

**The Demographics of Population Ageing in Latin America, the  
Caribbean and the Iberian Peninsula, 1950-2050**

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**Abstract**

As the ageing of populations encompasses the globe, Latin America and the Caribbean, with their own history, culture and traditions, now stand on the brink of their own ageing challenge, and countries are variously prepared or unprepared to take on the challenge and utilise the demographic window of opportunity available to them over the next 20 years or so. Over the last 50 years, as well as experiencing declining levels of fertility and mortality, the populations of the region have grown and urbanised, increasing strain on infrastructures such as public services, housing, transport, jobs and education. Although a large and increasing majority of people in the region live in urban settings, indigenous peoples still remain in rural areas, and there are sharp and constant divides in wealth. As a result, the demographics of the region and the policies to address the challenges of these demographics are thus not a one-size fits all – not across the region and not within countries.

This paper considers the demographic development across Latin America and the Caribbean region since 1950 to 2010 and forward to 2050. The Iberian Peninsula with its historical links to the region is also included to illustrate the convergence or otherwise of the region's demographics with that of (Southern) Europe.

**Key words:** population ageing, demographic transition, demographic dividend

## **Introduction**

The world is ageing – both at an individual and population level – and this ageing produces challenges and opportunities for governments and citizens across the globe (Leeson & Harper 2006, 2007, 2007a, 2007b, 2008).

At an individual level, life expectancies at birth have increased from 47 years in the mid 20<sup>th</sup> century to 69 years today, and are expected to rise to 76 years by the mid 21<sup>st</sup> century. At the population level, the proportion of the world's population aged 60 years and over has increased from 8 per cent in the mid 20<sup>th</sup> century to 11 per cent, and by 2050, it is expected to reach 22 per cent, equating to 2 billion people (United Nations 2009). The challenge of increasing longevity has long been an issue of demographic interest, and no less so in more recent years (Leeson 2009; Vaupel & Kistowski 2005, for example).

The scale of ageing across the globe is truly immense and must surely be regarded as one of the success stories of humankind as more and more people live long, relatively healthy lives (Leeson 2001). However, this success does not come without some concerns, perhaps, and challenges, most certainly. In addition, different regions of the world – and even different countries within regions – have experienced the demographic ageing of their populations in significantly different ways. For example, the ageing of the populations of Europe began with the so-called demographic transition and this transition from high fertility and mortality to low fertility and mortality lasted for around 150 years giving societies and governments time to address and adjust as their populations transitioned from young to old. The infrastructures in place in the developed world today (long term care services, housing and transport, pensions systems, for example) have been developed accordingly in response to changing demographics and levels of welfare. Elsewhere, and more recently, this transition is not only more dramatic in terms of scale, but also in terms of speed (for example, Khan & Leeson 2008). There is little time to address and adjust, despite the good intentions of governments, and the window of opportunity is closing slowly but surely.

As Europe and North America aged through the 20<sup>th</sup> century, the next wave sees the populations of much of Asia ageing in the first decades of the 21<sup>st</sup> century on an unprecedented scale, driven primarily by rapidly declining fertility. Fertility in Korea, for example, has declined in the course of just one generation from almost 3 in 1975-80 to just over 1 in 2000-05 (United Nations 2009). This presents huge challenges to individuals, families, and society as a whole, not least because many of these societies are highly family-based in respect of support for older people. Quite simply, that family is shrinking dramatically and the role of the family is changing likewise (Harper 2004).

As the ageing of populations encompasses the globe, Latin America and the Caribbean, with their own history, culture and traditions, now stand on the brink of their own ageing challenge, and countries are variously prepared or unprepared to take on the challenge (Brea 2003). As well as ageing, the populations of the region have grown and urbanised, increasing strain on infrastructures such as public services, housing, transport, jobs and education. So while a large majority of people in the region live in urban settings, indigenous peoples still remain in rural areas, and there are increasing divides in wealth and the demography of the region and the policies to address the challenges are thus not a one-size fits all – not across the region and not within countries.

