cairo Demographic Center in 2000. Talani et al's. 2003 survey of 103 potential migrants reveals the same trend.

⁸⁶ The brain exporting country receives in exchange for brain, remittances continuously as long as the citizen remains migrant. This is done following Ghosh, 1999 "Brain Drain", pp. 41-44. In *Encyclopedia of Political Economy*, edited by P.A. O'Hara. London: Routledge.

⁸⁷ There are no agreed-upon standard phases of the Egyptian migration. For instance, Saneya Saleh (1990) divided the historical trends to four phases; 1955-1961, 1961-1967, 1967-1973 and 1973-1982. While Ayman Zohry (2005) divided it to five phases starting with the phase before 1974, the expansion phase (1974-1984), the contraction phase (1984-1987), the deterioration phase (1988-1992) and recent phase (1992-2004)

of permanent emigration started. Furthermore, after the war of 1967 most graduate students with scholarships, or studying at their own expenses, were tempted to stay abroad due to unfavourable economic conditions at home. This was the start of the “*Egyptian brain drain*”.⁸⁸

According to CAPMAS 2002 estimates, the total number of permanent Egyptian migrants in non-Arab countries was about 1.4 million. The breakdown of this figure is shown in Table 5.1. Majority of permanent Egyptian migrants are concentrated in seven countries: USA, Italy, Canada, Australia, United Kingdom, France and Germany which represent 92 percent of total permanent migration.

Table 5.1: Stock of Permanent Egyptian Migrants by Receiving Country, 2002

Country	Number	%
USA	635,000	47.0
Canada	141,000	10.0
Australia	80,350	6.0
United Kingdom	74,764	6.0
Germany	40,265	3.0
Italy	210,000	15.0
France	70,000	5.0
Greece	50,000	3.7
The Netherlands	20,000	1.5
Austria	18,000	1.3
Switzerland	12,000	0.9
Sweden	3,510	0.2
Total	1,354,889	100.0

Source: Emigration Sector – Ministry of Manpower and Emigration

United States is the favourite destination for permanent Egyptians migrants; it accounts for 46 percent of total stock of permanent Egyptians migrants. Table 5.2 shows the distribution of Egyptians who migrated between 2000 and 2004 classified according to academic qualifications. Italy accounts for the largest number, 760 of which 525 have high school or less qualification (most of these workers notably in agriculture. See Table 5.6). USA attracts the highest number of the highly-qualified; 294 migrants out of 424 have university degree, of which 9 have PhD degree and 21 have Master degree. Out of the total migrants during this period USA attracts 30 percent of those with PhD degree and 53 percent of those with Master degree.

Temporary Brain Drain

Temporary migration takes two forms. One is through individual contracts and the other is via official secondment through government authorities on the basis of bilateral contracts. Secondment of Egyptian school teachers to Iraq and Gulf started earlier and continued although with lower rates at present. The huge expansion in temporary migration took place after 1973 war, which coincided with development projects in Arab oil-producing countries. Many Egyptians migrated to the Gulf countries during this period not only construction workers but also engineers and medical doctors. Also this period witnessed secondment of university lecturers. It was required by the government at that time that Egyptian expatriates transfer a minimum of 10% of their remittances through official exchange rate. This can be viewed as brain export of qualified Egyptians. Besides secondment of university lecturers

⁸⁸ Zohry (2005). The issue of brain drain was discussed in Egypt even earlier in 1966.

individual contracts of university lecturers increased during this period as well. A considerable proportion of the seconded lecturers didn't return to Egypt after the end of their secondment period. Many consider this as a brain drain and had highlighted the negative impact of this exodus of lecturers on the quality of education in Egypt.⁸⁹

Table 5.2: Distribution of Permanent Egyptians Migrants according to Educational Attainment, 2000-2004

Year	Educational Attainment	Country					Total
		USA	Canada	Australia	Italy	Other Countries	
2000	PhD	1	5	-	-	2	8
	Master	5	2	-	-	1	8
	Bachelor	46	53	12	25	12	148
	High school or less	27	16	3	71	7	124
	Without	1	2	-	8	4	15
2001	PhD	3	1	-	-	-	4
	Master	5	3	-	-	-	8
	Bachelor	81	63	13	74	9	240
	High school or less	29	10	1	209	7	256
	Without	5	1	-	15	1	22
2002	PhD	2	4	-	-	2	8
	Master	6	1	-	-	1	8
	Bachelor	49	54	11	74	14	202
	High school or less	31	15	4	211	5	266
	Without	1	-	-	18	-	19
2003	PhD	3	1	-	-	-	4
	Master	-	-	-	-	-	-
	Bachelor	34	35	9	11	9	98
	High school or less	17	4	5	22	3	51
	Without	-	1	-	6	-	7
2004	PhD	1	1	-	-	-	2
	Master	5	9	-	-	1	15
	Bachelor	53	41	12	4	2	112
	High school or less	17	10	4	12	6	49
	Without	2	-	1	-	1	4
Total		424	332	75	760	87	1678

Notes: * Other Countries include: France, New Zealand, UK, Germany, Switzerland, Belgium, Austria, Spain, Denmark, The Netherlands, Lithuania.

Source: CAPMAS, *Permanent Migration from Egypt during 2004*.

During the last three decades, flows of temporary migrants to neighbouring Arab countries exceeded permanent migration to Europe and North America. According to CAPMAS 2002 estimates, the total number of Egyptian temporary migrant labourers in Arab countries was about 3.34 million. As can be seen in Table 5.3, most of the demand for Egyptian labour comes from Saudi Arabia, Libya, Jordan, Kuwait and UAE. Migrants to these countries comprise 96 percent of the total number of Egyptian migrant labourers in Arab countries.

⁸⁹ Ali Layla, 1980, "The role of Egyptian Labour in development", *International Politics*, July 1980; Saadeldin Ibrahim, 1982. *The New Arab Social System: A Study of the social impact of oil wealth*. Cairo

Table 5.3: Stock of Temporary Egyptian Migrants by Receiving Arab Countries, 2002

Country	Number	%
Saudi Arabia	1,350,000	41
Libya	950,000	28
Jordan	500,000	15
Kuwait	250,000	7
UAE	160,000	5
Oman	40,000	1.1
Qatar	20,000	0.6
Iraq	15,000	0.4
Syria	10,000	0.3
Yemen	10,000	0.3
Bahrain	6,000	0.1
Sudan	2,000	0.05
Algeria	2,000	0.05
Total	3,345,000	100

Source: Emigration Sector – Ministry of Manpower and Emigration

Statistics on educational attainments of temporary migrants to Arab countries do not exist. CAPMAS used to manually record these statistics based on work permission records obtained from Ministry of Interior before 1980s. But because of the huge increase in volume of migration, manual recording and maintenance of records became impossible. In 2005, CAPMAS started the process of recording these statistics electronically. Table 5.4 shows the number of contracts for Egyptians to work in some Arab countries classified by educational attainment. The Table shows that the number of contracts for those with high qualification (university degree or above) represents 28 percent of the total contracts in 2005. In Bahrain, UAE and Oman, the number of contracts for highly-qualified Egyptians exceed both those with medium and without qualifications. Saudi Arabia still remains the Arab country that attracts the highest number of highly-qualified Egyptians, it accounted for 53 percent of total contacts for highly-qualified Egyptians in 2005.

Table 5.4: Number of Work Contracts for Egyptians from Arab Countries, 2005

Country	Educational Attainment			Total
	High	Medium	Without	
Saudi Arabia	38,657	38,643	59,168	136,468
UAE	12,147	11,493	9,815	33,455
Kuwait	14,817	20,923	28,668	64,408
Oman	2,348	546	296	3,190
Qatar	3,245	4,323	4,246	11,814
Bahrain	621	168	100	889
Total	71,835	76,096	102,293	250,224

Source: Ministry of Interior, 2005

5.3 CONSEQUENCES

Identification and analysis of the causes of emigration of highly qualified skilled and trained persons are essential for reformulating effective national and international policies that would focus on creating conducive environment in developing countries for skilled manpower. The causes are often seen in a bi-polar model of '*pull*' exerted by the immigration countries and the '*push*' exerted factors operating in the emigration countries, in which the differentials between the two determine the decision of the individual to migrate.

Human Capital Depletion/Formation

Although migrants remittances constitute important contributions to the economy of the sending country, this has to be balanced against the loss of skilled scientists or younger workers. Many studies had lamented the loss of Egyptian scientists and university lecturers and highlighted the negative impact of such migration on the quality of education at universities.⁹⁰

On the other hand, the prospect of higher wages through emigration stimulates the acquisition of human capital. This effect can be stronger than the direct effect of emigration. A brain drain may, therefore, actually enhance growth in the source economy. Some Egyptians point that migration of the most gifted Egypt's scientists enables them to be more creative and innovative, because of better research environment, and some obtained highest recognition such as Ahmed Zewail who won the 1999 Nobel Prize in Chemistry, which is a source of pride for Egyptians.

Gain through Remittances

Remittances of these migrants are one of Egypt's key sources of income. In fiscal year 2004-2005, estimated remittances totalled US\$ 4.32 billion.⁹¹ Egypt received the largest single-year amount of migrants' remittances of US\$ 6.1 billion in 1992 followed by US\$ 5.6 billion in 1993. On average Egypt received US\$ 3.7 billion migrants' remittances during the 1990s.⁹² In 2001, Egypt ranked fifth globally among the top 20 developing countries recipients of workers' remittances.⁹³ Table 5.5 shows the distribution of Egyptian migrants' remittances by country. As can be seen from the Table, remittances from USA and Saudi Arabia are the largest.

⁹⁰ Saneya Saleh's (1990) own study which was based on a survey, besides a review of some earlier studies in 1970s and 1980s presented in her book, support this view.

⁹¹ Central Bank of Egypt, 2005.

⁹² Zohry. 2003. *Contemporary Egyptian Migration 2003*. Pp. 73-74.

⁹³ The ranking was India first, then Mexico, The Philippines, Morocco and Egypt. World Bank. 2003. *Global Development Finance*. Washington, DC: The World Bank.

Table 5.5: Remittances of Egyptians Working Abroad by Country, 1999-2005
(US\$ Million)

Country	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005*
Saudi Arabia	737.3	681.3	621.2	634.4	639.6	725.5
Kuwait	410.9	222.3	376.4	254.3	205.6	589.2
UAE	283	301.9	349.4	302.9	278.8	371.6
Qatar	41.7	44.4	45.4	48.5	46.2	63.8
Bahrain	19.4	12.7	54.2	23.8	7.1	10.5
Oman	12.1	11	11.3	14.9	15.5	18.4
Libya	3.3	2.6	3	1.6	2.7	2.1
Lebanon	16.4	14.6	10.3	18	14.6	20.6
USA	1018.8	1048.8	955.9	1025.9	1111.1	1619.6
France	46.6	48.8	47.3	63.3	63.4	68.7
Germany	91.2	96.6	89.1	125.9	131.1	230.5
Italy	33.6	34.6	32.4	48.3	64.3	74.9
The Netherlands	9.9	16.5	12	22.4	36.6	25.9
United Kingdom	113.1	95.7	116	124	122.8	169.4
Greece	4	5.6	5.2	7.9	8.4	11.6
Spain	5.1	3.1	3.4	10.7	6.3	12.4
Switzerland	135.1	105.4	119.9	97.7	91.5	102.7
Japan	6.6	14	8.6	9	3.8	19.8
Canada	9.6	6.2	5.9	8.3	8.7	12.9
Other Countries	69.3	76.6	85.6	120.8	141.5	179.4
Total	3067.3	2842.7	2952.5	2962.6	2999.6	4329.5

Notes: * Provisional Figures.

Source: Central Bank of Egypt, Monthly Statistical Bulletin, February 2006.

5.4 LAWS, POLICIES AND PROGRAMMES

The Emigration and Sponsoring Egyptians Abroad Law no. 111 of 1983 is regarded as the main migration law in Egypt. The Law grants migrants the right to retain their Egyptian nationality along with the nationality of the country of destination. It is stated that a temporary Egyptian migrant is an Egyptian citizen, not a student or seconded worker, who stays abroad for one continuous year. Article 4 of the Emigration law states that a Higher Committee for Migration will be set up and headed by the Minister concerned with emigration affairs.⁹⁴ Later the committee was formed by Resolution no. 2000 of 1997 but there is no indication about its effectiveness yet.

A Liberal Migration Policy

Egypt's general policy stand is to encourage migration. Such policy may be viewed as a labour export strategy, which includes intended brain export to MENA countries and "unintended brain drain" to Western countries. The Emigration Sector is exerting efforts to open new overseas markets for Egyptian labour. Table 5.6 shows some of the labour migration bilateral agreements signed by Egypt. Some of these agreements have already lapsed, others have occasional or irregular contact and some are active and expanding such as, the one associated with the Integrated Migration Information System (IMIS) Project.

⁹⁴ Emigration Law No. 111 of 1983. Ministry of Emigration and Egyptians Abroad. P. 6.

Table 5.6: Status of Labour Migration Agreements Signed by Egypt

Country	Date	Description	Current Status
Saudi Arabia		Ad hoc arrangements	Occasional irregular contact
Jordan	1974-1981		Lapsed
UAE	1988-1990		Lapsed
Libya	2003	Most recently teachers	Occasional irregular contact
Lebanon		Construction workers	Unknown
Sudan	2003	Exchange of workers	Active
Italy		Agricultural workers	Active
	2001	IMIS	Active and expanding
Tunis	2001		Active

Source: Collyer (2004).

