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**POPULATION, MIGRATION AND DEVELOPMENT IN ASIA,  
WITH SPECIAL EMPHASIS ON THE SOUTH PACIFIC:  
THE IMPACT OF MIGRATION ON POPULATION AND THE MDGS\***

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\* The views expressed in the paper do not imply the expressions of any opinion on the part of the United Nations Secretariat.



## A. INTRODUCTION

While migration is mostly about flows, its impact on population structure and trends is also a major issue both at national and regional levels. Migration affects population growth, age and sex structures and related dependency ratio. In emigration countries, it depletes cohorts, mostly at young adult ages, and it increases the youth bulge in immigration countries. Its impact on the labour force, distribution of income, women empowerment and families can have positive as well as negative effects on poverty and consequently on MDGs. Poverty is acknowledged to be a corner stone of MDGs attainment. Migration, through its impact on population, can have effect on access to quality services and contribute to poverty reduction that are both necessary to achieve the MDGs.

The relationship between MDGs and population trends and structures has started to be considered, but there is still need to improve our knowledge of how demographic mechanisms, including migration, influence progress towards MDGs attainment.

This paper will mostly consider the situation in Pacific island countries and major migration countries in South, East and South-East Asia, including China and India. While the relationship between population, migration and MDGs is difficult to assess in large and interdependent Asian countries, linkages appear more clearly in small Pacific countries where the impact of migration is much more important. Although lessons learnt from the Pacific may not be replicable in larger economies, it contributes to improving our knowledge of the effects of migration on population and MDGs.

## B. MIGRATION TYPES

Migration types are not neutral on its impact on population and development. In Asia, due to lack of political agreement on long-term and permanent migration schemes, such as green cards, migration consists mostly of 'guest workers' on short-term contracts that can be extended (Asis 2005, Abella 2005). Singapore has developed medium and long-term contracts for highly qualified migrants. Chain migration patterns have developed with unskilled construction workers migrating from Myanmar to Thailand; semi-skilled Thai workers migrating to Taiwan, Singapore, while Malaysians migrate to Singapore, Korea and Japan. Family reunification exists mostly for high qualified migrants. However, schooling of migrants' children has been addressed by several host countries including Singapore, Japan and Korea. Student and work contract migrations have consequences on age and sex of migrants. Students are youth; males migrate more often for industry jobs and women for services jobs. Age plays different roles according to types of migration as rim countries migration schemes grant points according to age. Despite forecasts of increasing shortages on labour markets in host countries (Mason), migration policies are still mostly oriented toward a restrictive selection process and temporary migration. This certainly reduces the level of legal flows and result in higher undocumented migration the characteristics of which are less precisely known.

In the Pacific, some Polynesian countries, except Tonga, are former New Zealand colonies and benefit from special access to New Zealand: Cook Islanders, Niueans, Tokelauans

are all New Zealand citizens, and Samoans benefit from a special quota. Tuvaluans and Tongans (in Polynesia) and Kiribati (in Micronesia) also have some access to New Zealand under the Pacific Access Category (PAC), as does Vanuatu (in Melanesia)<sup>i</sup> (Bedford and al. 2006, Bedford 2005). Former US affiliated islands: FSM (Federated States of Micronesia) and RMI (Republic of the Marshall Islands) have special access to the US and to US territories (Guam and American Samoa). The special schemes have resulted in large scale migration, with free movements to New Zealand for selected groups of Polynesians, extended to Australia for New Zealand residents in the frame of the Trans-Tasman Travel Agreement, and resulting in the development of transnational communities with frequent circulation, as well as overstaying, between islands and New Zealand, further including Australia and the US<sup>ii</sup>. Large scale circulation also applies to Micronesian migration towards the US. These two networks are typical of Pacific migration. Such schemes are made possible by the small size of island states and have resulted in mass migration from some island countries. But, although free movement would enable return migration and circulation, this has little developed beyond visits for Christmas and family events, and it has not resulted in much brain circulation that would enable more rapid economic development.

Labour migration has a long history in parts of the Pacific, initially for work on plantations, later for work in phosphate mines, and more recently through recruitments of seamen from Tuvalu, Kiribati and to a lesser extent, Fiji. There is also migration from Fiji to UK to work in military and to the Middle East to work as security personnel. Fiji is also largely affected by brain drain, with nurses migrating to rim countries and secondarily to Middle East. Shortages in nurses in Fiji have resulted in migration of Pilipino nurses. While Cook Islanders migrate to New Zealand, shortages in the tourism industry are filled by Fijians on short-term contracts. These are Pacific cases of chain migration.

### C. DEMOGRAPHIC IMPACT OF MIGRATION

The impact of migration on population trends and structure is well known but flows have drawn most of the attention and, actually, a precise measure of flows is needed to assess the demographic impact of migration. Beyond uncertainties on the size of flows, data on stocks are also unavailable, with Singapore and Malaysia, among others, not publishing data on non-resident population. Would such data be available, comprehensive estimate of the impact of migration in a long-term perspective - answering questions like: what would be the population of the Philippines or the Cook Islands if there had been no migration since 1960 or 1970 - would be purely theoretical because fertility would certainly have been different on the long-term had migration not taken place.

More simply, we shall try to consider the current impact of migration on population trends and structure from the latest censuses in Asia and the Pacific, with more attention to a few countries.

Consequences of migration on population growth are well known. They include, as regards purely demographic impacts:

- Reduced population growth for emigration countries and higher growth for immigration countries - the former is usually considered favorable to developing countries;
- Changes in sex ratios according to gender differentials in migration patterns, with various directions being possible in both emigration and immigration countries - imbalances are usually considered unfavorable;
- Changes in age structures: increased dependency in emigration countries and reduced dependency in immigration countries – the former is considered unfavorable in the frame of the demographic window theory (Mason 2006, Mason 2001, Bloom, Canning 2001).

Social and economic impacts are many, but the most commonly stated relate to:

- The labour force: depleted working ages and brain-drain from emigration countries and increased labour force and brain-gain in immigration countries, the former are considered unfavorable - however, migration releases tensions on the labour market;
- Family breakdowns reflected by increased headship rates for females in emigration countries and more frequent lone persons and ‘not related’ or ‘other relatives’ members of households in host countries – the direction of related effect is not well established

Table 1 summarizes these major impacts of migration on population at the national level.