This paper considers population ageing across Latin America and the Caribbean region for the period 1950-2050. For historical reasons, the Iberian Peninsula data are also graphed to illustrate the convergence or otherwise of the region's demographics with that of Southern Europe.

## **Population Growth and Urbanisation in Latin America, the Caribbean and the Iberian Peninsula 1950-2050**

By the mid 20<sup>th</sup> century, Latin America and the Caribbean were experiencing a veritable population boom as mortality declined while fertility remained relatively high leading to population growth rates of almost 2.8 per cent per annum in the early 1960s – surprisingly (perhaps) the highest rates of growth in any region of the world. These high levels of growth coincided with the region's highest levels of fertility – almost 6 live births per female on average. But such high levels of fertility were not to last. In just 30 years, this had been halved. Even so, population in the region doubled in the same 30 years, from 220 to 442 million. Part of this is due simply to the momentum in the population, but part of it is due to decreasing mortality, which ensured more and more people were surviving to older ages (life expectancy at birth increased by 12 years from 57 to 69 years) and significantly more children were surviving their first year of life (infant mortality rates fell from a staggering 126 per 1000 live births to a more modest 38 per 1000 live births). By 2010, despite continued declines of fertility to around 2 per female, the population of the region had increased by a third to 589 million, now comprising 8.5 per cent of global population.

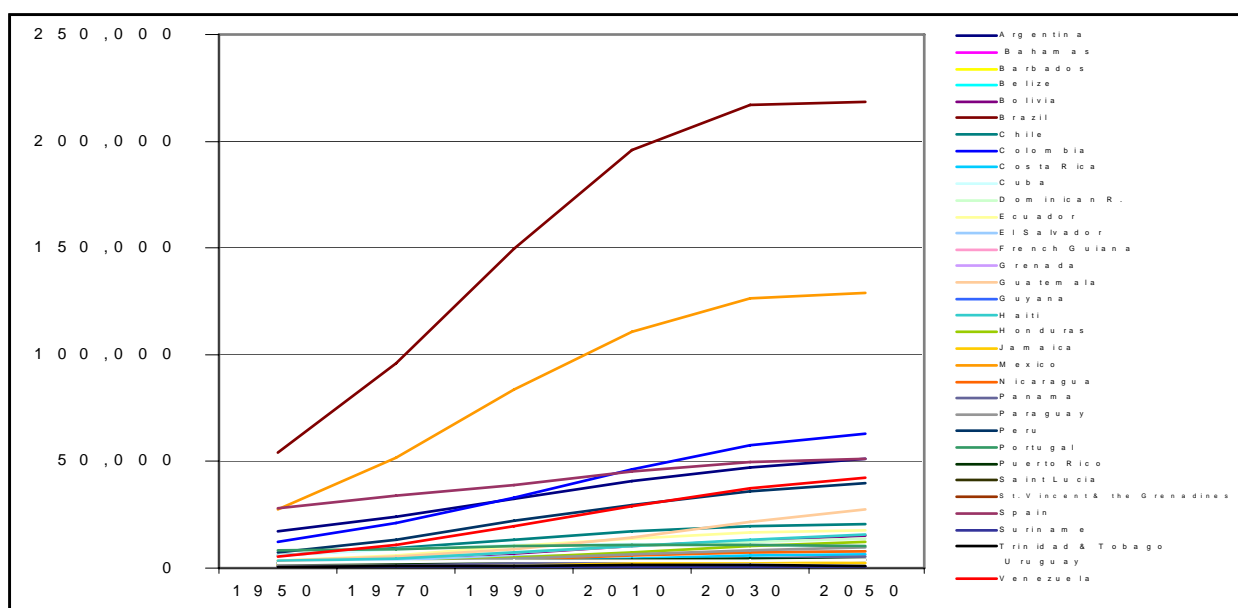
At the same time, the region was becoming more urbanised. In the mid 20<sup>th</sup> century, around 40 per cent of the region's population lived in urban settings, and by 2010 this had doubled with 80 per cent now living in urban settings. Likewise, urbanisation in the Iberian Peninsula has increased from around 30 per cent in 1950 to just over 60 per cent in 2010, and the level of urbanisation here is expected to increase further to 80 per cent by 2050. Only North America has a higher proportion of its population urbanised. These region-specific characteristics reflect a global trend of urbanisation as for the first time in human history more than 50 per cent of the world's population live in urbanised settings. More than 50 per cent of the world's urban-dwelling population lives in Asia. Interestingly, urban areas of the world are expected to absorb all global population growth over the next four decades as well as continuing to deplete the rural populations of the world by virtue of rural-urban migration (United Nations 2010).