The policy of encouraging migration and looking for new job markets overseas cannot be looked at in isolation from existing immigration laws in destination countries and competition from other countries. Table 6.1 in Chapter Six shows the view on level of immigration and proposed policies in some countries. When looking at Saudi Arabia, UAE and Kuwait, which are key destinations for Egyptian temporary migrants, all these countries view the level of immigration to be too high and their policy is towards reduction of immigration. This, combined with high competition from Asian countries, constitutes a threat to Egypt's emigration expansion strategy. In light of this, such emigration expansion strategy might offer relief from persistent unemployment in some sectors in the short-run but it cannot constitute a viable policy option reversing brain drain in the long-run.

Conversion of Brain Drain into Brain Gain (TOKTEN Project)

The Transfer of Knowledge Through Expatriate Nationals (TOKTEN) Programme is administered by the Academy of Scientific Research and Technology. The programme started in 1980 and was funded by UNDP. Between 1992 and 1994, the Government of Egypt and UNDP shared costs of the programme. Since 1995, the program became fully-funded by the Egyptian government.⁹⁵

From 1980 to 2005, the programme was able to attract 443 Egyptian expatriates from North America, Australia and Europe, which are the major destinations for permanent migration. The TOKTEN programme is not involved in attracting Egyptian expatriates in the Gulf. The Academy prepares two catalogues for the TOKTEN programme. The catalogue of demand which includes a list of host organizations, and a roster of experts of Egyptian origin known as catalogue of supply. The Academy estimates the number of Egyptian migrant experts to be 2,515 which represents only 0.3 percent of total permanent Egyptian migrants. According to the Academy, the number is very small but when one look at the quality of these experts and the role they can play in the development of their country of origin, the loss is significant. Table 5.7 gives the distribution of these experts according to their field of specialization. Engineering and social sciences are the dominant fields of specialization.

⁹⁵ The Academy of Scientific Research and Technology was established in 1971 under the Ministry of Higher Education and Scientific Research. The Academy kept the same name "TOKTEN" since it became a trade name.

Table 5.7: Distribution of Permanent Egyptian Migrant experts according to Specialization

Field of Specialization	Number	%
Engineering	809	32.2
Medicine	462	18.3
Sciences	201	8.0
Agriculture	124	5.0
Social Sciences	919	36.5
Total	2,515	100.0

Source: Academy of Scientific Research and Technology.

Since its establishment, the TOKTEN project had attracted only 440 experts out of about 535 experts whom their database are available for the Academy. Egyptian experts based in USA represent 71 percent of the total experts who have participated in the project since its inception. One of the major difficulties pointed out by the programme administrators is the lack of sufficient funding, which certainly affects its sustainability. The Government contributes 200,000 Egyptian Pounds annually (US\$ 35,700). It was noted by the programme administrators that institutions are not taking the initiative in requesting for expatriates' services, it is rather the expatriates who took the initiative. Given the number of prominent Egyptian experts abroad, TOKTEN is a crucial program that needs to be strengthened both technically and financially.

Integrated Migration Information System Project (IMIS)

The IMIS began in June 2001 as a result of collaboration between the Emigration Sector of the Egyptian Ministry of Manpower and Emigration, the Italian government as the donor partner and the International Organization for Migration (IOM) as the implementing agency.

The main aim of IMIS is to develop the tools and capacities to allow the Egyptian government to better understand and respond to the emigrant community and thus maximize the benefits of emigration. It is essentially a capacity building exercise, restructuring the Emigration Sector to enable improved coordination between the Egyptian government and the Egyptian expatriates, though it also provides a number of concrete outputs through a website which came online in October 2003. To get inspiration, the IOM had organized a tour for some Emigration Sector staff to the Philippines, which according to IOM is a successful case of IMIS.

The Emigration Sector's website⁹⁶ currently fulfils three tasks. First, it provides a job matching system allowing foreign employers to advertise positions in Egypt, and Egyptian candidates for emigration to publicize their details for prospective employers abroad. Second, the website provides practical, comprehensive information on possibilities for legal migration to various countries. Third, the website provides a news source on events of interest to Egyptian emigrants, particularly investment opportunities in Egypt. The project has not been running for sufficiently long to assess its success but it represents an extremely comprehensive, well-funded example of establishing practical links between actual and potential

⁹⁶ <http://www.emigration.gov.eg>

migrants and their home government. The first phase of the project was 36 months with a total cost of US\$ 2,236,000. The Italian Government's contribution to this project is US\$ 1,736,000 while the Egyptian Government will contribute US\$500,000. The second phase of the project for 2 years is under planning.

The obvious problem with the system as it currently operates is the strong European focus of the information. Egyptian emigrants are overwhelmingly concentrated in the Gulf States, with approximately 1.3 million living in Saudi Arabia alone. Still, the Emigration Sector sees IMIS as a tool which may also enable Emigration Sector to stay in touch with Egyptians in the Gulf. A second problem pointed out by IOM is the difficulty to link and attract Egyptian expatriates to the IMIS and the need to build their confidence in the system.

The evolution of Egyptian migration trends was characterized by specific national and international socio-economic conditions and changing national legislations. Egyptian government policy towards migration has experienced different phases since independence. With about 4.7 million Egyptians abroad (3.34 million in Arab countries), Egyptian migration is seen as a survival and livelihood strategy. With regard to the positive correlation between intra-migration and intra-trade, efforts to manage highly-skilled migration in member countries should be encouraged in line with the recommendation of the Islamic Summit Conference mentioned at the onset of this study.

PART THREE

**MIGRATION POLICIES
AND COOPERATION AMONG MEMBER COUNTRIES**

CHAPTER SIX

MIGRATION STRATEGIES AND POLICIES

The main challenge for member countries is ultimately to adopt sound national economic strategies and policies for accelerating growth, reducing poverty and achieving economic development. In this context, migration policies should be considered as part of these economic policies for development. Accordingly, after analyzing the economic consequences of migration and brain drain and the situation with regard to the movement of highly-skilled labour in the three selected member countries, discussion should now focus on how both LIMCs and LEMCs can increase the role of migration policies in promoting growth, reducing poverty and achieving social progress. Besides national policies and strategies which eventually constitute the basic policy frameworks in this area, the nature of issues related to international migration and brain drain requires policy and institutional arrangements at regional and international levels.

6.1 NATIONAL MIGRATION STRATEGIES AND POLICIES

Since in many LEMCs, the migration of skilled people is one of the major threats to their economic development, some measures have already been taken to reduce or convert the brain drain into gain. Among others, at national level, efforts are made for expanding the role of the diasporas of these countries in economic development. This is one important way to directly involve the skilled people living outside in promoting and financing developmental projects and programmes and not only in transferring remittances. To this end, attempts have been made by LEMCs to establish regular links between their local entrepreneurs, through networking, to organized, and educated diasporas, with a strong presence in the high-tech, knowledge, and financial sectors in key international centres. It is expected that these links will contribute to skills development and access to venture capital. Generally, the measures adopted for managing or regulating international migration as well as improving its developmental impact may be classified under two major categories of policies, namely migration policies and remittances policies.

6.1.1 Migration Policies

In general terms, the migration policies aim at improving the management of international migration by both labour-exporting and importing countries. The main purpose of migration management is to improve the developmental impact of international migration. So far, it appears that the member countries covered by the case studies recognize that they have not adopted comprehensive written migration policies. However, the institutions established at governmental level, including at ministerial level, have taken some initiatives and adopted various programmes to reduce the negative impact of brain drain. These programmes may be classified under recruitment policies, retaining programmes, temporary migration and incentives for return programmes, and taxation policies.

Recruitment Policies

Many LEMCs have set up a specialized ministry and other regulatory public sector institutions involved in the management of technical assistance and cooperation programmes. As indicated in the case studies, these programmes have already benefited some LIMCs. However, the number of agreements or memoranda of understanding in this area remains very limited and, therefore, more cooperation is needed in order to enhance the exchange of expertise and skills among member countries. The regulatory bodies are also involved as it is the case for Pakistan in the regulation of recruitment agents in order to help them play valuable role in promoting migration. In order to limit rents and improve transparency, this regulation tries to remove constraints on migration and imperfect information, particularly among member countries.

Retaining Programmes

There is a general consensus in the selected member countries about the inappropriateness of preventing highly-skilled workers from migration. But, this does not mean that action should not be taken to encourage some of these workers to stay home. In practice, many LEMCs have already adopted programmes to retain key workers for the development of their economies and the competitiveness of their enterprises as it is the case for statisticians and IT experts in Senegal. These programmes may include some of the following elements:

- Improvement of working conditions in public sector,
- Investment in research and development,
- Identification of job opportunities for educated migrants,
- Permission of dual nationality,
- Facilitation of the portability of social insurance benefits,
- Provision of adequate information on migration opportunities and risks, and
- Cooperation with destination countries that have programmes to promote return.

Temporary Migration and Incentives for Return Programmes

By adopting programmes of temporary migration, especially under technical assistance or cooperation programmes such as in the case of professors and teachers in Senegal, many LEMCs have made significant contribution to economic development, human development and poverty reduction of other member countries. In this context, it is to be noted that temporary migration of both skilled and unskilled workers presents advantages and disadvantages to LEMCs and LIMCs. Relative to permanent migration, temporary programmes have the advantages for labour-exporting countries to secure deliberate increases in migration, raise remittances, and improve the skills of returning workers. For labour-importing countries, the advantages are to ease social tensions, limit the potential burden on public expenditures, allow for controlled variation of the number of migrants in response to changes in labour-market conditions, and limit adverse effects on native workers. However, temporary migration can be less efficient than permanent migration for firms in labour-importing countries because of high training costs while for labour-exporting countries, it does not guarantee future access to labour markets and remittances due to possibility of expulsion of migrants by labour-importing countries.

In practice, the most feasible means of increasing such temporary migration and making it successful is to ensure that it is managed by both LEMC and LIMC involved and to combine it with adequate incentives for return. These combined programmes of temporary migration and incentives for return may be used as one of the major tools for cooperation among member countries in view of implementing the recommendations of the Extraordinary OIC Summit regarding the assimilation of experts within member countries.

Taxation Policies

Many LEMCs have adopted fiscal policies favourable to their overseas population. These policies aim at better managing migration and attracting the savings and investments of migrants. In this context, the idea of the taxation of migrants and/or labour-importing countries to the benefit of labour-exporting countries have been expressed on many occasions, including during the visit to selected member countries. However, it is widely recognized that little progress has been made in implementing the various proposals already suggested in order to counter brain drain or reduce its negative impact on developing countries. Among others, it was suggested to introduce a tax on the income of migrants abroad⁹⁷. However, this policy as well as a variety of other policy proposals were ultimately not implemented for various reasons, including difficulties with implementation of taxation, measurement problems of brain drain and ambiguities with respect to the welfare consequences due to lack of sufficient empirical evidence.

6.1.2 Remittances Policies

The remittances policies adopted by both labour-exporting and importing countries aim at improving the developmental impact of remittances. Like other LEMCs, the member countries visited as well as their development partners do not consider remittances as a substitute for official development aid while developing remittances policies. They recognize that remittances are private funds which should be treated like other private income. In general, the remittances policies have or tend to have some of the following elements:

- i) Facilitation of the access of migrants and their families to formal financial services for sending and receiving remittances through :
 - Expansion of banking networks,
 - Overseas presence of domestic banks from origin countries, and
 - Participation of microfinance institutions and credit unions in providing low-cost remittance services.
- ii) Improvement of the use of remittances to support financial products such as those related to housing loans, consumer loans and insurance services.
- iii) Improvement of the competition in the remittance transfer by :
 - Lowering capital requirements on remittance services,
 - Opening-up postal, banking, and retail networks to partnerships with remittance agencies, and

⁹⁷ Proposal made mainly by Bhagwati, J.N. and M. Partington. 1976. *“Taxing the Brain Drain: A Proposal”*, Amsterdam: North Holland.

- Disseminating data on remittance fees.
- iv) Reduction of the cost of remittance transactions by:
 - Supporting the introduction of modern technology in payment systems,
 - Reducing exchange-rate distortions,
 - Preventing financial abuse, and
 - Facilitating the flow of funds through formal channels.
- v) Provision of adequate incentives to remit in order to ensure stronger remittance flows by :
 - Providing tax incentives without encouraging tax evasion, and
 - Attracting remittances from migrant associations without diverting funds from other local funding priorities.
- vi) Channelling remittances to more productive uses by mainly improving the overall investment climate, rather than by targeting remittances because they are private in nature.

Table 6.1 gives the views of some LEMCs and LIMCs on the level of migration as well as on proposed policies. In general, these countries have a satisfactory view on the volume of migration and on the maintenance of existing policies.⁹⁸

Table 6.1: Governments View on Levels of Immigration and Emigration and Proposed Policies

Country	Immigration		Emigration		Encourage return
	View	Policy	View	Policy	
Algeria	Satisfactory	Maintain	Satisfactory	Maintain	Yes
Bahrain	Satisfactory	Maintain	Satisfactory	Maintain	
Egypt	Satisfactory	Reduce	Too low	Increase	No
Jordan	Too high	Reduce	Too low	Increase	
Kuwait	Too high	Reduce	Too high	Reduce	
Lebanon	Too high	Reduce	Satisfactory	Maintain	
Libya	Satisfactory	Maintain	Satisfactory	Maintain	
Morocco	Satisfactory	Maintain	Satisfactory	Reduce	Yes
Oman	Too high	Reduce	Satisfactory	Maintain	
Qatar	Satisfactory	Maintain	Satisfactory	Maintain	
Saudi Arabia	Too high	Reduce	Satisfactory	Reduce	Yes
Turkey	Too high	Reduce	Satisfactory	Increase	No
UAE	Too high	Reduce	Satisfactory	Maintain	

Source: United Nations (2004).