The impact of migration at regional level is more rarely mentioned but it deserves to be considered, mostly as it involves populations of very different size, like in the case of China and India on one side and South and South-East Asia on the other. Economies have become interdependent in the frame of a well established system of regional migration. In emigration countries with labour surplus, migration is a safety valve that reduces unemployment and under-employment, while in immigration countries with labour shortages, migration supports economic growth – however labour surpluses and shortages need to be considered at sectoral level. The beneficial effect of emigration as a safety valve is limited in larger countries like China and India that can ‘export’ only a minor part of their unemployment and under-employment because receiving countries have not the capacity to absorb it and need to protect their labour market through migration and work policies (Rallu, 2001). For instance, in China, rural under-employment was estimated to be well above 100 millions people and the region, not even the world economies cannot integrate such numbers of unqualified migrants. Nevertheless, the migration pressure of China in the region remains a concern for smaller South-East Asian countries, with Chinese setting up retail businesses and taking a large share of small trade. While there is a regional circulation of labour force at various levels of qualification and sectors of the labour market, there is also an extra-regional migration to Middle East or to developed countries of the Pacific rim and the West. Thailand, Myanmar, Malaysia, Indonesia, Bangladesh, Pakistan and Sri-Lanka are largely involved in intra-regional migration (as well as extra regional migration to the Middle-East). But China, India, the Philippines and Viet-Nam have a large part of their migration directed towards rim countries and to the West.

At intra-Pacific level, migration of Pacific islanders is quite limited with only Fiji, Cook Islands and Palau attracting immigrants: mostly through regional organizations and the University of the South Pacific for Fiji and in tourism industry and construction in the Cook Islands (mostly Fijians) and Palau (mostly Micronesians). Fiji and Palau also have Asian

migrants, mostly Filipinos, on work contracts in health and tourism. However, Cook Is (see above) and Fiji are mostly emigration countries. Palau experienced increasing emigration of its youth and Asian net migration declined in 2000-2005.

Most of Pacific islanders' migration is directed towards rim countries: Australia, New-Zealand and the USA<sup>iii</sup> as well as to US and French territories but the latter rather consists in more or less closed US and French regional networks, that however include Asian migration, mostly for US territories. The mass migration from the Pacific, in the frame of preferential access to rim countries, results in important reduction of population growth in island countries.

### *1. Population growth*

The effect of migration on population growth varies greatly by countries, small countries being more affected than large countries.

In Asia, net migration remains below 2 per 1,000 and often below 1 per 1,000 in absolute values in most countries and therefore only slightly impacts on population growth. Its impact on China and India (-0.3 per 1,000 and -0.2 per 1,000) is even much lower (table 2). The highest negative net migration rate is observed in Sri Lanka reaching close to -0.5 per cent and the highest positive net migration is observed in Singapore reaching close to 1 per cent (it was close to 2 per cent for the 1995-2000 period) – Brunei Darussalam has migration rate of 2 per 1,000.

In the Pacific<sup>iv</sup>, net migration nearly erases the effect of natural growth in FSM, Nauru, Samoa, Tonga, or even inverts growth in Niue, Tokelau and occasionally in Cook Is<sup>v</sup> (Rallu, Ahlburg, forthcoming). In those countries net migration is frequently close or even above 2 per cent. Migration also considerably reduces population growth in RMI but it has declined recently. In Fiji, migration, mostly of Indo-Fijians but also increasingly of indigenous Fijians (with emigration rate of -1.7 per cent the former and -0.2 per cent for the latter; -1.0 percent for Fiji), reduces growth substantially and results in population decline for Indo-Fijians. Seamen migration from Kiribati had not much impact on growth as returns at end of contracts and some returns from Nauru tend to equilibrate flows. Palau had higher net migration rate in 1995-2000 (1.2 per cent) lifting total growth to 2.1 per cent, but it has much reduced in 2000-2005.

### *2. Sex ratios*

In the past, mostly males migrated and the analysis of sex ratios imbalances was used to reveal migration. But female participation in migration has been increasing for several decades and now many countries have higher female than male migration. Sex ratios have become difficult to interpret in regards of migration, mostly when emigration and immigration are present together. However, a few countries, like Indonesia, still have predominantly male migration and show low sex ratios at young adult ages (figure I). In the Pacific, ancient emigration countries (Tonga and Samoa) have turned to predominantly female youth migration, but mid-adult ages in Tonga show clearly imbalances in sex ratios linked with mostly male migrants in the early stage of the migration process. Predominantly male migration to Palau (figure I) steeply increases sex ratios, reaching 139 males per 100 females at ages 25-44.

### *3. Age structures and dependency ratios*

The depletion of young adult ages linked with migration is a major demographic impact of migration. It is associated with change in dependency ratios. However, dependency is also strongly affected by the level of fertility.

The impact of migration at young adult ages is sometimes difficult to see on age-pyramids, due to past changes in fertility and various events affecting the history of countries, like conflict for Sri-Lanka. When migration affects a large range of ages like in the Philippines, the impact is not much visible. It is much clearer in Indonesia for males and Sri-Lanka for both sexes (figure I).

The depletion of young adult ages is most typical in mass migration island countries where it results in bottle neck shaped age-pyramids, like in FSM, Cook Islands and Palau. In Palau, both youth emigration of both sexes and predominantly male immigration at mid and late adult ages are well visible.

### *4. Cohort change*

A more interesting approach to the impact of migration on population consists in cohort change. While age-pyramid and sex ratios did not show much effect of migration on population structure in the Philippines, changes in cohort size at ages under 50<sup>vi</sup> clearly show emigration in cohorts reaching ages 15 to 34. The impact was limited at ages 20-24 for males and 20-34 for females in 1995-2000, but it increased and extended to ages 30-34 in 2000-2005 for both sexes (figure II). In both periods, net losses are more important for females than for males. Some return migration appears at ages 35-39, but trends thereafter are difficult to interpret as combined effects of immigration/return migration and emigration can occur<sup>vii</sup>. Results may also be affected by quality of age reporting or age selective variations in coverage of enumeration.

Similar data for Pacific islands show much higher net losses starting as early as late teen ages, with one third of female youth cohorts and close to 40 per cent of males 25-29 emigrating from Samoa (and a similar situation occurs in Tonga and Cook Is), 20 per cent and 25 per cent of respectively female and male Marshallese aged 20-24, and between 15 per cent and 20 per cent of the 20-34 years old leaving Fiji, with higher rate at ages 30-34 in the frame of post-coup emigration that affected many adult Indians (figure III). In Palau, while all cohorts showed net migration increases between 1995 and 2000, only the cohorts reaching 25-29 in 2005 show net migration in 2000-2005, with emigration of Palauans at 20-24 and net departures of Asian migrants at ages above 30<sup>viii</sup>.

Such migration levels look like an exodus from small island countries and the situation in Sri Lanka and smaller Asian countries is intermediate between those of larger S-E Asian and small islands countries. At high levels of emigration, the impact on population structure and dependency is considerable.

## 5. *Dependency ratios*

The increase in dependency due to migration is the result of depleted adult cohorts. Their impact on dependency can be high and it directly affects potential for development in the frame of the theory of the demographic window of opportunity. Recent studies have shown that low dependency is favorable to economic growth (Mason 2006, Mason 2001, Bloom, Canning 2001), on condition it is accompanied by high employment level of the youth bulge, which is possible in the frame of friendly economic and investment policies as well as social and political stability and good governance. But, emigration influences dependency ratios in the wrong direction. However, emigration countries have their workers abroad sending remittances that are usually higher than what they would earn in-country.