But do the country-specific demographic pathways converge or diverge? Not surprisingly, population size and growth rates differ significantly across the region, as appears from Figure 1.

In the mid 20<sup>th</sup> century, the majority of countries in the region had populations under 10 million, ranging from just 25,000 in French Guiana to 7.6 million in Peru. Only four countries in the region had populations greater than 10 million, the largest of these being Brazil with 54 million, followed by Mexico (28 million), Argentina (17 million) and Colombia (12 million). As growth rates peaked in the 1960s, populations doubled almost everywhere over the next 20 years, notable exceptions being Argentina, Uruguay, Cuba, Puerto Rico, Jamaica and Barbados, and by 1990 the majority of populations had more or less tripled in size compared with 1950, notable exceptions again being Argentina, Uruguay, Cuba, Jamaica and Barbados. By the turn of the 21<sup>st</sup> century, growth was slowing across the region, but even so Brazil's population had risen to almost 200 million and Mexico's to around 110 million. The majority of countries (19) still had populations below 10 million, but there were now 11 countries with populations between 10 and 50 million, and two countries with more than 100 million inhabitants.

In 1950, the population of the region had more or less matched that of North America (Canada and the United States), but 60 years on the North was demographically overshadowed by its southern neighbours by more than 200 million people.

**Figure 1. Population in Latin America and the Caribbean, 1950-2050, by country. Thousands.**



Source: United Nations (2009)

The medium variant of the United Nations Population Forecasts suggests that the population of Latin America and the Caribbean will continue to grow, reaching 729 million by 2050, outranking its northern neighbours by almost 300 million by that time. Underlying this continued regional growth, however, is population decline, albeit modest, in a number of the smaller countries of the region, namely Barbados, Cuba, Grenada, Guyana, Jamaica, Puerto Rico and Trinidad & Tobago, continued modest increases in some other countries and population stabilisation elsewhere, while the pattern of mainly relatively small populations continues with 19 countries still with populations under 10 million, nine between 10 and 50 million and four more than 50 million (see Figure 1).

Along the same time-line, the population of the Iberian Peninsula increased from 36 million in 1950 to 56 million in 2010 and is expected to increase modestly to 61 million by 2050, and the Peninsula's share of global population has fallen from 1.4 to 0.8 per cent and is expected to decline further to just 0.6 per cent by 2050. As we shall see, fertility on the Peninsula has declined dramatically to fuel the slowing of its population growth, despite continued improvements in mortality.

The two main drivers of the development outlined above are fertility and mortality, and to some extent in localised areas also international migration, and in the following we shall consider the trend of convergence or divergence in the region in respect of each of the two main drivers, where the trends although at different levels are downwards.

## **Fertility**

In the 1970s to 1990s, the low levels of fertility (1.3 to 1.8) across Northern and Western Europe and North America were seen as unprecedented and unlikely to continue and the world's population was expected to reach 12 billion by the middle of the 21<sup>st</sup> century (Davis, Bernstam & Ricardo-Campbell 1986). In other words, there was no evidence and certainly no expectation that fertility would

- remain low in all of Europe
- plummet across Asia
- begin its decline in Latin America

or that

- world population would stabilise at around 9 billion by the mid 21<sup>st</sup> century

and as a consequence, predictions proved dramatically off course. Fertility levels remained low or increased only moderately in Northern and Western Europe and North America; they declined to extremely low levels in Southern Europe; and – even more unexpectedly – they declined dramatically in Asia, coming down to just above replacement level in the region as a whole and to frighteningly low levels in some countries such as Korea (around 1.2), Hong Kong (around 1.0) and Singapore (around 1.3). Fertility in Spain declined from 2.9 in 1970 to only 1.3 in 1990 and likewise in Portugal from around 3 to 1.49, and while fertility has recovered somewhat in Spain, it has continued to decline in Portugal standing at 1.39 in 2010 (United Nations 2009).