6.2 REGIONAL MIGRATION ARRANGEMENTS

While at national level, some concrete actions and programmes have been adopted by member countries, it appears that the subject of international migration and brain drain has not gained prominence in the regional agendas as a whole. In this respect, it is to be noted that during the discussion of this subject with relevant institutions in the member countries visited, international rather than regional initiatives have been highlighted. Compared to the movement of goods, the issues related to the movement of people and particularly to the movement of highly-skilled people have not been given due attention by OIC and its various organs as well as by the regional organizations. However, this does not mean that all these regional organizations are totally unaware of the migration and brain drain issues and have not taken any action in this area.

⁹⁸ United Nations, 2004, "World Population Policies, 2003", New York.

6.2.1 Arrangements under the Organization of Islamic Conference

At OIC level, it appears that the subject of migration of highly-skilled labour has not been given due attention. Among others, very few official documents and gatherings have covered this topic. As already stated, it is only recently that at the Summit level, some specific recommendations have been adopted. In this regard, the last OIC Summit recommended to “*call upon the OIC Member States to facilitate the freedom of movement of businessmen and investors across their borders*” as well as to “*assimilate highly-qualified Muslims within the Muslim World, develop a comprehensive strategy in order to utilize their expertise and prevent brain migration phenomenon*”.

Following this Summit, international migration could become a major subject of discussion among member countries. Obviously, increased attention to the volume and directions of international population movements will be accompanied by growing awareness that migration may not only have an impact on the process of development itself but also on economic cooperation and integration, including on intra-trade and intra-investment. Both LEMCs and LIMCs need to understand better the role of migration in the development process as well as the ways in which their trade, aid, investment, and development assistance policies affect and are affected by international migration.

Concerning the IDB Group, while international migration was not so far a major subject of attention within the IDB Group, more has been done in reality within the framework of its normal technical and financial activities. Directly, its various technical assistance and cooperation programmes have been designed to encourage the use of available expertise within member countries. Indirectly, international migration and brain drain have been addressed through various developmental projects financed by the Bank. These projects aimed at fostering economic development and social progress in member countries and, therefore, might help in generating employment opportunities, including for skilled people. However, while this occasional paper does not recommend a major migration initiative for the IDB Group, it does suggest that efforts should be made to increase awareness, enhance the flow of information and sharing of experiences among member countries, and strengthen cooperation on this matter particularly in the light of the recent decision by the Third Extraordinary Islamic Summit.

6.2.2 Arrangements under Regional Organizations

Almost all member countries are part of one or more regional or sub-regional groupings such as the League of Arab States, the Cooperation Council for the Arab States of the Gulf (GCC), the Economic Cooperation Organization (ECO), the Economic Cooperation for West African States (ECOWAS), etc. some efforts have been made within the framework of these groupings in the area of migration. For lack of information, it is difficult to make a comprehensive presentation of the activities related to this subject by all groupings involving member countries. However, a brief overview of some of their major initiatives confirms the idea of further strengthening their capacity and resources in this field.

The League of Arab States

One important institutional development at the level of the Arab League is the establishment of the Population Research and Emigration Unit according to an agreement with the United Nations Population Fund (UNFPA) in order to be the coordinating organ between member states in areas of population and emigration. The Unit is concerned with population research and emigration in member countries in terms of preparing studies and providing support in designing policies. In this respect, its key aims include, among others, transferring and producing local knowledge about population aspects, supporting dialogues in order to activate political will to implement resolutions of Arab conferences on population and migration, contributing to national capacity building in areas of population and migration policies as well as in area of utilization of analytical tools for designing appropriate policies, and supporting and updating regional population and migration databases, which can be of use for decision makers and researchers.

For the period 2004-2007, one major priority of the Unit is to enhance the developmental return of migration in general and migration of qualified labour in particular. Another priority is the creation of permanent and sustainable mechanism for dialogue between decision makers, planners and researchers about developmental consequences of migration.⁹⁹ With respect to creation of databases, the Unit had created a database of 742 researchers and experts in the field of population studies and development, 154 of them live outside the Arab region. The database allows for search for publications of these experts.¹⁰⁰ Also, the Unit plans to build databases on migration, reproductive and maternal health, and youth. In this context, the Unit aims to have a better future coordination in recording of migration flows and statistics among and from Arab countries which is currently lacking.

In 2006, the Unit started an interesting project, the Arab Project for Transfer and Production of Knowledge Through Expatriates, which is a 3-year project (2006-2008). The project can be thought of as an “*Arab TOKTEN*”. The driving force behind such a project is the Unit awareness and concern about the serious outflow of Arab researchers and experts from the Arab region and the need to maximize the use of their knowledge and skills in economic development in Arab countries.

The Unit is actively involved in organizing of and participating in conferences concerned with migration. For instance, the Unit organized a major conference on “*Arab Migration in a Globalized World*” jointly with the International Organization for Migration in Cairo in September 2003.¹⁰¹ Linked to the issue of transfer of knowledge and information technology, the Unit organized a parallel session on “*Migration of Qualified Labour and Information Society*” during the World Summit on the Information Society held in Tunis during November 2005.

In the area of cooperation with international organizations working on migration, the Unit had signed in February 2005 a Memorandum of Understanding (MOU) with International Centre for Migration Policy Development. The aim of MOU is to ensure cooperation in area of exchange of information and statistics related

⁹⁹ This represents the Unit working plan that was approved during the 7th Annual Meeting of Presidents of Population Committees in Arab Countries, which was held in December 2004 in Egypt.

¹⁰⁰ The database can be viewed at the link, <http://www.poplas.org>

¹⁰¹ The proceedings of this conference can be viewed at, <http://www.poplas.org/publications/books.htm>

to different aspect of migration, promotion of joint activities such as research and studies on migration, and organizing regional conference on migration in the Mediterranean region.

Besides this Unit, within the framework of the Arab League, the Arab Labour Organization (ALO) is a special organ responsible for Arab labour issues. The ALO aims to coordinate policies, develop labour legislations, improve work conditions, provide technical assistance, and improve quality of labour and productivity in member countries. The ALO plans to publish online labour databases, Arab labour market indicators, and database on Arab labour agreements and strategies.¹⁰²

Cooperation Council for the Arab States of the Gulf

One of the key characteristics of the Gulf Council Cooperation (GCC) is the Economic Agreement, which was signed by member States in November 1981 with the aim to develop, extend and enhance their economic ties on solid foundations, in the best interest of their peoples and for the sake of working to coordinate and standardize their economic, financial and monetary policies, as well as their commercial and industrial legislation, and customs regulations. Following their meeting in Muscat in December 2001, the leaders of GCC signed an updated version of the Economic Agreement. Some of the articles relevant to labour market are presented such as Article 3 which states that the member States shall agree on executive principles to ensure that each member State shall grant the citizens of all other member States the same treatment as is granted to its own citizens without any discrimination in the fields of freedom of movement, work and residence; right of ownership, inheritance and bequest; freedom of exercising economic activity; and free movement of capital.

In addition, Chapter 5 of the Economic Agreement deals with human resources development. Article 16 concerning nationalization of labour market states that member States shall take measures to develop and harmonize labour legislation, remove impediments of free labour between member countries, and consider GCC citizens working in other member States included in the ratio of nationalized labour force in the country they are working. It also states that member States shall adopt unified measures for classification of labour categories, and shall exchange information related to unemployment, job opportunities and training programmes.

Another article, namely Article 17 deals with increasing the participation of national labour and its training. It states that member States shall take effective measures to increase participation of national labour force in labour market, particularly in jobs that require high skills, and shall adopt effective programmes to develop skills of national labour, as well as shall adopt appropriate policies to reduce foreign labour in their countries.

Economic Cooperation Organization (ECO)

At ECO level, the Charter of the ECO Science Foundation was signed during the third ECO Summit held in Islamabad, Pakistan in 1995. The purpose of this Foundation is to build up a reservoir of highly-skilled, scientific and technical

¹⁰² These databases and information are still under construction at ALO's website, <http://www.aralo.org>

manpower and strengthen the scientific and research institutions in the member States. The Foundation is headquartered in Islamabad, Pakistan with coordinating centres in each member country. It functions as a coordinating, financial and monitoring agency for the promotion and support of following major activities:

- Evaluation of existing training facilities in the region and formulation of training programmes for building up highly-skilled scientific and technical manpower,
- Designing of programmes to strengthen the scientific, engineering and research and development institutions,
- Survey of problem areas faced by member States in technology, and technology assessment for individual member States and facilitating technology transfer,
- Promotion of goal-oriented research projects, including joint research programmes; promotion of scientific projects of economic and/or commercial values contributing to the development plans or projects of the member countries,
- Exchange of science and technology information through designated centres and institutions working as a network,
- Strengthening of scientific cooperation through institutional linkages, exchange of scientists and holding of collaborative seminars and conferences on major science and technology issues, and
- Identification of elite science and technology organizations as focal points in ECO member States.

Unfortunately, information is not readily available on whether the Foundation has made any progress in achieving its objectives or not, and on whether it is now fully operational or not.

Economic Community of West African States (ECOWAS)

ECOWAS, which consists of 14 West African States, including 12 member countries, is leading the way in promoting the free movement of people in Africa. The free movement of people, labour and services, and the right of residence and establishment are enshrined in the Abuja Treaty establishing the African Economic Community. In fact, ECOWAS member States have ratified a Protocol on the free movement of people and goods, and the right of residence and establishment, which abolished requirements for entry visas. More specifically, citizens of ECOWAS member States may enter without visa, and reside in any member State for up to 90 days, but must obtain permission to stay longer. This Protocol was further enhanced in May 2000, when the ECOWAS ministers responsible for internal affairs and national security agreed to introduce a common passport for ECOWAS citizens. The ECOWAS passport is currently being issued in all member States.

ECOWAS member States generally respect the provisions on free movement of people, but labour mobility is a more sensitive issue because employment opportunities are limited in these countries and policymakers do not want to increase the pressure on local workers. Given these difficulties, the emerging consensus is that

gradual and targeted introduction of labour mobility is the best way to move towards a regional policy on general labour mobility.¹⁰³

On the other hand, regional efforts to develop human resources have been limited, and various agreements remain to be fulfilled. Most of the efforts seem to be concentrated in harmonizing and coordinating education policies. Within ECOWAS, the francophone countries, for example, have extensive cooperation in education, including the implementation of regional programmes, and the recognition and equivalence of diplomas. Similarly, anglophone countries have increased their collaboration through the West African Examination System, which provides a good platform for coordinating and harmonizing education policies. For example, the Primary 'O' level and the Secondary 'A' level certificates have been adopted by almost all countries as standard certificates.

6.3 INTERNATIONAL MIGRATION ARRANGEMENTS

Besides efforts to enhance policies and strengthen capacity at the national and regional levels, various initiatives are also underway to improve the governance of international migration through improved coherence and greater consultation and cooperation between countries. It is expected that the success of such efforts will depend on a better appreciation of the close linkages that exist between international migration and development and other key policy issues, including international trade, foreign investment and aid but also state security, human security and human rights.

Despite the efforts to promote *win-win* policies in the area of international migration, the effects of this migration remain unequally distributed between labour-importing and exporting countries. As a result, policies aimed at facilitating the recruitment and mobility of highly-skilled workers, in particular migration policies have not ensured so far a fairer distribution of benefits. One of the reasons may be the absence of a real "*lead agency*" for international migration. Currently, there are various international bodies, arrangements and initiatives dealing with migration issues. Many of these arrangements are under the United Nations system while others are independent bodies. In the context of their existing mandates, the role played by these international bodies in addressing the subject of international migration is crucial, but it cannot substitute the role of regional and national institutions because of the nature and complexities of the issues involved.

6.3.1 Arrangements under the United Nations

Since 1976, international migration issues have gained prominence in the international agenda. Till 1980, efforts were made by the United Nations in order to adopt recommendations on statistics of international migration. Later, the Programme of Action of the International Conference on Population and Development¹⁰⁴ and the Copenhagen Declaration on Social Development and Programme of Action of the World Summit for Social Development¹⁰⁵ devote considerable attention to issues related to international migration. In 1997, the Commission on Population and

¹⁰³ United Nations Economic Commission for Africa (UNECA). 2003. *Assessing Regional Integration in Africa*. UNECA Policy Research Paper. Addis Ababa.

¹⁰⁴ See United Nations, 1995, chap. I, resolution 1, annex.

¹⁰⁵ See United Nations, 1996, chap. I, resolution 1, annexes I and II.

Development and the General Assembly discussed international migration as a special issue during their respective sessions¹⁰⁶. Currently, there are various institutions under the United Nations which deal with different aspects related to international migration and brain drain.

International Labour Organization (ILO)

ILO is one of the first specialized agencies of the UN. It seeks the promotion of social justice and internationally recognized human and labour rights. It has long been concerned with the migration of labour and the employment of foreigners and has been the focal point for development of a Convention for the protection of migrant workers. Under its "*World Employment Programme*," and through regional activities such as the "*Maghreb Initiative*" and the "*Asian Migration Project*," the Organization has focussed on job creation in countries of emigration, and the relationship amongst migration, trade, and development. ILO also made efforts to improve data collection and statistics on international migration in many countries.

ILO has an International Migration Unit under its Social Protection Section, which aims to protect migrant workers' rights and promote their integration in countries of destination and their ties with countries of origin, forge an international consensus on how to manage migration, and improve international labour migration database. Some of Unit's projects include a research project in 2001 on the impact of aid programmes, employment and migration in Morocco, Egypt and Tunisia; and a project (2001-2004) on labour migration and development in West Africa.