It would need controversial reconstruction of population trends for decades with and without migration (see above) to estimate the long-term impact of migration on dependency ratios<sup>ix</sup>. Therefore, the impact of migration cannot be estimated comprehensively and precisely, but it is possible to compare dependency ratios according to countries' migration status.

In Asia, Singapore, China and Thailand have the lowest dependency and also the lowest fertility among countries listed in table 3. Among countries that have rather similar levels of migration like Bangladesh and Indonesia, the latter has much lower dependency due to completed fertility transition while the former has still TFR above 3. Similar characteristics and gaps prevail between the Philippines and Viet Nam, with the latter having both lower emigration and fertility resulting in lower dependency. And despite higher migration than the Philippines, Sri Lanka has lower dependency due to completed fertility transition. Further comparison and interpretation is difficult as several host countries (Malaysia, Singapore) do not include migrants in their census reports that relates to de-jure population only. Altogether, it appears that dependency is still strongly affected by fertility levels and the related children burden and the role of migration is difficult to measure, although its impact is evident.

In the Pacific, Palau is the only country that has already achieved fertility transition (with TFR of 1.9 in 2001-2005); it also has significant immigration and consequently shows the lowest dependency ratio in the region, similar to China and Thailand (table 3). In Fiji, Indians have achieved fertility transition but they have high emigration; their dependency ratio (55 in 1996) was much above that of Palau, but still much lower than for indigenous Fijians (70) who still have TFR of 3.3 and much lesser migration. All other countries, except PNG, Solomon Is and Vanuatu are more or less affected by emigration. Samoa and Tonga have TFR just above 4 since the late 1970s and the mid 1980s respectively but they have ancient and important emigration. Their dependency ratio is similar to those of Solomon Is and Vanuatu that have witnessed fertility decline much more recently with TFR still close to 5 at the end of the 20<sup>th</sup> century. Despite similar, or even more pronounced, migration patterns than Tonga and Samoa, the Cook Islands have lower dependency due to lower fertility. FSM and RMI had both recent fertility declines and important migration; they also show dependency levels close to those of Melanesian countries.

Trends show that stabilization of the size of the population in the most affected migration countries in the Pacific goes hand in hand with nearly stable dependency ratios. Only RMI, FSM

and to a lesser extent Fiji and Tokelau<sup>x</sup> show significant declines in dependency (figure IV) that are linked with fertility declines. Other countries show stable (Tonga), fluctuating (Cook Is, Niue) or slightly increasing (Samoa, Tuvalu) dependency ratios at a rather high levels, mostly when fertility remains high with TFR around 4. However, such stable fertility levels are necessary to avoid population decline. Altogether, these countries have achieved quasi stable populations through both quasi stable fertility and migration. As remittance based economies, achieving the demographic window does not seem to be felt as an issue in those countries.

Thus, it appears that migration can erase the benefits of fertility decline for high emigration countries for a long period of time, eventually resulting in quasi stable population size and structure characterized by high dependency in the Pacific. Whenever high fertility is a major factor of high dependency in the Pacific, as well as in Asia, it appears that migration can delay the onset of the demographic window of opportunity, with most origin countries having dependency ratio well above 60 and as high as 80.

The impact of migration on labour force and gender empowerment will be addressed in relation to MDGs (see below). The above analysis of the impact of migration on population will help us understand its impact on MDGs attainment.

#### D. IMPACT OF MIGRATION ON MDGS

MDGs are development indicators and some of them have been recognized as such for decades, like infant mortality rate (IMR), as well as maternal mortality ratio (MMR) that appears to be closely correlated with the former in both Asia (Choe, Chen 2006) and the Pacific, and both are also correlated with the coverage of services in health. Other MDGs are obviously and closely linked to development, like poverty and environment (access to improved water and sanitation) indicators. Education is also a well acknowledged factor of development as well as of reduction of infant mortality and morbidity, mostly in relation to female education as well as employment. Thus, this section will address the impact of migration on development through its impact on population and MDGs indicators.

##### *1. Services indicators in education, health and environment*

The first demographic impact of emigration is reduced population growth and it is considered to have favorable effects. The impact of rapid growth on MDGs services indicators: primary and secondary education enrolment, immunization, skilled attended deliveries, is usually negative. In the Pacific, countries that have high population growth rates usually have lower coverage of services than those with low growth and they face the challenge of increasing coverage while births and children cohorts are increasing – not withstanding necessary improvement in the quality of services. This is clearly the situation in Solomon Is, Vanuatu and other rapid growth countries that have no emigration outlet. In migration countries like Samoa and Tonga, despite TFR still around 4, migration of reproductive age adults has resulted in stable birth cohort size since several decades. Thus, it has been possible to increase coverage of services close to 100 per cent and there is no difficulty keeping this level steady. However, this is realized through fragile balance between fertility and migration. Despite emigration, high and

slowly declining fertility in the Philippines resulted in increasing birth cohort size until the 1995 census. The 2000 census is the first one to show stabilizing births cohorts at the basis of the age-pyramid, with still the possibility of some under-enumeration of the 0-4 age groups, as shown in previous censuses (see above).

The same effect of population growth applies to environment services: access to improved water and sanitation. But it is complicated by urban/rural aspects. It can happen that urban growth consumes most of resources for infrastructures, leaving rural areas deprived, which is actually hindering rural development and increasing the urban drift. – The same probably applies to services in health and education, but water and sanitation indicators are usually disaggregated by urban/rural while it is more rarely so for education and health services which is a real gap in MDGs monitoring and may hide consequences of rapid urbanization.

## *2. Education, child and maternal health indicators, MDG 2, 4 and 5*

Whenever reduced growth can have favorable effects on education and health services indicators, brain drain depletes the stocks of qualified teachers and nurses.

Transition rates from class 1 to 6, or up to form 3 – that some countries have included in their extended MDGs targets-, tend to be low and occur in the frame of many repetitions. A majority of students enter secondary education late by 1 or more years which jeopardize their chances of completing upper secondary education as well as technical education. Low qualification of the population results in difficulty for migrants to migrate through point systems, having to refer to short-term contracts or even migrate undocumented, and face unstable employment and low wages in host countries, which will affect remittances they can send home as well as their poverty status in host country.

IMR and MMR are dependent on coverage and quality of services and therefore they are affected by population growth (see above). However, reducing child and maternal health indicators to very low levels needs high quality of services that is not available due to brain drain of qualified nurses and doctors. Therefore, IMR is stagnating between 10 per 1,000 and 20 per 1,000 in Polynesian migration countries, but it is above 30 per 1,000 in FSM and RMI. As Polynesian countries had already low IMR in the 1990s, achieving the MDGs targets implies rates below 10 per 1,000 that seem difficult to reach.