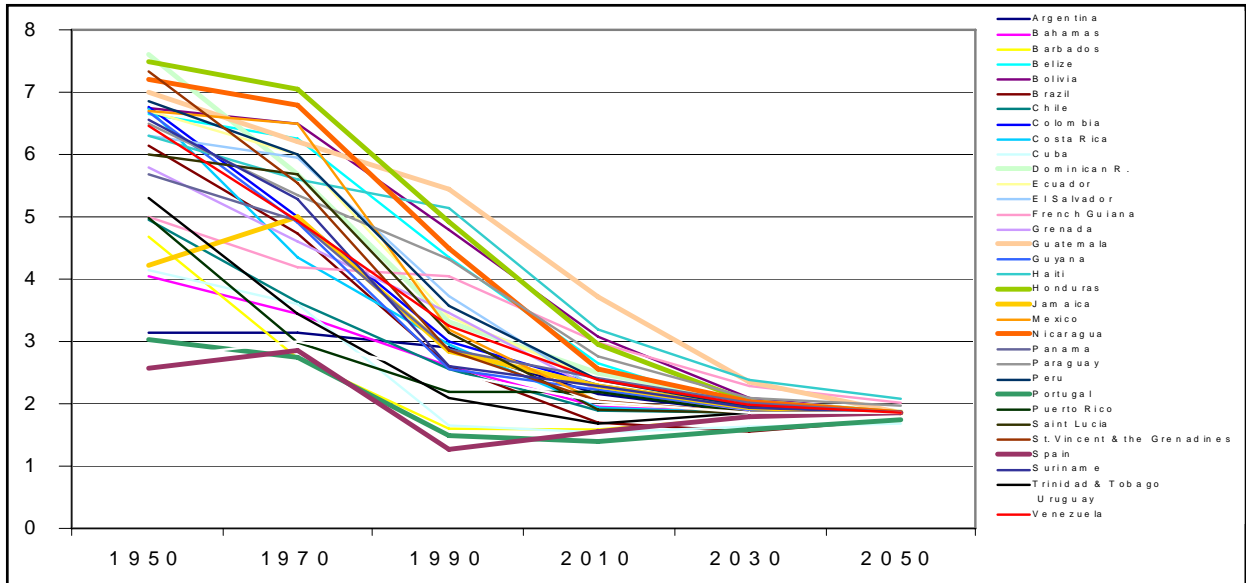
These fertility declines – and the beginnings of similar declines in Latin America – are the result of profound social changes, including changing values and attitudes as well as behaviour to family formation and childbearing. As can be seen from Figure 2, fertility across the region has plummeted from 1950 to 2010 with only one or two exceptions (for example, Uruguay where the decline has been from 2.7 in 1950 to 2.0 in 2010), and the variance in levels has decreased significantly. In 1950, levels had varied from 2.73 in Uruguay to 7.6 in the Dominican Republic and by 2010 this variance was from 1.54 in Cuba to 3.71 in Guatemala. In the most populous countries of the region, the declines have been from 6.1 to just 1.7 in Brazil and from 6.7 to just 2.0 in Mexico.

These are indeed dramatic declines both in terms of size and speed.

Towards the middle of the 21<sup>st</sup> century, there is a convergence of fertility levels across the region on 2.0, which is a result of the assumptions of the forecast's assumptions (United Nations 2009) and need not reflect a true convergence (compare with the predicted experience from the latter decades of the 20<sup>th</sup> century).