United Nations Fund for Population Activities (UNFPA)

UNFPA promotes the agenda of the International Conference on Population and Development (ICPD) in the area of migration by promoting policy dialogue and enhancing governments' ability to respond to issues relating to international migration, to promote orderly migration flows and to address the needs of migrants. UNFPA played a major role in bringing attention to the subject of international migration, notably in ICPD held in Cairo in September 1994. UNFPA devoted its annual report, "*The State of the World's Population 1993*" to the subject, and in that document called upon the international community to "*take account of the possible effects of economic, trade and development cooperation policies on international migration flows.*"

UNFPA supports the International Migration Policy Programme (IMP), an inter-agency programme founded in 1998,¹⁰⁷ in its work to foster regional and international cooperation and strengthen the capacity of governments to deal with migration and refugee issues. In October 2004, together with the IMP, UNFPA launched the joint publication, "*Meeting the Challenges of Migration: Progress since the ICPD*", which highlights the linkages between migration and population and development issues, discusses developments since the adoption of the ICPD Programme of Action in 1994 and points to some of the challenges that lie ahead. In early 2005, UNFPA also convened an Expert Group Meeting "*International*

¹⁰⁶ United Nations, "*Recommendations on Statistics of International Migration -Revision I*", Statistical Papers Series M, No. 58, Rev. 1, New York, 1998, p.8.

¹⁰⁷ Other partners in IMP are United Nations Institute for Training and Research (UNITAR), IOM and ILO.

Migration and the Millennium Development Goals” to analyze migration as both a facilitating and constraining factor in the achievement of the MDGs.

Other United Nations Arrangements

The UN Regional Economic Commissions are also engaged with the subject of international migration. They made efforts for collection and dissemination of data on migration; collected and analysed data on migration policies; and studied determinants and consequences of regional migration flows. Few years ago, the five regional Commissions have even decided to focus on international migration as an area of interregional cooperation over 3-4 years. The main elements for cooperation included data gathering, research, special initiatives, and policy coordination.

The United Nations High Commissioner for Refugees (UNHCR) is the lead agency for matters pertaining to the protection of refugees and of asylum seekers. Although perhaps best known for its human rights perspective, increasingly, UNHCR has also sought to address the root causes of refugee movements, both in its own work and by encouraging the collaboration of other international bodies. Toward this end, its activities may cover issues concerning highly-skilled refugees and their repatriation within the general framework of migration, development, trade and reconstruction.

The United Nations Development Programme (UNDP) has addressed international migration within a number of its activities. But, while UNDP does not consider itself an active partner on the topic, it adopted a strategy on international migration. In collaboration with international organizations such as IOM, UNDP co-sponsored workshops on “*Sustainable Development and Migration*”. Interest in mobilizing the experience of expatriate professionals from developing countries remained unfocused until 1977, when UNDP started working with these countries to reverse losses caused by the massive exodus of their specialists and to transform part of the enormous brain drain into brain gain. During the same year, TOKTEN began in Turkey following a three-week visit to the UNDP-assisted Karadeniz Technical University from a senior mechanical engineer of Turkish origin based in California. Volunteers under the TOKTEN programme have served governments, public and private sector enterprises, universities and other organizations in fields ranging from agriculture, engineering, and sciences to computer technology and management.

The United Nations Conference on Trade and Development (UNCTAD) has conducted studies on foreign direct investment (FDI), trade, and international migration. In 2005, UNCTAD launched a project for connecting centres of excellence in developing countries, especially those in Africa. The main idea is to turn these centres into regional hubs of learning that can pool resources and conduct joint research in areas of importance to developing countries, such as health, agriculture and environment. It is expected that this network will contribute to reverse the negative impact of brain drain by producing researchers able to tackle development challenges faced by their countries and regions.

6.3.2 Independent International Institutions

World Trade Organization (WTO)

At WTO level, the temporary movement of persons for delivery of services (Mode IV) is negotiated as part of the General Agreement on Trade in Services (GATS). The purpose is, among others, to facilitate temporary migration, business visits and transfers of senior staff within multinational corporations. Developing countries are now seeking greater openness to enable them to benefit from off-shoring of services.

The other international trade arrangements negotiated under WTO may also have an impact on brain drain since trade and migration can be substitutes. Generally, it is expected that reduced trade barriers increase trade, lower wage differentials, and reduce migration. On the one hand, where migration costs are low, increased trade and FDI can reduce migration flows. On the other hand, where migration costs are high and credit constraints binding for the poor, trade and FDI may have differing effects on the composition of migrant flows, discouraging emigration by skilled workers, while encouraging that of the unskilled.

6.3.3 Other International Institutions

International Organization for Migration (IOM)

IOM is an inter-governmental body comprising 116 member States, highly decentralized and service oriented. As an important international organization for migration, IOM acts with its partners in the international community to:

- Assist in meeting the growing operational challenges of migration management,
- Advance understanding of migration issues,
- Encourage social and economic development through migration, and
- Uphold the human dignity and well-being of migrants.

IOM provides for the orderly transfer of migrants, refugees, displaced persons, and others in need of international migration services under its "*International Migration Activities*", while its "*Programmes for the Transfer of Qualified Human Resources*" help developing countries meet the need for highly-skilled manpower. Periodically, IOM also provides a forum for discussion on migration and development issues.

Organization for Economic Co-operation and Development (OECD)

OECD is a forum where the governments of 30 countries work together to address the economic, social and governance, challenges of globalization. In recent years, the OECD has moved beyond a focus on its countries to offer its analytical expertise and accumulated experience to many developing and emerging market economies.

The OECD Directorate for Employment, Labour and Social Affairs oversees work on the inter-related policy areas that can promote employment and prevent social exclusion. Its activities are focused on four main themes: employment and

training, health, international migration, and social issues. On the theme of international migration, the Directorate publishes “*Trends in International Migration*”, which reviews, on annual basis, developments in migration movements and policies and the role of migration in the population and labour force of host countries. It describes characteristics of the employment of foreign workers and their integration into the labour market, as well as the management of migration flows and their contribution to development. This publication is the key source of statistics of foreign and foreign-born labour in OECD countries.

In sum, there is a general agreement that labour-exporting countries, including LEMCs, and their regional and international partners should, in the long run, rely on strategies and policies that generate adequate employment and sustained growth, rather than on migration as an alternative to economic development. In this respect, cooperation between LIMCs and LEMCs on intra-migration and brain drain issues should be part of their overall economic cooperation and integration strategy.

CHAPTER SEVEN

COOPERATION BETWEEN LABOUR-EXPORTING AND IMPORTING MEMBER COUNTRIES

Similar to cooperation on trade and investment, it is expected that cooperation on migration will contribute to promoting deeper economic integration among member countries. However, while some efforts have been made to reduce barriers to cross-border trade and financial transactions among these countries, more concrete actions should be taken in order to remove barriers to the cross-border movement of people, especially of highly-skilled labour, which remain very high. In this respect, a possible role of regional institutions at OIC level remains catalytic in nature.

7.1 MIGRATION AND BRAIN DRAIN CHALLENGES

The member countries are facing many challenges in promoting development and enhancing economic cooperation among themselves, including particularly the challenge of strengthening the effectiveness of their relevant national and regional institutions. In promoting their cooperation on issues related to migration and brain drain, the same general challenges are faced by them. In the light of the case studies, some of the specific challenges which may be highlighted include the lack of information on migration and brain drain, high cross-border barriers to the movement of people, and weak specialized migration institutions.

Lack of Information on Migration

The member countries as well as their regional institutions lack adequate data and information on migration and brain drain. In particular, they lack data on direction of migration, brain drain and remittances which are needed to engage in an effective dialogue for strengthening cooperation in this area. In reality, the statistical deficiency is not limited to the movement of people and their financial transfers, but also to the movement of goods and services. Obviously, it is not enough to remedy this deficiency by relying only on OECD migration databases which focus on migration to OECD countries and do not properly cover the growing South-South migration, including member countries.

Besides the lack of statistics, there are not enough empirical studies on migration and brain drain involving member countries, especially on intra-migration among themselves. In this context, the decision makers do not have adequate information and knowledge on the linkages between international migration and economic development in general as well as between intra-migration on the one hand and intra-trade and investment on the other hand.

High Cross-Border Barriers to the Movement of People

In order to identify the priority areas for cooperation among member countries on migration and brain drain issues, the analysis on causes and economic benefits of migration¹⁰⁸ needs to be completed by highlighting the major barriers to migration among these countries. Besides the lack of information, there are other barriers which constitute actual challenges to the exchange of skills and expertise among member

¹⁰⁸ See Chapter Two.

countries. While some of these barriers are clear and common to many member countries, others remain controversial. In particular, because of its distributional consequences, net gains of migration for the economy may mask important losses for some individuals and groups. Accordingly, migration may generate resistance because the movement of people has economic, psychological, social, and political implications that the movement of goods or money do not.

In this context, one of the barriers, which is often stressed in gatherings such as business fora or conferences, is the issue of visa requirements. This explains the importance of the recommendation of the OIC Extraordinary Summit on the need to facilitate the freedom of movement of businessmen and investors across borders among member countries. The challenge for these countries is to fully implement this recommendation within the next decade. More challenging than the movement of skilled workers is to ensure work permit and skill equivalence to them in all member countries.

Weak Migration Institutions

Currently, despite the existence of some specialized institutions, there is no lead migration agency at the international level. At OIC level, there is no specialized agency for intra-migration. This explains the lack of sufficient information and research on migration issues relevant to member countries. Despite the importance of migration and brain drain flows affecting member countries, the absence of such an agency is based on the wrong perception that existing OIC organs such as COMSTECH as well as international institutions such as ILO, IOM, UNHCR and specialized regional and international NGOs may take care of all migration related matters concerning member countries, including intra-migration.

Accordingly, the member countries face the challenging task of strengthening existing arrangements or making new ones in order to implement the specific recommendations on brain drain contained in the OIC Ten-Year Programme of Action. A stronger OIC migration institution can play a leading role in improving the availability of statistics and studies, removing some barriers and promoting adequate programmes of exchange of expertise and skills among member countries.

7.2 MAJOR OPPORTUNITIES FOR COOPERATION

While member countries are facing serious challenges, they can also benefit from new opportunities for enhancing their cooperation on issues related to intra-migration. As stated above, after the recent OIC Extraordinary Summit, there is now increased awareness of the importance for adequately regulating and managing the movement of highly-skilled labour among member countries. In addition, other factors such as the liberalization of trade in services and the increasing outsourcing of services combined with the shift of FDI to services may facilitate such movement.

Increased Awareness and Political Will

Following the Third Extraordinary Session of the Islamic Summit Conference, there is now increased awareness about the importance of migration issues. The adoption of the “*Ten-Year Programme of Action to Meet the Challenges Facing the Muslim Ummah in the 21st Century*” provides a good opportunity for undertaking

specific actions in order to particularly facilitate freedom of movement of businessmen and investors across the borders of member countries as well as to assimilate highly-qualified people within these countries. It is timely for IDB/OIC countries to develop a comprehensive strategy for utilizing their expertise and prevent brain migration phenomenon as requested by the Summit for the first time.

Growing Demand for Skilled Labour

While there is in general a high demand for skilled labour, especially in industries and professions related to information technology, there is also apparently a growing shortage of such labour in a number of member countries. To meet this shortage, it is expected that many LIMCs will continue to implement measures to facilitate the recruitment of foreign skilled workers. Similar to other cooperation areas, preferences should be provided to experts coming from LEMCs witnessing a growing skilled population in new fields such as IT and related areas.

Liberalization of Trade in Services

The liberalization of trade in services aims at freeing up businesses in areas such as telecommunications and energy as well as making it easier for professional people to get jobs abroad. Currently, the negotiations on services under WTO constitute a key part of global free trade negotiations because services account for some 70 percent of global economic activity and around 30 percent of world trade. These negotiations involve about 20 services sectors and mostly take the form of requests for liberalization by developed countries.

In this context, the liberalization of trade in services under Mode IV or movement of natural persons among member countries is expected to facilitate the assimilation of highly-skilled labour in these countries. While a significant portion of movements of natural persons is from developing to developed countries, there is also a considerable movement of labour between developing countries, such as between some member countries and Gulf countries. According to some studies, world welfare gains from liberalization of the movement of workers could amount to US\$ 156 billion per year if developed countries increase their quota for the entry of workers from developing countries by 3 percent. Another study computed gains of some US\$200 billion annually if a temporary work visa scheme is designed and adopted multilaterally.¹⁰⁹ The expected gains could be larger than the total gains expected from all the other negotiating items in current WTO negotiations.

Shift of FDI to services

According to available data, FDI in services has increased. The volume of the world stock of FDI in services quadrupled during the period 1990-2002 and its share in the world FDI stock has increased from one quarter in the 1970s to about 60 percent in 2002. Developed countries remain the main source as well as the main recipient of FDI. However, the share of developing countries has also grown from one percent in 1990 to 10 percent of global FDI stock in services in 2002.¹¹⁰ FDI flows in

¹⁰⁹ UNCTAD, 2005, “*Trade in Services and Development Implications*”, Trade and Development Board, Commission on Trade in Goods and Services, and Commodities, ninth Session, Geneva, 14-18 March 2005.

¹¹⁰ Ibid

services between developing countries are growing faster than flows between developed and developing countries.

This shift of FDI towards services has allowed the services sector to benefit from the related transfer of capital, technology and managerial know-how and facilitated the development of skills and reorganization of firms in recipient countries. However, there are costs which may include the crowding out of domestic service suppliers, potential effects on the balance of payments, and negative cultural and environmental externalities. In order to benefit from the new opportunities and derive the maximum gains from FDI in services, member countries should define their national FDI policies for services within the framework of regional agreements. These agreements should be based on well-managed and regulated intra-migration, especially of highly-skilled labour.