## *3. Gender indicators, MDG 3*

The second impact of migration on population identified above was imbalances in sex ratios. The effect of the sex distribution of migrants, with current increase in feminization of migration, on gender equity and women empowerment has been abundantly commented in the literature (UNFPA, SWOP 2006), but there is not yet a precise and comprehensive quantification of its effects on gender. For women, migration is sometimes a first chance of getting paid employment, but in case of return migration, they may not find similar job opportunities at home. Women left behind, despite remittances from migrant husbands, often need to work which increases the share of women in paid employment and is considered to be empowering them - female labour force participation has also favorable effect on health status of women and

children, but it can be detrimental to children education. However, migrants' wives frequently live with relatives or in-law which limits their empowerment. A major benefit of migration for both males and females is behavior change that usually goes with living in a different economic and social environment which can have positive effect on gender equity and increase education of girls. However, this mostly works for the more educated. There is also evidence of migrants' wives living isolated in ghettos and experiencing sometimes even slower social change than in home countries. Social remittances or the dissemination of new ideas through visits of parents/relatives to host countries and return migration is considered to be mostly missing in the Pacific, despite high mobility of islanders, and the proportion of females in parliamentary seats remains the lowest in the world.

Altogether, like urbanization, migration is certainly an opportunity for women. However, this does not occur equally for everyone. There are social groups for which migration does not improve the situation of women and can even have negative effects. This is closely linked with education and economic status and calls to consider the impact of migration on MDG 1: poverty<sup>xi</sup>.

#### *4. Poverty, MDG 1*

The central factor in the relation between migration and poverty is remittances. However, labour force participation, a major determinant of remittances, deserves attention in origin as well as in host countries.

The underlying issue of the role of remittances on poverty is whether remittances reduce inequity of income distribution. The development of migration occurs through different phases with different impact on income distribution. At the beginning of migration, there is a 'migration hump': the more educated and wealthy have more opportunity to migrate in the frame of individual migration. In the first phase of migration, the proportion of households with one or more migrants in the lower income quintiles is lower than for higher quintiles and the amount remitted per household is also lower which contributes to increasing the inequality of income distribution. This is the situation shown by Fiji 2003 HIES data for indigenous Fijians whereas migrants and remittances are more evenly distributed by income quintiles for Indians with more ancient and higher migration (Brown 2006)<sup>xii</sup>. However, this does not mean that there is no impact of remittances on poverty, as some remittances can actually be enough to lift a few households out of poverty, or anyway reduce the depth of poverty. At a later stage, lower social strata access more frequently migration and the impact of remittances on poverty reduction becomes larger. However, *in Tonga, although well advanced in migration process, only 33 per cent of households in lowest quintile of value of non-land assets had a migrant against 55 per cent to 75 per cent for higher quintiles* (Brown 2006, Ahlburg 1996). This is not taking into account effects such as increase in commodities, services, food prices and altogether the cost of living, or inflation, that may result from migration and remittances at the national level, pushing higher the poverty lines.

In Asia, the dominant pattern of low qualified labour migration departs somewhat from the phase pattern of migration and remittances on income distribution that prevails in individual migration patterns. Labour migration of unqualified or semi-qualified workers, may speed access

to migration of lower (but not the lowest) income people. However, despite high levels of remittances nationally, amounts remitted per household for the poorest segment of the population is certainly low. Whenever, it may contribute to somewhat reducing poverty, it is unlikely to result in much economic development. Countries that rely mostly on unqualified migration show much slower economic growth than those where domestic economy is striving. The former are also more affected by brain drain as local wages are too low to deter qualified workers from leaving and attract return migrants. This is the case of the Philippines, Viet Nam, Indonesia, Bangladesh, Pakistan and Sri Lanka that have much lower GDP per capita than Malaysia and Thailand. Despite low GDP per capita, China and India attract return migrants in the frame of very large differentials in sectoral markets, with high profits being possible in the new technology and export sectors<sup>xiii</sup>. Pacific island countries have sluggish economic growth and high cost of living which, associated with low wages does not make return migration attractive for nurses and teachers.

Although developed countries are usually not considered in the frame of MDGs (except for Goal 8) as host countries of international migrants, they are concerned by poverty issues as well as population living in slums (MDG 7). Unqualified migrants have often the lowest jobs (3 Ds) and wages in host countries and sending remittances push many migrants' households into poverty. Data from US censuses show that economic position of Pacific migrants, primarily from Samoa, Tonga, Micronesia and Fiji, improved in the 1980s, despite unfavorable macroeconomic conditions, and improved further in the long economic upswing of the 1990s. Part of the improvement in the position of Pacific migrants was due to increases in their human capital: education, work experience and language skills. These gains allowed more workers to acquire white-collar jobs and to increase their earnings (Ahlburg, Song 2006, Ahlburg 2000). Thus, the poverty rate of Pacific Islanders fell from 1.57 times the US rate in 1990 to 1.33 times the US rate in 2000.

As regards remittances as well as for the living standard of migrants, migration is obviously more profitable when it consists of qualified workers. Thus, there is a kind of vicious circle with brain drain affecting the production of qualified migrants (see above). Like for other workers, the socio-economic situation of migrants is deeply affected by their education status.

### *5. Employment indicators, MDG 1*

MDG indicator 'employment-to-population ratio at ages 15-64' under goal 1 has replaced 'youth unemployment rate' under goal 8. The impact of migration on the old and the new indicator is not much different although it is stronger on the former because migrants are often youth, mostly in the Pacific. As data for the new indicator are not yet available for all countries, we shall consider the old indicator. Migration reduces tensions on the labour market. Whenever, migrants may be employed before migration, their departures make jobs available for non migrants, as long as the economy is not too much affected by out-migration. Moreover, many young migrants never worked before migration, which is typically the case in the Pacific in the frame of preferential migration to New Zealand. However, youth unemployment is still high in these countries, from 12 per cent in Samoa, 30 per cent in Tonga, 35 per cent in FSM and 63 per cent in RMI. This shows that migration without economic growth is not the solution to unemployment. It is still more the case in Asia where emigration countries have actually the

highest youth unemployment rates (around or above 20 per cent in Indonesia, Sri Lanka and the Philippines<sup>xiv</sup>, and migration can only have a marginal effect on unemployment in China and India due to the size of their populations. Economic growth, not emigration, is the best way to reduce pressure on labour markets. This may be a reason why China and India have developed circulation of elites and return migration which contributes to economic growth.

#### *6. Health and environment, MDG 6 and MDG 7*

In origin countries, beside brain drain, migration also reduces the size of labour force in the lowest wage sectors, among which agriculture, reducing agricultural production and implying food imports. In the Pacific, migration and remittances have caused unprecedented extent of changes from the 1960s: modernization of housing, changes in diet and live styles that have resulted in the last decade in epidemic levels of NCDs: cardio-vascular diseases, cancers and diabetes. Dual mortality patterns have appeared in most of Pacific island countries as communicable diseases are still frequent due to poor quality of health services. The high cost of treatment of NCDs uses increasing proportions of the health budget hindering improvement in primary health care. At the end of the day, the impact of migration and remittances on population health as well as on the health budget is probably negative in the mass migration countries of the Pacific<sup>xv</sup>. This has led these countries to include NCDs in MDG 6 beside HIV/AIDS, TB and malaria.

Migration and remittances also impact on environment (MDG 7). Changes in consumption patterns result in more toxic waste and pollution affecting air, fresh water resources and coastal reefs. In Polynesia, shortages in agricultural labour force and remittance money have led to inconsiderate use of pesticides that affects coral reefs and reduces sustainability of in-shore fish stocks. Although poverty is high in RMI and FSM, the increase in automobiles and other household equipments have resulted in large amount of waste that cannot be dealt with in atoll environment and causes chemical pollution that can affect fresh water resources. Lack of adequate sanitation and domestic piggeries in Kiribati have led to high bacteriological pollution of the lagoon in South Tarawa, while pollution from automotives is also increasing. Population density in Ebeye (RMI) reaches above 30,000 per sq.km, it is above 10,000 per sq.km in Majuro urban area and above 8,000 per sq.km in Betio (South Tarawa). These environment issues are also present around cities in other Pacific islands and in Asia.

The relation of HIV/AIDS and TB with migration has already been largely debated, mostly as regards the former. It is true that migration increases risky behavior among lone migrants and results in HIV infection that is transmitted to spouses and partners. Behavior change, women empowerment, safe sex, anti-drug information campaigns are needed to reduce and revert the spread of HIV/AIDS<sup>xvi</sup>. There is also urgent need to develop relevant information to eliminate inaccurate ideas and discriminative practices against PLHA (people living with HIV/AIDS) as well as migrants altogether.

Furthermore, various MDGs indicators can be improved through the many uses of remittances:

- Purchase or in-kinds remittances of telephones, cell phones, computers and internet connection - Pacific countries with the largest expatriate communities are also those with the highest use of internet;
- Payment of education fees for children left behind or other relatives;
- Payment of health expenditures for children, parents or other relatives;
- Use of remittances for collective purposes:
  - Infrastructures (wells, improved toilets, sewage, generator/solar power, school books/materials, medicine for health centers), disaster relief,
  - Social life: cultural, sports or youth associations, churches..., that can contribute to social change and women empowerment and improve gender equity.

Finally, remittances used for investment or savings contribute to employment generation and economic growth in various ways, with related impact on MDGs indicators.

Altogether, whenever migration reduces, if not erases completely, population growth easing increases in services coverage, changes in age structure and dependency due to migration have adverse effects. It delays the advancement in the demographic window of opportunity that is favorable to development. Sectoral shortages in labour force can appear, mostly nurses and teachers for which international demand is high. Brain drain hinders improvement in quality of services causing stagnating infant and maternal mortality and low levels of education and qualification of the population and future migrants, creating a kind of reproduction of marginality.

## E. EMERGING ISSUES

In the frame of the space available in this paper, we shall briefly consider two emerging issues: one relating to bride migration and the other to brain circulation, social remittances, governance and development. Although they are rather already old issues, there has not been much progress done in these areas.

### *1. Bride migration*

Bride migration is already an issue in Asia. It is not unknown in the Pacific, mostly in countries where families used to arrange marriages and this now occurs between islands and rim countries. Imbalanced sex ratios at birth have increased in Asia. Female deficit on marriage markets is already felt in China and India, as well as in Korea (Rallu 2006). Given the size of the deficit in China (above 1 million from 2015, or more than a female birth cohort in the Philippines or Viet Nam) and India, it is unlikely that bride migration from neighboring countries can be the solution. However, even limited, bride migration would severely deplete female marriageable cohorts in other countries of the region. This is only one side of the problem. The other side would consist in continued imbalanced sex ratios at birth in these countries based on the belief

and hopes that migration will fill the gaps. A continuation of the trends, or stabilization of sex ratios at current levels, would have an impact on population growth and ageing (Attane 2006, Cai, Lavelly 2003) as well as consequences on family, society and culture.

## *2. Brain circulation and social remittances*

The guest worker and highly qualified migration patterns in Asia have moderately developed into brain circulation. Brain drain and sectoral shortages are still increasing. China and India have succeeded in developing brain circulation at a high level of qualification, with PhD students and young researchers studying and working in the US in ICT (often on Chinese or Indian data for social sciences) and returning to teach or work for a few months in universities in their countries of origin. Such pattern is not much developing in other countries for two types of reasons: lack of interest of migrants in returning to work in slowly developing economies, even for short periods, and lack of policy environment that enables such exchange, in the frame of suspicion of administrations, specifically in the Pacific, towards people who have been in contact with other ideas and could try to change the traditional, hierarchical and political systems that prevail in origin countries.

The lack of brain circulation is only part of a larger context that consists in the lack of social remittances in the Pacific. Despite large transnational communities with frequent movements between islands and rim countries, migration has not resulted in much social change in island countries and even only limited change occurs in migrant communities in rim countries. While some migrants leave to escape the constraints of local societies as regards traditional and religious life, most migrants organize their communities around ethnic lines and church leaders in rim countries. Return migrants who set up businesses and do not want to comply with traditional and religious authorities and the custom of gifts to the chiefs, are subjected to various pressures and discriminations and often re-emigrate. Altogether, island countries benefit from remittances, but do not reap the benefits of social and political change that would make business environment more attractive. Migration acts rather well as a safety valve for social problems like unemployment and lack of economic growth so that the need for policy change is not felt, or even is felt as a threat to the traditional system of governance. The low proportion of females in parliamentary seats in the Pacific, actually the lowest in the world, is testimony to the lack of social remittances and related limited women empowerment that does not reach to highest decision making positions.

## CONCLUSION

The effects of migration on population trends and structures are well known, but they become more and more difficult to measure, following uncertainties on the size of flows and characteristics of migrants in a long time frame and countries becoming affected by both out- and in-migration as well as transit migration.

The impact of migration on MDGs is for some part not different from the impact of population trends on MDGs. The reduction of population growth due to migration appears to be favorable to improvement in MDG indicators as rapid growth is obviously a challenge for

services delivery and therefore for mortality and morbidity indicators that directly depend on coverage and quality of services, as well as for curriculum completion indicators in education. In that, migration has the same effect as the demographic window of opportunity reducing birth cohort size, but the depletion of adult ages increases dependency. Whenever, migration countries have large proportions of their workers abroad sending remittances that are higher than wages they would earn in-country, increased dependency has negative effects on development at the national level, as regards services quality in relation to brain drain.