Increasing Outsourcing of Services

Outsourcing is used, among others, by enterprises seeking to take advantage of low wage countries. Outsourcing some operations allows significant productivity gains, access to additional skills, and improvements in the quality of the services provided. Outsourced services range from simple, low-value-added activities (e.g. data entry) to more sophisticated, high-value-added activities (e.g. architectural design, financial analysis, software programming, human resource services and R&D). Overall, the trade of outsourced services is taking place between developed and developing countries, as well as within each group, with developing countries strongly involved in the rise of outsourcing. It is to be noted that after large transnational companies, small and medium-sized enterprises have also started outsourcing their operations. As a result, global outsourcing expenditures is expected to grow by 30 to 40 percent each year over the next five years to reach US\$ 827 billion in 2008.¹¹¹

In order to capture the new trading opportunities from outsourcing, member countries can implement a number of domestic policies, related, *inter alia*, to infrastructure development, improvement of the legal and regulatory framework, human resource development, promotion of R&D and adoption of quality standards. These new opportunities from outsourcing may facilitate the assimilation of highly-skilled labour within member countries as recommended by the OIC Extraordinary Summit by retaining the experts, encouraging both actual and virtual return or exchanging of expertise among member countries.

7.3 PRIORITY AREAS OF COOPERATION

In the light of the previous discussion, eight major priority areas for cooperation among member countries may be identified. These include sharing information and knowledge, designing suitable national and regional migration strategies and policies, developing and strengthening migration institutions, reforming tertiary education, defining innovative partnerships with diasporas, enhancing technical cooperation, better targeting migration and brain drain issues through development financing and enhancing the contribution of Islamic banking and finance, particularly in mobilizing and channelling remittances to productive projects.

¹¹¹ UNCTAD (2005).

Information and Knowledge Sharing

Obviously, cooperation on migration statistics should be considered as one of the areas of cooperation between member countries which needs to be strengthened and where the regional institutions can play an important role. In particular, concerning the intra-migration of highly-skilled workers, efforts should be made to collect comprehensive data on the scale and characteristics of flows and stocks of skilled and highly-skilled workers among member countries. This will contribute to better analyses of the mobility of these workers among member countries and their impact on growth, intra-trade, intra-investment and economic cooperation and integration in general.

Concerning cooperation in the area of research, it should aim at building knowledge on how to accommodate migration and brain drain for the benefit of LEMCs and LIMCs, where some socio-economic trends may move in opposite directions. This cooperation should enhance the research efforts related to the analysis of the consequences of these trends for both groups of countries, including impact on their labour markets.

In practice, the regional institutions at OIC level should explore the possibility of launching a programme for sharing and expanding information and knowledge in the area of migration and brain drain. Among others, this programme should address the issues surrounding intra-remittances, intra-brain drain, the determinants of intra-migration and temporary movements of persons, social protection, and the links with poverty alleviation, enhancement of intra-trade and intra-investment. Under this programme, studies, surveys and other statistical services may be financed.

Strategies and Policies

On the basis of adequate statistics, information and studies, the cooperation on migration and brain drain issues should focus on devising regional “*win-win*” policies for both LEMCs and LIMCs. Obviously, these policies should also be suitable to the migrants themselves. In this regard, while migration is a sensitive and complex matter, it is important to recognize that it is also a reality that must be dealt with collectively by member countries in order to better strengthen their socio-economic ties. Therefore, they should identify and agree on policy changes and institutional reforms needed for improved outcomes of migration, including of highly-skilled labour. Their common working hypothesis should be that migration is more likely to benefit all member countries if its advantages are perceived by all, and if they cooperate together in designing and implementing sustainable reforms and policies at regional or OIC level.

In this context, it is crucial to consider the intra-migration, particularly of highly-skilled workers, as an important policy issue in the agendas of OIC and its specialized organs. Considering that improved knowledge and understanding of the issues related to intra-migration are necessary for developing adequate policies by both LIMCs and LEMCs, the regional institutions at OIC level should help in creating awareness, discussing problems and achieving convergence in this crucial area of cooperation. In particular, it is important to examine appropriate migration policies

for facilitating the mobility of skilled workers in ways that are beneficial both to receiving and sending member countries.

Institutional Development

At national level, many LEMCs have a specialized ministry dealing with the needs of expatriates as well as specialized organizations covering specific aspects of migration. While some of these national organizations are considered to be successful and may serve as examples for other member countries, there is in general a need for strengthening their human, financial and institutional capacities, particularly in the light of new challenges and opportunities in the area of movement of natural persons.

At OIC level, the cooperation for building the capacities for dealing with issues related to brain drain may be given priority. Among others, this requires strengthening COMSTECH and enhancing existing programmes and initiatives such as those under the IDB Group. However, there is no specialized agency for intra-migration. Accordingly, besides strengthening existing arrangements, it is important to explore ways and means for launching a new one in order to implement the specific recommendations on brain drain contained in the OIC Ten-Year Programme of Action. This arrangement may be conceived in form of a federation or union of national specialized migration organizations. It will serve as a platform for discussing migration and brain drain issues and building consensus on questions related to the movement of persons both at regional and international levels.

Tertiary Education Reform

It is now recognized that efforts should be made to adopt appropriate planning and reforms for improving the tertiary education system in member countries, including improving infrastructure and research facilities. Firstly, this will better adjust the number and quality of graduates to the real needs of the economy of these countries. Secondly, it will provide adequate tertiary education opportunities and prevent or reduce migration for study purpose which constitutes an important source of migration of highly-skilled people. Thirdly, it should improve research and working conditions environment and make it conducive for maintaining and attracting highly-skilled labour in member countries.

Cooperation among member countries in the area of tertiary education reform may take various forms. Among others, these include sharing of experience or technical assistance for capacity building from more advanced member countries in this field. In addition, the possibility of promoting joint universities, research institutes and centres of excellence should be explored.

Innovative Partnerships with Expatriates

The increased awareness about brain drain issues at OIC level will contribute to helping LEMCs to transform their brain drain into gain through more effective partnerships with diasporas. Among others, regional institutions should continue to organize investment conferences and business fora aimed at promoting active participation of the diasporas in the economic development. In addition, they may explore innovative partnerships between these diasporas and home country entrepreneurs. The objective should be to help harness the networking and marketing skills of these diasporas and accelerate formation of entrepreneurial networks to link

diaspora professionals from LEMCs to entrepreneurs in the home countries looking for opportunities to develop new business partnerships as well as in other member countries in order to enhance intra-investment and intra-trade.

Technical Assistance Cooperation

The promotion of technical assistance cooperation among member countries can serve as an efficient tool for assimilating highly-skilled labour within these countries. The existing technical assistance programmes have already contributed to an exchange of expertise among member countries as it has been shown in the case studies. However, the high level of brain drain to developed countries from many LEMCs indicates that the present volume of technical assistance cooperation is far below the potential level.

Accordingly, the regional institutions at OIC level may explore ways and means for better coordinating between the national technical assistance programmes in member countries. In addition, they may launch in collaboration with member countries bilateral or multilateral technical assistance funds with the purpose to use the expertise and skills available in some countries to other countries. These funds will help mobilize additional resources for expanding and financing at regional level successful programmes implemented so far at local or national level such as TOKTEN.

Addressing Migration in Development Financing

The IDB Group plays an important role in financing developmental projects in member countries. Some of these projects may have affected the propensities of people to migrate and the migration process. Accordingly, within the OIC family, the IDB Group has a comparative advantage in mobilizing adequate resources and allocating them to convert brain drain into gain and to contribute to solving the problems of poverty, lack of employment opportunity, and other issues that induce people to migrate.

In general, it is expected that increased awareness of the implications of brain drain and migration will translate into the incorporation of this element in the country assessment and programming as well as risk management undertaken by the IDB Group. On the one hand, in project preparation, the migration factor should not be ignored and its impact on poverty reduction, human capital development, labour market competitiveness, and private sector development in both LEMCs and LIMCs should be assessed. On the other hand, migration factor should also be included in risk analyses undertaken by the IDB Group.

Contribution of Islamic Banking and Finance

Through its efforts to promote Islamic Finance and banking, the IDB Group may contribute to improve the financial framework that can affect whether and how migrants remit their earnings abroad. Through its collaboration with Islamic financial institutions, the IDB Group has the potential to develop incentives and mechanisms for the repatriation and productive investment of remittances which constitute an important source of finance for LEMCs. In this regard, suitable modes of finance should be designed for both mobilizing and utilizing these remittances. These modes

should take into consideration the specific nature of this kind of transfer which are private funds.

At this stage, based on a preliminary assessment of brain drain and its developmental impact in member countries, it is difficult to go beyond a tentative identification of priority areas for cooperation. More efforts are, therefore, needed in order to define more concrete actions for effectively regulating and managing the movement of highly-skilled labour among member countries.

CONCLUSION

This paper has highlighted the economic consequences of international migration and brain drain for member countries and the policies that can improve their contribution in promoting socio-economic development and reducing poverty in both LEMCs and LIMCs. However, because of many reasons highlighted in the paper, such as lack of basic data on international migration, economic diversity among member countries, the conclusions formulated must remain qualified.

Following the latest OIC Extraordinary Summit, this paper should be considered an initial effort to address issues related to migration and brain drain. It includes the findings relevant to member countries of several studies, reports, and databases on the topic. It also includes the findings from extensive interviews with many officials in three selected LEMCs visited. Consultative meetings were held with permanent representations of other multilateral and bilateral organizations in countries visited, in order to obtain outside perspectives on what regional institutions at OIC level might do with regard to international migration.

The main destination of migrants from member countries, including highly-skilled migrants, is OECD countries. The available information on these flows show that skilled migration from member countries or brain drain has accelerated after 1990. The majority of member countries were affected by brain drain. In this regard, while some member countries, especially in Africa, suffered from very high brain drain in 2000, others member countries were moderately affected by this problem. However, another important destination of migrants from member countries is other member countries. Unfortunately, less information is available on these migration flows though there are general indications that migration among member countries is growing.

There is a general agreement on the major factors driving these migration flows, including of highly-skilled. These include among others the relative expected incomes discrepancies between labour-importing and exporting countries and better job opportunities in labour-importing countries. But, there is still a debate on the development consequences of brain drain. From the analysis of the relationships between brain drain and some development indicators in member countries, it appears that the overall impact of brain drain on development is negative; the member countries that have the highest rate of brain drain tend to be less developed. The results also support the conventional view that brain drain has a detrimental effect on human capital and poverty alleviation.

Concerning the positive impact of remittances on the economy of labour-importing countries highlighted by many analysts, the general view on the subject has also been supported. The remittances represent an important source of finance for many member countries. In 2003, they corresponded almost to the double of ODA and one and half of FDI to these countries. Overall, workers remittances in the member countries totalled some US\$ 33 billion in 2003. Between 1990 and 2003, the volume of remittances presented an increasing trend. While there has been growing recognition of the positive effects of the remittances, it remains difficult to quantitatively assess all their effects. In particular, measuring the poverty impact of remittances in member countries is difficult because of scarcity of data. In this paper,

it appears that remittances are positively correlated with human development, income and private consumption while negatively correlated with poverty in member countries. However, on the basis of available information, no significant relationship between remittances and investment or savings was found. This suggests that remittances in member countries are mostly used for consumption rather than investment or savings. These basic results are consistent with the literature on the development impact of remittances. In fact, there is considerable empirical evidence that shows that remittances increase the total income available for consumption and contribute to poverty reduction. Furthermore, whether remittances lead to increased investment is highly contentious and empirical results are mixed.

In practice, within their national migration policies in general and remittances policies in particular, efforts are made, at national level, for expanding the role of the diasporas of member countries in economic development. This is one important way to directly involve the skilled people living outside in promoting and financing developmental projects and programmes and not only in transferring remittances. To this end, with the help of regional and international organizations, attempts are made to establish regular links between local entrepreneurs, through adequate networking, to active, organized, and educated diasporas, with a strong presence in the high-tech, knowledge, and financial sectors in key international centres. It is expected that these links will contribute to skills development and access to venture capital.

However, the policies adopted so far for managing or regulating international migration as well as improving its developmental impact need to be enhanced. At regional level, there is need for stronger cooperation among member countries on migration and brain drain issues. Similar to the movement of goods among these countries, clear targets should be determined for the movement of skilled people in order to achieve within the OIC Ten-Year Programme of Action the recommendations related to the assimilation of highly-skilled labour within member countries and the development of a comprehensive strategy in order to utilize their expertise and prevent brain migration phenomenon.

In promoting their cooperation on issues related to migration and brain drain, the same general challenges for promoting cooperation are faced by member countries. These countries as well as their regional institutions lack adequate data on direction of migration, brain drain and remittances which are needed to engage in an efficient dialogue for strengthening cooperation in this area. Also, there are not enough empirical studies on the linkages between international migration and economic development in general as well as between intra-migration on the one hand and intra-trade and investment on the other hand. In addition, there are barriers which constitute actual challenges to the exchange of skills and expertise among member countries such as requirements of entry visa, work permit and skill equivalence.

While member countries are facing serious challenges, they can also benefit from new opportunities for enhancing their cooperation on issues related to intra-migration. After the OIC Summit, there is now increased awareness of the importance for adequately regulating and managing the movement of highly-skilled labour among member countries. The adoption of the Ten-Year Programme of Action provides a good opportunity for undertaking specific actions in order to particularly facilitate the freedom of movement of businessmen and investors across the borders of member countries as well as to assimilate highly-qualified people within these countries. In

addition, other factors may facilitate such movement, including the liberalization of trade in services and the increasing outsourcing of services combined with the shift of FDI to services.