MDGs indicators for services do not reflect only the supply side. The demand side is also important and it is strongly related to MDG 1: poverty reduction, and MDG 3: gender equity. We have seen that remittances contribute to reducing poverty. Migration, like urbanization, certainly increases women empowerment and women are becoming a majority of migrants from some countries. Cases where the situation of women is deteriorating in the frame of migration can often be addressed through policies.

Remittances change lifestyles and can have negative impact on health and environment while at the same times they increase access to communication technologies.

All MDGs are related to poverty and a corner stone of the relationship between migration and MDGs is remittances and its impact on poverty. Remittances can lift significant proportions of the households out of poverty. But the overall economic impact of remittances, raising the cost of living, can reduce this benefit.

The final question is actually whether migration is favorable to economic development. It appears that migration countries have high unemployment rates and slow economic growth. Even small Pacific countries that have developed remittances based economies have stagnating or very slowly improving economic and social indicators, among which MDGs indicators. Brain circulation and social remittances need to be developed so that the full benefit of migration materializes in the frame of better social and economic policies and governance.

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## NOTES

<sup>iii</sup> These countries are also part of the new recognized Seasonal Employer Programme. Fiji was also included in the PAC and the SEP, but it was suspended after the 2006 coup. From 2002, these programmes replaced the Visa Waiver for short-term stays introduced in 1986 and the temporary work permit from 1992 for Tuvaluans and I-Kiribati. The latter was removed because of overstaying by Tuvaluans.

<sup>iii</sup> Indo-Fijian migration is also directed to Canada.

<sup>iv</sup> PNG, Solomon Is and Vanuatu have been put at the bottom of the table. These countries do not experience much migration, rather slight emigration for Vanuatu. Differences between total and natural growth rates are mostly due to poor quality of data used to estimate natural growth (census data based indirect methods); there is also some under-enumeration, specifically for Solomon Is.

<sup>v</sup> The Cook Is experience alternatively positive and negative growth according to economic situation in New Zealand. Total growth was -1.2 per cent in 1995-2000.

<sup>vi</sup> At ages below 50, mortality is negligible (except in case of conflict) and changes in cohorts mostly reflect net losses/emigration when index is below 1.0 and net gains/immigration when index is above 1.0. However, the method is affected by variation in quality of enumeration as well as in age reporting between censuses. Thus, the increase in cohorts reaching 5-9 years may translate under-enumeration of children 0-4 at previous censuses.

<sup>vii</sup> Data on residence at previous census, if they are reliable, can help sort the impact of immigration and emigration.

<sup>viii</sup> In Northern Marianas Islands, immigration of females resulted in the age group 20-34 twice as high as their expected size at the end of the 1990s.

<sup>ix</sup> Reliable data on residence at previous census would enable intercensal estimate of the impact of migration on dependency ratios, but data on non-resident and non documented migrants are usually missing (see above).

<sup>x</sup> However, in small countries like Niue and Tokelau, dependency ratios tend to fluctuate according to migration waves.

<sup>xi</sup> MDG 8 is mostly related to remittances and development and we shall not address it in this paper. It will be addressed in session 4 of this meeting.

<sup>xii</sup> It should be noted that data from Fiji 2003 HIES for indigenous Fijians are very different from those of Brown's survey of a smaller sample (400 households in total) in 2006 which shows less inequity in the distribution of migrants and remittances, with an extent of change that seems too important to have occurred in such short period. Results for Indians are more consistent in both datasets.

<sup>xiii</sup> PPP GDP per capita is also higher in China than in the previously cited emigration countries.

<sup>xiv</sup> Although 2005 data show much lower rate in the Philippines (15 per cent) while rate was just below 20 per cent in 2000-2004.

<sup>xv</sup> The adoption of similar life style by elites of non migration countries in Melanesia has resulted in increasing prevalence of NCDs and still more markedly dual mortality patterns, in the frame of low coverage of health services.

<sup>xvi</sup> In countries with important seamen migration (Kiribati and Tuvalu), the lack of information has resulted in high HIV prevalence rates among seamen's wives while it would have been easy to include sexual and reproductive health education in the curriculum of seamen schools in these countries.

**Table 1: Impact of migration on population trends and structures**

	Emigration	Impact	Immigration	Impact
Growth	Reduced	Usually favorable	Increased	
Sex ratio	Usually imbalances	Unfavorable	Usually imbalances	Unfavorable
Dependency	Increased	Unfavorable	Reduced	Favorable
	Emigration	Impact	Immigration	impact
Labour force	Brain drain	Unfavorable	Brain gain	favorable
	Brain circulation	Favorable	Brain circulation	favorable
Gender	Female headship	Un/favorable	Lone migrants	Un/favorable

**Table 2: Natural growth, total growth and net migration rates in South and South-East Asia and the Pacific**

Asia	Natural growth (per cent) 2000-2005	Total growth (per cent) 2000-2005	Net migration rate (per 1,000)	Pacific	Natural growth (per cent)	Total growth (per cent)	Net migration rate (per 1,000)
Bangladesh	1.96	1.89	-0.7	Fiji	1.7	0.7	-10.0
Brunei Darussalam	2.08	2.29	2.0	FSM	2.3	0.2	-21.0
Cambodia	1.75	1.76	0.2	Kiribati	1.8	1.8	0.0
China	0.7	0.67	-0.3	RMI	2.6	0.7	-19.0
India	1.64	1.62	-0.2	Nauru	2.3	0.2	-21.0
Indonesia	1.41	1.31	-0.9	Palau	0.7	0.8	1.0
Malaysia	1.82	1.95	1.2	Cook Is	1.5	1.6	1.0
Myanmar	0.93	0.89	-0.4	Niue	1.1	-3.0	-41.0
Nepal	2.15	2.08	-0.8	Samoa	2.7	0.3	-24.0
Pakistan	1.98	1.82	-1.6	Tokelau	2.4	-0.9	-33.0
Philippines	2.3	2.08	-2.2	Tonga	2.1	0.3	-18.0
Singapore	0.52	1.49	9.6	Tuvalu	1.6	0.5	-11.0
Sri Lanka	0.9	0.43	-4.7	PNG	2.3	2.7	4.0
Thailand	0.68	0.76	0.7	Solomon Is	2.7	2.8	1.0
Viet Nam	1.5	1.45	-0.5	Vanuatu	2.2	2.8	6.0