Many priority areas for cooperation among member countries on brain drain issues may be identified. Firstly, cooperation on migration statistics and research needs to be strengthened. In particular, concerning intra-migration, efforts should be made to collect comprehensive data on the scale, characteristics and impact of flows and stocks of skilled and highly-skilled workers among member countries. Secondly, cooperation on migration and brain drain issues should focus on devising regional “*win-win*” policies for both LEMCs and LIMCs. In this context, it is crucial to consider intra-migration, particularly of highly-skilled workers, as an important policy issue in the agendas of OIC and its specialized organs. Thirdly, besides strengthening existing migration arrangements at OIC level, it is important to explore ways and means for launching a new one in order to implement the specific recommendations on brain drain contained in the OIC Ten-Year Programme of Action. Fourthly, it is now recognized that efforts should be made to adopt appropriate planning and reforms for improving the tertiary education system in member countries, including improving infrastructure and research facilities. Cooperation among member countries in this area may take various forms, including sharing of experience, technical assistance for capacity building, and promotion of joint universities, research institutes and centres of excellence. Fifthly, regional institutions at OIC level should contribute to helping LEMCs to transform their brain drain into gain through more effective partnerships with their expatriates. Among others, they should continue to organize investment conferences and business fora aimed at promoting active participation of the expatriates in the economic development.

On the other hand, the promotion of technical assistance cooperation among member countries can serve as an effective tool for assimilating highly-skilled labour within these countries. In this context, regional institutions at OIC level may explore ways and means for better coordinating between the national technical assistance programmes in member countries. In addition, they may launch in collaboration with member countries bilateral or multilateral technical assistance funds with the purpose to transfer the expertise and skills available to other member countries. Within the OIC family, IDB Group may play an active role in this field. This Group has a comparative advantage in mobilizing adequate resources and allocating them to convert brain drain into gain and to contribute to solving the problems of poverty, lack of employment opportunity, and other issues that induce people to migrate. Also, it may contribute, through its efforts to promote Islamic finance and banking, to improve the financial framework that can affect whether and how migrants remit their earnings abroad. In this regard, suitable modes of finance should be designed for both mobilizing and utilizing the remittances taking into consideration their private nature.

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STATISTICAL ANNEXES

Annex 1.1: Major Demographic Indicators of IDB Member Countries, 1990-2004

Country	Population (million)			Growth Rate (%)		Age Composition (% of total population)	
	1990	2000	2004	1990-1999	2000-2004	15-64 Years	65+ Years
Afghanistan	17.7	26.6	29.6	..	2.7	..	..
Albania	3.3	3.1	3.2	-0.6	0.6	65.8	7.5
Algeria	25.0	30.4	32.4	2.0	1.6	62.7	4.1
Azerbaijan	7.2	8.0	8.3	1.2	0.6	66.1	7.6
Bahrain	0.5	0.7	0.7	3.0	2.0	70.7	2.6
Bangladesh	110.0	131.1	140.5	1.8	1.7	61.9	3.4
Benin	4.7	6.2	6.9	2.8	2.5	52.9	2.6
Brunei	0.3	0.3	0.4	2.8	1.6	67.0	3.2
Burkina Faso	8.9	11.3	12.4	2.4	2.3	50.5	2.7
Cameroon	11.7	15.1	16.4	2.6	2.0	55.4	3.7
Chad	5.8	7.9	8.8	3.0	2.8	50.1	2.7
Comoros	0.4	0.6	0.6	2.6	2.4	56.0	2.7
Cote d'Ivoire	11.8	15.8	17.1	3.0	1.9	56.2	2.6
Djibouti	0.5	0.7	0.7	3.2	1.6	54.5	3.0
Egypt	52.4	64.0	68.7	2.0	1.8	62.7	4.4
Gabon	1.0	1.3	1.4	2.8	2.2	54.0	5.5
Gambia	0.9	1.3	1.4	3.5	2.3	56.1	3.3
Guinea	5.8	7.4	8.1	2.6	2.1	54.2	2.5
Guinea-Bissau	1.0	1.4	1.5	3.0	2.9	51.9	3.4
Indonesia	178.2	206.3	217.6	1.5	1.3	65.5	5.0
Iran	54.4	63.7	66.9	1.6	1.2	..	..
Iraq	18.1	23.2	25.3	2.6	2.2	58.2	3.1
Jordan	3.2	4.9	5.4	4.5	2.6	59.7	3.2
Kazakhstan	16.3	15.1	15.0	-0.7	0.0	68.0	8.4
Kuwait	2.1	2.2	2.5	-0.1	2.6	73.6	2.0
Kyrgyz Republic	4.4	4.9	5.1	1.1	1.0	63.0	6.2
Lebanon	3.6	4.3	4.6	1.8	1.3	64.4	5.9
Libya	4.3	5.2	5.7	2.0	2.0	64.1	3.8
Malaysia	18.2	23.3	25.2	2.5	1.9	62.8	4.5
Maldives	0.2	0.3	0.3	2.5	2.2	57.7	4.0
Mali	8.5	10.8	11.9	2.5	2.4	50.2	2.7
Mauritania	2.0	2.6	2.9	2.6	2.2	54.8	3.1
Morocco	24.0	28.7	30.6	1.8	1.6	63.2	4.4
Mozambique	14.2	17.7	19.1	2.2	1.9	54.4	3.6
Niger	7.7	10.7	12.1	3.4	2.9	48.9	2.3
Nigeria	96.2	126.9	139.8	2.8	2.4	53.3	2.6
Oman	1.6	2.4	2.7	4.1	2.4	56.8	2.9
Pakistan	108.0	138.1	152.1	2.5	2.4	57.1	3.4
Palestine	2.0	3.0	3.5	4.1	4.0	..	3.0
Qatar	0.5	0.6	0.6	1.7	2.1	73.2	3.4
Saudi Arabia	15.8	20.7	23.2	2.7	2.9	57.1	2.9
Senegal	7.3	9.5	10.5	2.6	2.2	54.1	2.7
Sierra-Leone	4.0	5.0	5.4	2.3	1.9	54.3	2.6
Somalia	7.2	8.7	9.9	1.8	3.2	49.8	2.4
Sudan	24.9	31.4	34.4	2.4	2.3	57.1	3.6
Suriname	0.4	0.4	0.4	0.5	1.1	66.1	5.6
Syria	12.1	16.2	17.8	2.9	2.3	59.5	3.2
Tajikistan	5.3	6.2	6.3	1.7	0.6	59.8	4.7
Togo	3.5	4.6	5.0	2.6	2.1	53.9	3.2
Tunisia	8.2	9.6	10.0	1.6	1.2	67.1	6.1
Turkey	56.2	67.4	71.7	1.8	1.5	65.8	6.0
Turkmenistan	3.7	4.6	4.9	2.4	1.5	62.5	4.5
Uganda	17.4	23.3	25.9	2.9	3.1	48.2	1.8
U.A.E.	1.8	3.2	4.1	6.0	5.6	..	..
Uzbekistan	20.5	24.7	25.9	1.9	1.3	62.8	4.9
Yemen Republic	11.9	17.5	19.8	4.0	3.0	52.7	2.5
Member Countries	1,036.5	1,281.0	1,383.2	1.9	1.9	59.7	3.9
Memo							
Developing Countries	4,366	5,098	5,375	1.6	1.3	63.7	5.8
OECD Countries	840	899	919	..	..	67.2	18.0
World	5,253	6,052	6,348	1.4	1.2	64.3	7.2

Note: Only high-income OECD Countries.

Sources: IDB Statistical Monograph No. 26, 2006

World Development Indicators Online, World Bank, 2006

Annex I.2: Major Human Indicators of IDB Member Countries, 1990-2004

Country	Secondary School Enrollment (% gross)			Tertiary School Enrollment (% gross)			Per Capita GNI (US\$)			UNDP Human Development Index (HDI)	
	1990	2000	2003	1990	2000	2003	1990	2000	2004	2003	Rank
Afghanistan	10	..	..	..	..	..	..	..	..	..	..
Albania	78	78	81	14	15	16	676	1,181	2,117	0.780	72
Algeria	61	68	80	15	..	21	2,417	1,574	2,266	0.722	103
Azerbaijan	88	80	83	16	17	16	..	610	943	0.729	101
Bahrain	100	95	96	21	..	33	7,261	10,391	14,372	0.846	43
Bangladesh	20	46	47	6	6	6	298	391	440	0.520	139
Benin	12	24	28	3	4	..	333	337	448	0.431	162
Brunei	69	87	90	9	12	13	..	..	..	0.866	33
Burkina Faso	7	10	11	..	..	1	345	248	346	0.317	174
Cameroon	27	..	31	5	5	5	955	582	810	0.497	148
Chad	7	12	16	..	1	..	263	184	247	0.341	173
Comoros	18	..	31	1	1	2	546	404	557	0.547	132
Cote d'Ivoire	21	..	..	7	..	..	731	646	760	0.420	163
Djibouti	12	18	20	..	..	1	..	776	949	0.495	150
Egypt	71	85	85	38	..	29	763	1,457	1,247	0.659	119
Gabon	..	50	..	7	..	..	4,781	3,088	4,080	0.635	123
Gambia	18	34	34	1	..	..	312	322	280	0.470	155
Guinea	9	..	24	..	..	..	426	399	414	0.466	156
Guinea-Bissau	9	..	..	..	..	..	215	159	163	0.348	172
Indonesia	45	57	61	..	..	16	623	594	1,140	0.697	110
Iran	57	77	78	20	20	21	2,587	1,674	2,318	0.736	99
Iraq	49	..	43	13	13	..	..	..	..	..	..
Jordan	63	..	86	..	28	35	1,388	1,760	2,189	0.753	90
Kazakhstan	97	89	92	24	27	45	..	1,267	2,253	0.761	80
Kuwait	43	88	89	21	..	..	..	16,477	22,466	0.844	44
Kyrgyz Republic	100	87	92	30	37	42	..	279	405	0.702	109
Lebanon	73	76	79	36	37	44	1,336	5,199	6,012	0.759	81
Libya	86	..	105	56	51	58	..	..	4,400	0.799	58
Malaysia	56	69	70	23	24	29	2,423	3,434	4,522	0.796	61
Maldives	50	55	67	..	..	..	..	2,013	2,405	0.745	96
Mali	7	..	20	2	..	2	255	223	330	0.333	174
Mauritania	13	22	23	5	..	4	543	456	528	0.477	152
Morocco	36	41	45	9	9	11	1,031	1,220	1,574	0.631	124
Mozambique	7	12	16	1	1	1	174	210	272	0.379	168
Niger	6	6	7	..	..	..	280	162	210	0.281	177
Nigeria	25	..	36	..	..	8	282	282	430	0.453	158
Oman	45	76	80	..	8	..	5,613	6,609	9,075	0.781	71
Pakistan	25	24	23	..	..	3	421	482	596	0.527	135
Palestine	..	..	88	25	26	35	..	1,746	..	0.729	102
Qatar	84	89	94	25	..	22	0	0	0	0.849	40
Saudi Arabia	44	69	67	20	22	25	7,222	7,827	10,144	0.772	77
Senegal	16	17	19	4	..	..	662	451	631	0.458	156
Sierra-Leone	17	26	..	..	..	..	197	140	209	0.298	176
Somalia	6	..	..	..	..	..	144	..	..	..	..
Sudan	22	32	35	7	7	..	549	313	527	0.512	141
Suriname	52	71	74	..	..	..	1,507	2,070	2,232	0.755	86
Syria	49	43	48	..	..	..	883	912	1,226	0.721	106
Tajikistan	102	79	86	14	15	16	..	184	277	0.652	122
Togo	23	..	..	4	4	..	383	272	312	0.512	143
Tunisia	44	78	78	17	19	27	1,429	2,084	2,649	0.753	89
Turkey	48	73	79	22	24	28	2,268	2,985	3,750	0.750	94
Turkmenistan	107	..	..	..	..	..	881	641	..	0.738	97
Uganda	12	9	20	2	3	3	318	261	248	0.508	144
U.A.E.	65	80	79	20	22	35	21,136	19,272	23,772	0.849	41
Uzbekistan	99	..	95	..	..	16	..	624	453	0.694	111
Yemen Republic	58	46	47	11	11	..	..	406	552	0.489	151
Member Countries	40	52	52	8	6	12	903	1,074	1,447	0.598	--
Memo:											
Developing countries	47	60	..	9	16	..	847	1,156	1,502	0.694	--
OECD countries	94	106	..	50	69	..	20,394	27,564	33,547	0.910	--
World	55	68	..	13	21	..	4,074	5,243	6,329	0.741	--

Note: Only high-income OECD Countries.