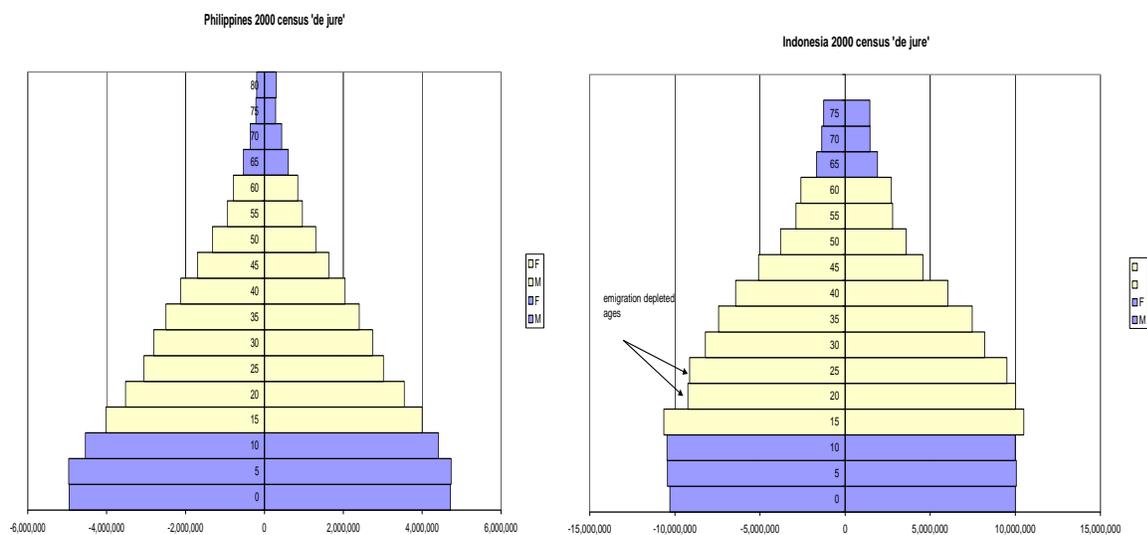
Sources: for Asia, UNPD World Population Prospects 2006; for the Pacific, latest intercensal data based on national census reports and author's calculations.

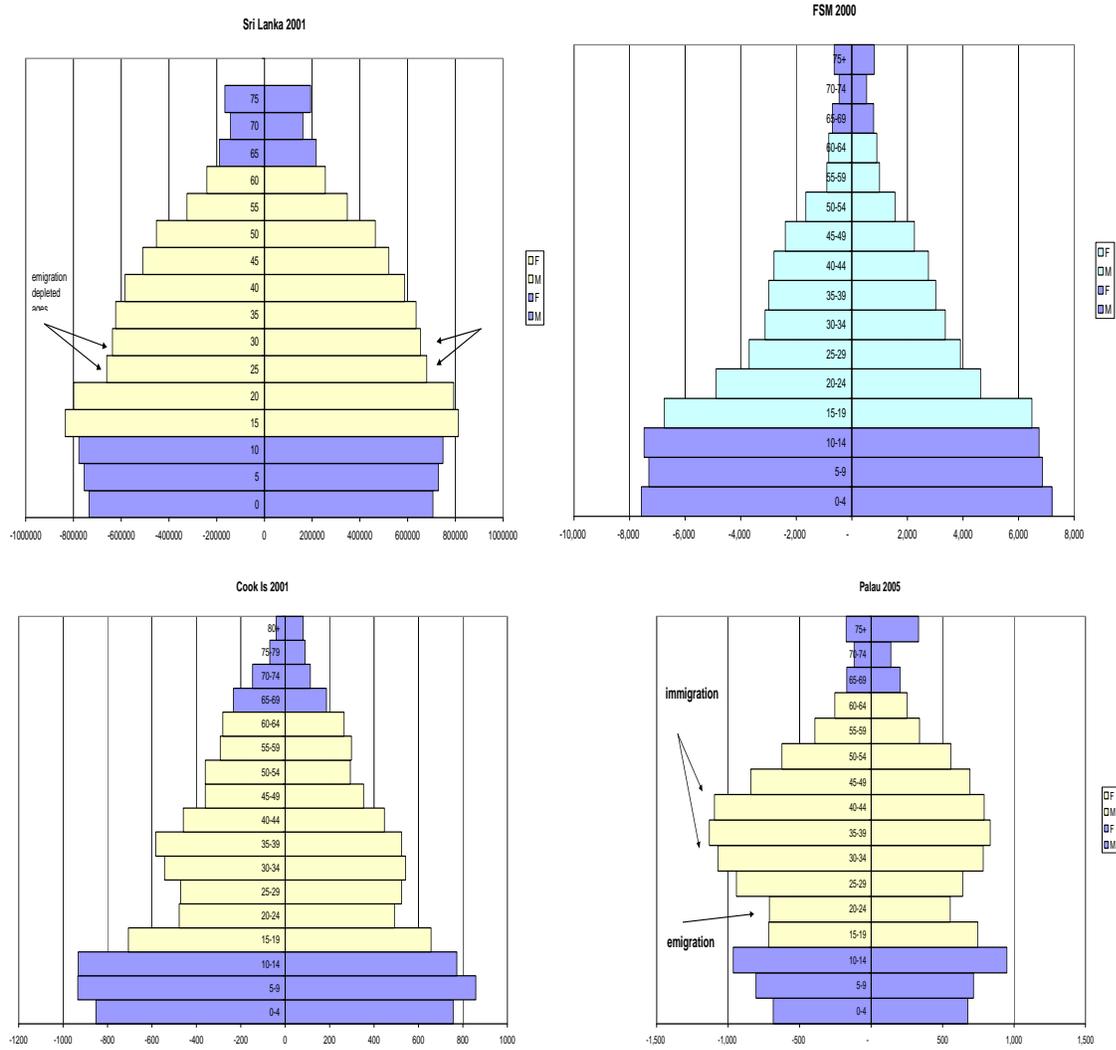
**Table 3: Dependency ratios in Asia and the Pacific, recent censuses; dependents aged 0-14 and 65 or over per 100 adults aged 15-64**

Asia	Dependency ratio	Pacific	Dependency ratio
Bangladesh	61.3	Fiji	62.6
Cambodia	66.7	FSM	78.6
China	42.9	Kiribati	68.1
India	66.7	RMI	82.5
Indonesia	54.7	Palau	42.5
Malaysia	61.3	Cook Is	67.9
Myanmar	51.5	Samoa	82.7
Pakistan	85.2	Tokelau	81.0
Philippines	63.9	Tonga	79.5
Singapore	38.9	Tuvalu	72.0
Sri Lanka	48.3	PNG	73.5
Thailand	42.9	Solomon Is	81.6
VietNam	56.3	Vanuatu	85.7

Sources: national censuses, various years.

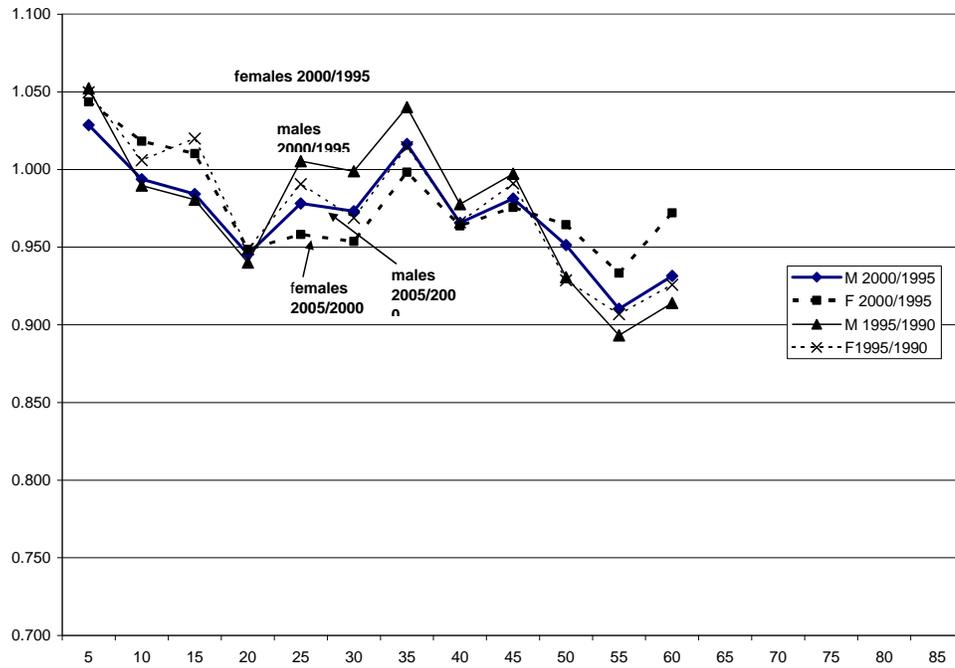
**Figure I: Age-pyramids of migration affected countries in Asia and the Pacific**





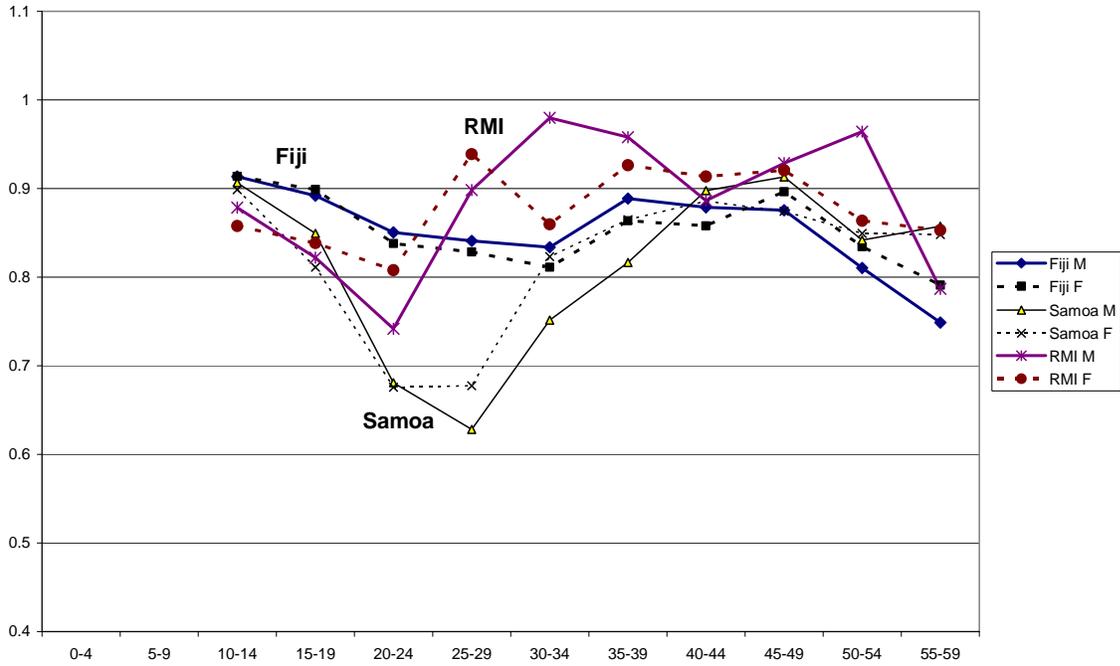
Sources: latest censuses

**Figure II: cohort change between 1995 and 2000, and 2000 and 2005 in the Philippines, by sex and age at most recent census**



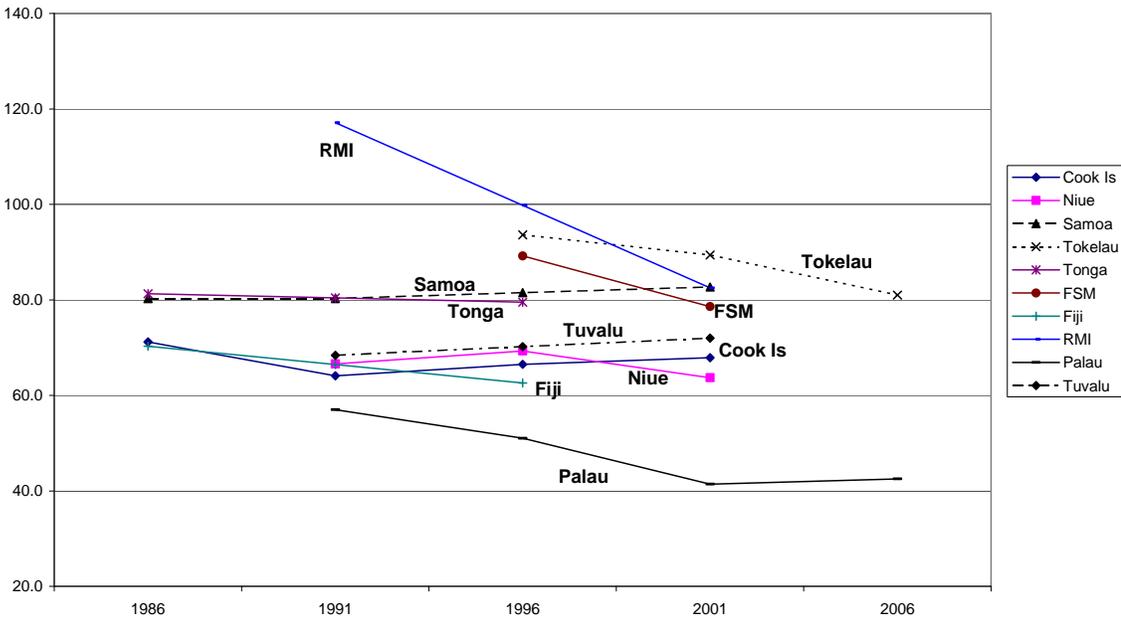
Sources: author's calculation from 1990, 1995 and 2000 census data of the Philippines

**Figure III: Cohort change over 10 years censuses in Fiji, RMI and Samoa, by sex and age at most recent census**



Sources: author's calculation from 1986 and 1996 Fiji censuses, 1991 and 2001 Samoa censuses and 1988 and 1999 RMI censuses.

**Figure IV: Trends in dependency ratios from mid 1980s to mid 2000s in Pacific migration countries**



Sources: national censuses, various years.