Sources: IDB Statistical Monograph No. 26, 2006

World Development Indicators Online, World Bank, 2006

Annex 1.3: Major Macro Economic Performance of IDB Member Countries, 1990-2004

Country	Annual GDP Growth Rate (%)			Gross fixed Capital Formation (% of GDP)		
	1990	2000	2004	1990	2000	2004
Afghanistan	..	..	..	..	..	..
Albania	-9.6	7.3	6.2	32	16	26
Algeria	0.8	2.4	5.2	26	27	25
Azerbaijan	..	11.1	11.2	..	36	34
Bahrain	4.5	5.3	5.4	19	14	17
Bangladesh	5.9	5.9	5.5	16	22	23
Benin	3.2	5.8	2.7	15	17	18
Brunei	..	..	..	..	..	..
Burkina Faso	-1.5	1.6	3.9	17	27	18
Cameroon	-6.1	4.2	4.8	21	18	18
Chad	-4.1	-0.6	31.0	5	17	63
Comoros	5.2	2.5	1.8	17	15	10
Cote d'Ivoire	-1.1	-2.3	-2.3	11	16	9
Djibouti	-1.9	0.7	3.0	..	15	..
Egypt	5.7	5.1	4.3	34	21	18
Gabon	5.2	2.0	2.0	38	37	28
Gambia	3.7	5.5	8.3	16	18	21
Guinea	4.4	1.9	2.6	17	20	13
Guinea-Bissau	6.3	7.5	4.0	45	11	10
Indonesia	9.0	4.9	5.1	26	25	19
Iran	11.2	5.0	6.5	13	22	28
Iraq	..	..	..	..	..	..
Jordan	1.0	4.1	7.5	23	21	19
Kazakhstan	..	9.8	9.4	..	16	24
Kuwait	..	3.9	2.2	14	18	9
Kyrgyz Republic	5.7	5.5	7.1	30	13	16
Lebanon	26.5	1.1	6.3	..	25	18
Libya	..	1.1	4.5	..	11	14
Malaysia	9.0	8.9	7.1	25	27	23
Maldives	..	4.3	8.9	37	30	26
Mali	-1.9	3.2	2.2	21	21	19
Mauritania	-1.9	5.3	6.6	28	17	15
Morocco	4.0	1.0	3.5	20	22	23
Mozambique	1.0	1.5	7.8	21	24	30
Niger	-1.3	-1.4	0.9	13	11	14
Nigeria	8.2	4.2	3.6	19	24	26
Oman	7.5	5.4	4.3	..	24	13
Pakistan	4.5	4.3	6.4	16	15	15
Palestine	..	-1.2	-11.5	..	35	4
Qatar	..	..	..	..	..	..
Saudi Arabia	8.3	4.9	5.2	19	21	18
Senegal	3.9	5.6	6.0	13	18	16
Sierra-Leone	3.3	3.8	7.4	5	5	10
Somalia	..	..	..	19	..	..
Sudan	-5.5	6.5	6.0	..	12	18
Suriname	0.0	0.0	4.6	14	26	25
Syria	7.6	0.6	3.6	15	22	20
Tajikistan	-0.6	8.3	10.6	26	13	11
Togo	-0.2	-0.8	3.0	18	16	19
Tunisia	7.9	4.7	5.8	21	25	25
Turkey	9.3	7.4	8.9	26	25	17
Turkmenistan	0.8	18.6	17.0	..	45	28
Uganda	6.5	5.4	5.7	11	16	19
U.A.E.	17.5	12.3	5.2	24	29	23
Uzbekistan	1.6	3.8	7.7	27	30	22
Yemen Republic	..	4.4	2.7	..	31	16
Member Countries	8.4	5.4	5.8	21	20	20
Memo:						
Developing Countries	1.8	5.2	6.8	22	23	24
OECD Countries	3.0	3.6	3.3	23	22	..
World	2.9	4.0	4.1	23	22	..

Note: Only high-income OECD Countries.

Sources: IDB Statistical Monograph No. 26, 2006

World Development Indicators Online, World Bank, 2006

Annex 1.4: Migrants from Member Countries Residing in OECD Countries, 2005

Country	Population (2004)		Migrants*		Overall Migration rate
	Millions	%	Thousands	%	
Afghanistan	29.50	2.11	144,816	1.23	0.49
Albania	3.19	0.22	623,075	5.31	19.54
Algeria	32.37	2.32	1,364,026	11.62	4.21
Azerbaijan	8.28	0.59	19,019	0.16	0.23
Bahrain	0.73	0.05	9,763	0.08	1.35
Bangladesh	140.49	9.99	325,069	2.77	0.23
Benin	6.89	0.59	15,670	0.13	0.23
Brunei	0.36	0.03	10,935	0.09	3.03
Burkina Faso	12.39	0.93	9,526	0.08	0.08
Cameroon	16.40	1.15	65,580	0.56	0.40
Chad	8.82	0.68	6,450	0.05	0.07
Comoros	0.61	0.06	19,891	0.17	3.24
Cote d'Ivoire	17.14	1.28	69,669	0.59	0.41
Djibouti	0.72	0.06	7,215	0.06	1.01
Egypt	68.74	5.21	336,636	2.87	0.49
Gabon	1.37	0.10	12,661	0.11	0.92
Gambia	1.45	0.11	23,018	0.20	1.59
Guinea	8.07	0.66	23,319	0.20	0.29
Guinea-Bissau	1.53	0.11	32,946	0.28	2.15
Indonesia	217.59	15.70	350,392	2.98	0.16
Iran	66.93	4.90	650,862	5.54	0.97
Iraq	25.26	2.03	339,638	2.89	1.34
Jordan	5.44	0.40	71,398	0.61	1.31
Kazakhstan	14.96	1.04	46,812	0.40	0.31
Kuwait	2.46	0.19	45,978	0.39	1.87
Kyrgyz Republic	5.10	0.37	4,221	0.04	0.08
Lebanon	4.55	0.25	352,525	3.00	7.74
Libya	5.67	0.42	66,118	0.56	1.17
Malaysia	25.21	1.78	230,575	1.96	0.91
Maldives	0.30	0.02	578	0.00	0.19
Mali	11.94	0.95	48,511	0.41	0.41
Mauritania	2.91	0.22	16,866	0.14	0.58
Morocco	30.59	2.22	1,604,232	13.66	5.24
Mozambique	19.13	1.40	87,267	0.74	0.46
Niger	12.09	0.99	5,563	0.05	0.05
Nigeria	139.82	9.27	293,562	2.50	0.21
Oman	2.66	0.18	4,946	0.04	0.19
Pakistan	152.06	11.13	754,291	6.42	0.50
Palestine	3.51	0.25	15,529	0.13	0.44
Qatar	0.64	0.06	4,547	0.04	0.71
Saudi Arabia	23.21	1.73	55,078	0.47	0.24
Senegal	10.45	0.82	141,136	1.20	1.35
Sierra-Leone	5.44	0.39	46,867	0.40	0.86
Somalia	9.94	0.58	181,175	1.54	1.82
Sudan	34.36	2.55	56,134	0.48	0.16
Suriname	0.44	0.03	194,552	1.66	43.92
Syria	17.78	1.34	138,579	1.18	0.78
Tajikistan	6.35	0.46	3,619	0.03	0.06
Togo	4.97	0.43	20,853	0.18	0.42
Tunisia	10.01	0.71	443,201	3.77	4.43
Turkey	71.73	5.16	2,161,590	18.41	3.01
Turkmenistan	4.93	0.34	1,798	0.02	0.04
Uganda	25.92	2.03	86,884	0.74	0.34
U.A.E.	4.25	0.32	23,985	0.20	0.56
Uzbekistan	25.93	1.87	34,190	0.29	0.13
Yemen	19.76	1.48	37,926	0.32	0.19
Member Countries	1,383	100.00	11,741,262	100.00	0.85
Memo:					
Developing Countries	5,344		62,114,185		1.16

Note: *Does not include migrants to Turkey

Sources: IDB Live Database and OECD's Online Database on Immigrants and expatriates, last updated in November 2005

Annex 1.5: Migrants Aged 15+ from Member Countries Residing in OECD Countries, 2005

Country	15+ Population (2004)		15+ Migrants		15+ Migration Rate
	(Millions)	%	Number	%	
Afghanistan	0.00	0.00	133,624	1.23	..
Albania	2.34	0.29	524,758	4.84	22.46
Algeria	21.62	2.66	1,312,514	12.11	6.07
Azerbaijan	6.10	0.75	30,322	0.28	0.50
Bahrain	0.53	0.07	7,434	0.07	1.40
Bangladesh	91.74	11.27	292,089	2.69	0.32
Benin	3.82	0.47	14,365	0.13	0.38
Brunei	0.25	0.03	9,077	0.08	3.58
Burkina Faso	6.59	0.81	8,388	0.08	0.13
Cameroon	9.69	1.19	59,118	0.55	0.61
Chad	4.66	0.57	5,936	0.05	0.13
Comoros	0.36	0.04	17,738	0.16	4.92
Cote d'Ivoire	10.08	1.24	65,241	0.60	0.65
Djibouti	0.41	0.05	5,411	0.05	1.32
Egypt	46.12	5.67	307,221	2.83	0.67
Gabon	0.82	0.10	11,025	0.10	1.35
Gambia	0.86	0.11	21,243	0.20	2.47
Guinea	4.58	0.56	20,361	0.19	0.44
Guinea-Bissau	0.85	0.10	29,614	0.27	3.49
Indonesia	153.40	18.84	304,056	2.80	0.20
Iran	0.00	0.00	632,340	5.83	..
Iraq	15.49	1.90	297,339	2.74	1.92
Jordan	3.42	0.42	64,744	0.60	1.89
Kazakhstan	11.43	1.40	43,933	0.41	0.38
Kuwait	1.86	0.23	37,659	0.35	2.03
Kyrgyz Republic	3.53	0.43	4,755	0.04	0.13
Lebanon	3.20	0.39	335,958	3.10	10.49
Libya	3.85	0.47	65,007	0.60	1.69
Malaysia	16.97	2.08	215,561	1.99	1.27
Maldives	0.18	0.02	517	0.00	0.28
Mali	6.31	0.78	45,301	0.42	0.72
Mauritania	1.68	0.21	14,997	0.14	0.89
Morocco	20.68	2.54	1,498,312	13.82	7.25
Mozambique	11.10	1.36	85,767	0.79	0.77
Niger	6.19	0.76	5,055	0.05	0.08
Nigeria	78.16	9.60	263,045	2.43	0.34
Oman	1.59	0.20	2,757	0.03	0.17
Pakistan	92.00	11.30	671,386	6.19	0.73
Palestine	0.11	0.01	15,113	0.14	14.36
Qatar	0.49	0.06	3,381	0.03	0.69
Saudi Arabia	13.93	1.71	35,172	0.32	0.25
Senegal	5.94	0.73	133,162	1.23	2.24
Sierra-Leone	3.09	0.38	41,018	0.38	1.33
Somalia	5.19	0.64	137,939	1.27	2.66
Sudan	20.85	2.56	42,633	0.39	0.20
Suriname	0.32	0.04	186,556	1.72	58.74
Syria	11.15	1.37	130,589	1.20	1.17
Tajikistan	4.09	0.50	2,911	0.03	0.07
Togo	2.84	0.35	18,730	0.17	0.66
Tunisia	7.33	0.90	427,931	3.95	5.84
Turkey	51.50	6.33	2,032,628	18.75	3.95
Turkmenistan	3.30	0.41	3,496	0.03	0.11
Uganda	12.96	1.59	82,696	0.76	0.64
U.A.E.	0.00	0.00	14,640	0.14	..
Uzbekistan	17.55	2.16	35,587	0.33	0.20
Yemen	10.91	1.34	32,589	0.30	0.30
Member Countries	814.02	100.00	10,840,739	100.00	1.33
Memo:					
Developing Countries	3,714.28		52,081,624		1.40

Sources: IDB Live Database and OECD's Online Database on Immigrants and expatriates, last updated in November 2005

Annex 1.6: Migrants Aged 15+ by Skills Category

Country	15+Migrants	Highly-Skilled Migrants		Medium Skilled Migrants		Low Skilled Migrants		Migrants with Unknown Skills Levels	
	Total Number	Number	%	Number	%	Number	%	Number	%
Afghanistan	133,624	32,272	24.34	39,572	29.54	54,089	40.36	7,691	5.74
Albania	524,758	45,731	8.73	181,324	34.55	296,224	56.44	1,479	0.28
Algeria	1,312,514	215,347	16.41	364,751	27.79	726,780	55.37	5,636	0.43
Azerbaijan	30,322	12,021	39.64	9,828	32.37	7,863	25.87	610	2.01
Bahrain	7,434	3,017	40.58	2,891	38.68	1,263	16.81	263	3.49
Bangladesh	292,089	80,259	27.48	65,350	22.37	134,546	46.05	11,934	4.08
Benin	14,365	6,083	42.35	4,381	30.41	3,673	25.44	228	1.58
Brunei	9,077	3,557	39.19	3,595	39.43	1,688	18.44	237	2.58
Burkina Faso	8,388	2,471	29.46	1,890	22.45	3,848	45.59	179	2.11
Cameroon	59,118	24,679	41.74	18,930	32.00	14,013	23.67	1,496	2.53
Chad	5,936	2,478	41.74	1,967	32.90	1,374	22.86	117	1.94
Comoros	17,738	1,901	10.72	4,547	25.62	11,266	63.38	24	0.13
Cote d'Ivoire	65,241	16,669	25.55	21,689	33.23	26,061	39.91	822	1.26
Djibouti	5,411	1,592	29.42	1,903	34.98	1,835	33.51	81	1.47
Egypt	307,221	147,835	48.12	91,610	29.81	58,181	18.93	9,595	3.12
Gabon	11,025	3,913	35.49	3,642	32.93	3,326	29.98	144	1.29
Gambia	21,243	3,543	16.68	6,430	30.24	10,466	49.16	804	3.77
Guinea	20,361	4,908	24.10	5,254	25.77	9,725	47.65	474	2.32
Guinea-Bissau	29,614	3,752	12.67	6,122	20.66	19,596	66.10	144	0.48
Indonesia	304,056	101,627	33.42	119,450	39.28	74,658	24.55	8,321	2.74
Iran	632,340	286,235	45.27	212,275	33.57	116,235	18.38	17,595	2.78
Iraq	297,339	83,465	28.07	81,438	27.39	109,649	36.87	22,787	7.66
Jordan	64,744	26,640	41.15	24,009	37.06	13,351	20.60	744	1.15
Kazakhstan	43,933	12,450	28.34	17,078	38.85	13,942	31.69	463	1.05
Kuwait	37,659	16,542	43.92	13,601	36.07	6,812	18.05	704	1.86
Kyrgyz Republic	4,755	1,838	38.65	1,887	39.36	946	19.57	84	1.73
Lebanon	335,958	110,690	32.95	100,050	29.78	113,259	33.71	11,959	3.56
Libya	65,007	15,541	23.91	19,670	30.25	28,736	44.17	1,060	1.63
Malaysia	215,561	107,836	50.02	58,177	26.98	38,161	17.70	11,387	5.28
Maldives	517	175	33.85	185	33.58	119	20.36	38	6.28
Mali	45,301	5,735	12.66	8,555	18.88	30,847	68.05	164	0.36
Mauritania	14,997	2,745	18.30	3,025	20.15	9,120	60.66	107	0.71
Morocco	1,498,312	207,117	13.82	342,224	22.84	918,816	61.32	30,155	2.01
Mozambique	85,767	22,647	26.40	24,703	28.79	37,858	44.11	559	0.65
Niger	5,055	1,887	37.33	1,720	33.78	1,358	26.49	90	1.75
Nigeria	263,045	138,961	52.83	74,103	28.16	42,208	16.04	7,773	2.95
Oman	2,757	1,012	36.71	1,201	42.99	414	14.59	130	4.56
Pakistan	671,386	204,516	30.46	143,081	21.31	294,772	43.90	29,017	4.32
Palestine	15,113	6,581	43.54	4,015	26.49	3,486	22.96	1,031	6.78
Qatar	3,381	1,465	43.33	1,225	35.77	587	16.96	104	2.99
Saudi Arabia	35,172	12,348	35.11	13,213	37.53	8,732	24.78	879	2.49
Senegal	133,162	25,284	18.99	31,757	23.84	75,438	56.63	683	0.51
Sierra-Leone	41,018	13,704	33.41	15,191	37.00	9,986	24.30	2,137	5.20
Somalia	137,939	16,516	11.97	39,861	28.89	68,458	49.61	13,104	9.49
Sudan	42,633	17,066	40.03	13,541	31.73	10,386	24.32	1,640	3.84
Suriname	186,556	27,315	14.64	63,954	34.28	95,131	50.98	156	0.08
Syria	130,589	43,898	33.61	39,015	29.87	43,567	33.35	4,109	3.14
Tajikistan	2,911	1,265	43.46	1,004	33.98	597	19.98	45	1.50
Togo	18,730	6,638	35.44	6,361	33.90	5,323	28.31	408	2.17
Tunisia	427,931	68,190	15.93	118,798	27.76	237,533	55.50	3,410	0.80
Turkey	2,032,628	131,574	6.47	423,732	20.85	1,366,641	67.23	110,681	5.44
Turkmenistan	3,496	1,092	31.24	1,592	45.13	727	20.35	85	2.37
Uganda	82,696	32,332	39.10	23,783	28.75	22,895	27.66	3,686	4.45
U.A.E.	14,640	3,487	23.82	7,182	48.98	3,300	22.43	671	4.55
Uzbekistan	35,587	13,939	39.17	12,993	36.47	8,174	22.92	481	1.35
Yemen Republic	32,589	6,287	19.29	9,690	29.72	15,485	47.44	1,127	3.45
Member Countries	10,840,739	2,388,668	22.03	2,909,015	26.83	5,213,524	48.09	329,532	3.04
Memo:									
Developing Countries	52,081,624	12,251,373	23.52	17,170,330	32.97	18,893,018	36.28	3,766,903	7.23

Source: OECD's Online Database on Immigrants and expatriates, last updated in November 2005

**Annex 1.7: Member Countries' Highly-Skilled Migration Rates to OECD Countries,
Based on OECD Estimates, 2000**

Country	Highly-Skilled Migration Rate according to OECD*	Highly-Skilled Migration Rate according to OECD**
Afghanistan	7.54	..
Algeria	15.03	18.03
Bahrain	5.48	..
Bangladesh	3.09	2.11
Benin	10.52	9.58
Burkina Faso	..	14.29
Cameroon	12.6	19.86
Côte d'Ivoire		9.79
Egypt	3.61	4.6
Gabon	..	25.23
Gambia	42.41	..
Guinea-Bissau	70.39	..
Indonesia	1.53	1.94
Iran	8.06	17.95
Iraq	7.64	6.67
Jordan	4.58	3.29
Kuwait	6.34	..
Malaysia	11.65	7.91
Mali	14.01	19.73
Morocco	..	19.46
Mozambique	52.34	47.19
Niger	6.27	10.53
Nigeria	..	8.41
Pakistan	9.65	..
Senegal	18.41	28.57
Sierra Leone	32.52	33.45
Sudan	4.44	6.63
Syria	3.73	4.42
Togo	11.79	..
Tunisia	13.99	21.43
Turkey	2.98	5.22
Uganda	24.94	36.5

Note:* Based on Barro and Lee education database population aged 15+

**Based on Cohen and Soto education database population aged 15+

Source: OECD online "Database on Immigrants and Expatriates in OECD Countries" OECD

Annex 2.1: Trends in Remittances in Member Countries, 1990-2003

Country	Remittances (US\$ million)				Remittances & Compensation (US\$ million)			
	1990	1995	2000	2003	1990	1995	2000	2003
Albania	0	427	598	889	0	385	531	778
Algeria	352	1,120	790	1,090	352	..	..	..
Azerbaijan	..	3	57	171	..	..	57	154
Bangladesh	779	1,202	1,968	3,191	779	1,202	1,958	3,180
Benin	101	100	87	84	89	92	80	101
Burkina Faso	140	80	67	50	140	..	62	41
Cameroon	23	11	11	11	19	9	..	..
Comoros	10	12	12	12	10	12	..	..
Cote d'Ivoire	44	151	119	141	0	0	..	0
Egypt	4,284	3,226	2,852	2,961	4,284	3,226	2,852	2,961
Gabon	0	4	4	4	0	4	..	..
Gambia, The	10	19	19	40	0	..	..	..
Guinea	0	1	1	111	0	1	1	111
Guinea Bissau	1	0	2	18	1	0	..	22
Indonesia	166	651	1,190	1,489	166	651	1,190	1,489
Iran	0	600	320	340	0	0	0	0
Jordan	499	1,441	1,845	2,201	499	1,244	1,661	1,981
Kazakhstan	..	116	122	147	..	..	64	38
Kuwait	0	0	0	0	0	0	0	0
Kyrgyzstan	..	1	50	108	..	1	2	70
Lebanon	1,818	1,225	1,582	2,700	1,818	836	497	1,003
Malaysia	325	716	981	987	0	0	..	0
Maldives	2	2	2	3	0	0	0	0
Mali	107	112	73	138	107	112	69	139
Mauritania	14	5	2	2	14	5	..	..
Morocco	2,006	1,970	2,161	3,614	2,006	1,970	2,161	3,614
Mozambique	70	59	37	69	0	0	0	30
Niger	14	8	8	8	13	6	..	..
Nigeria	10	804	1,705	1,677	10	804	..	..
Oman	39	39	39	39	39	39	..	..
Pakistan	2,006	1,712	1,075	3,964	2,006	1,712	1,075	3,963
Palestine	..	626	1,124	692	..	..	..	..
Saudi Arabia	0	0	0	0	0	0	0	0
Senegal	142	146	233	344	91	86	179	521
Sierra Leone	0	24	7	26	0	24	7	26
Sudan	62	346	641	1,224	62	346	638	1,218
Suriname	1	0	0	24	0	0	0	21
Syria	664	937	656	618	0	0	0	743
Tajikistan	..	..	..	146	..	0	0	189
Togo	27	15	34	103	27	15	16	111
Tunisia	551	680	796	1,250	551	680	796	1,250
Turkey	3,246	3,327	4,560	729	3,246	3,327	4,560	729
Uganda	0	0	238	295	0	0	238	298
Yemen	1498	1,080	1,288	1,270	1,498	1,080	1,288	1,270
Member Countries	19,011	22,998	27,356	32,980	17827	17869	19982	26051
Share of World(%)	27.6	22.7	22.2	19.1				
Developing Countries	31,343	56,695	76,787	116,607	25,872	..	..	..
World	68,776	101,226	123,326	173,103	..	..	..	..

Note: The total for IDB is calculated for 44 member countries for which data is available

Source: World Development Indicators 2005 database and World Investment Report 200

Annex 2.2: Relative Importance of Remittances in Member Countries, 2003

Country	Remittances		Exports of goods and services		Official development assistance		Foreign direct investment inflows		Remittances, as % of		
	\$ million	%	\$ million	%	\$ million	%	\$ million	%	Exports	ODA	FDI
Albania	889	2.7	1,167	0.2	342	1.9	178	0.8	76.2	259.7	499.4
Algeria	1,090	3.3	25,978	4.3	232	1.3	634	2.8	4.2	469.4	171.9
Azerbaijan	171	0.5	3,055	0.5	297	1.6	3,285	14.5	5.6	57.6	5.2
Bangladesh	3,191	9.7	7,379	1.2	1,393	7.7	268	1.2	43.2	229.0	1190.7
Benin	84	0.3	488	0.1	294	1.6	45	0.2	17.2	28.6	186.7
Burkina Faso	50	0.2	357	0.1	451	2.5	29	0.1	14.0	11.1	172.4
Cameroon	11	0.0	3,189	0.5	884	4.9	215	0.9	0.3	1.2	5.1
Comoros	12	0.0	40	0.0	25	0.1	1	0.0	29.7	49.0	1200.0
Cote d'Ivoire	141	0.4	6,412	1.1	252	1.4	165	0.7	2.2	55.9	85.5
Egypt	2,961	9.0	17,881	3.0	894	5.0	237	1.0	16.6	331.3	1249.4
Gabon	4	0.0	3,781	0.6	-11	-0.1	206	0.9	0.1	-	1.9
Gambia	40	0.1	161	0.0	60	0.3	25	0.1	24.9	66.9	160.0
Guinea	111	0.3	799	0.1	238	1.3	79	0.3	13.9	46.7	140.5
Guinea Bissau	18	0.1	71	0.0	145	0.8	4	0.0	25.4	12.4	450.0
Indonesia	1,489	4.5	65,068	10.8	1,744	9.7	-597	-2.6	2.3	85.4	-
Iran	340	1.0	34,728	5.7	133	0.7	482	2.1	1.0	255.5	70.5
Jordan	2,201	6.7	4,393	0.7	1,234	6.8	424	1.9	50.1	178.3	519.1
Kazakhstan	147	0.4	14,990	2.5	268	1.5	2,088	9.2	1.0	54.8	7.0
Kuwait	0	0.0	22,876	3.8	4	0.0	-67	-0.3	0.0	0.0	-
Kyrgyzstan	108	0.3	726	0.1	198	1.1	46	0.2	14.9	54.6	234.8
Lebanon	2,700	8.2	2,540	0.4	228	1.3	358	1.6	106.3	1182.4	754.2
Malaysia	987	3.0	118,580	19.6	109	0.6	2,473	10.9	0.8	904.3	39.9
Maldives	3	0.0	609	0.1	18	0.1	14	0.1	0.5	16.7	21.4
Mali	138	0.4	1,141	0.2	528	2.9	132	0.6	12.1	26.2	104.5
Mauritania	2	0.0	370	0.1	243	1.3	214	0.9	0.5	0.8	0.9
Morocco	3,614	11.0	14,140	2.3	523	2.9	2,314	10.2	25.6	691.3	156.2
Mozambique	69	0.2	984	0.2	1,033	5.7	337	1.5	7.0	6.7	20.5
Niger	8	0.0	438	0.1	453	2.5	11	0.0	1.8	1.8	72.7
Nigeria	1,677	5.1	29,183	4.8	318	1.8	2,171	9.6	5.7	528.0	77.2
Oman	39	0.1	12,127	2.0	45	0.2	528	2.3	0.3	87.6	7.4
Pakistan	3,964	12.0	13,919	2.3	1,068	5.9	534	2.4	28.5	371.0	742.3
Palestine	692	2.1	345	0.1	972	5.4	0	0.0	200.6	71.2	-
Saudi Arabia	0	0.0	100,720	16.7	22	0.1	778	3.4	0.0	0.0	0.0
Senegal	344	1.0	1,848	0.3	450	2.5	52	0.2	18.6	76.5	661.5
Sierra Leone	26	0.1	178	0.0	297	1.6	3	0.0	14.6	8.7	866.7
Sudan	1,224	3.7	2,893	0.5	621	3.4	1,349	6.0	42.3	197.0	90.7
Suriname	24	0.1	281	0.0	11	0.1	-76	-0.3	8.6	219.8	-
Syria	618	1.9	8,651	1.4	160	0.9	1,084	4.8	7.1	385.4	57.0
Tajikistan	146	0.4	827	0.1	144	0.8	32	0.1	17.7	101.3	456.3
Togo	103	0.3	595	0.1	45	0.2	34	0.2	17.3	229.8	302.9
Tunisia	1,250	3.8	10,798	1.8	306	1.7	584	2.6	11.6	409.2	214.0
Turkey	729	2.2	65,810	10.9	166	0.9	1,753	7.7	1.1	439.6	41.6
Uganda	295	0.9	778	0.1	959	5.3	211	0.9	37.9	30.7	139.8
Yemen	1,270	3.9	3,380	0.6	243	1.3	6	0.0	37.6	522.5	21166.7
Member Countries	32,980	100	604,672	100	18,038	100	22,643	100	5.5	182.8	145.7
Share of World (%)	19		6.6		23.3		3.6				
Developing Countries	116,607		2345200		76184		166337		5.0	153.1	70.1
World	173,103		9186100		77453		632599		1.9	223.5	27.4

Note: The total for IDB is calculated for 44 member countries for which data is available

Source: World Development Indicators 2005 database and World Investment Report 2005