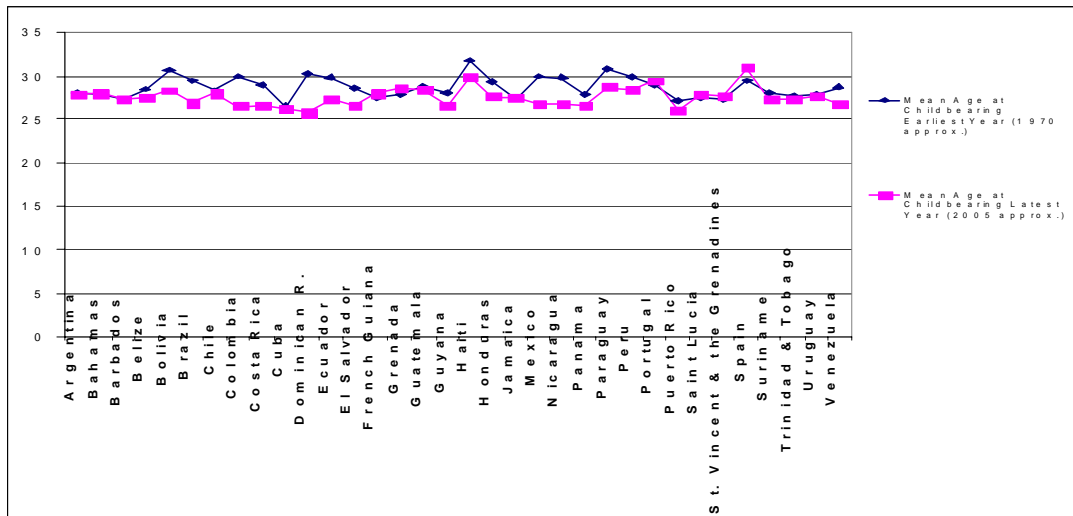
The mean age at childbirth in most countries under consideration has remained constant or has declined slightly from 1970 to 2005 (see Figure 3). The largest absolute decline has taken place in the Dominican Republic, from 30.3 years to 25.8 years. In Brazil, the decline has been almost 3 years to 26.9 years, and in Mexico more than 3 years to 26.8 years. In this same period, the mean age at childbirth in both Spain and Portugal has increased.

**Figure 2. Total fertility rates in Latin America and the Caribbean, 1950-2050, by country.**



Source: United Nations (2009)

**Figure 3. Mean age at childbirth in Latin America, the Caribbean and the Iberian Peninsula, 1970 and 2005, by country.**



Source: United Nations (2009a)

While these national figures for the development of fertility are in their own right of massive interest and concern for demographers and policy makers, the intra-country differences are vitally important as far as trying to understand the drivers of this fertility decline (over and above the emergence of cheap, accessible and effective means of birth control). Education, socioeconomic status and urban contra rural residence are all important determinants of fertility so that fertility tends to decline with increasing levels of urbanisation; to decline with increasing educational attainment of both males and females; and to decline with increasing socioeconomic status.

Education may well be the key of all of these factors in terms of driving large scale and universal fertility decline. Educated females tend to have higher aspirations for themselves and their children, and this alone leads to delays in marriage and child-bearing as well as smaller families. Once these aspirations have become rooted in a population, societal infrastructure also comes into play. The provision of childcare for working families and the provision of suitable housing for young families all come together in a perfect storm of low fertility.

### **Mortality**

Most countries of the region began to experience significant mortality declines after 1950, which led to marked increases in life expectancies at birth for both males and females, as appears from Figure 3. Across the region, however, there has been and still is noticeable variance between countries. So, in 1950 life expectancy at birth for males ranged from less than 40 years in Bolivia and Haiti to more than 60 years in Uruguay, Puerto Rico, Paraguay and Argentina. By 2010, this range was from 60 years in Haiti to almost 80 in Costa Rica, Cuba and Chile. The same is true for females although the variance is declining for both genders. Female life expectancy continues to exceed male life expectancy, and in fact the gender gap has widened over the past 60 years from 3.3 years to 5.5 years across the region on average – today the gap is widest in El Salvador at 9.5 years and narrowest in Grenada (3.2 years).

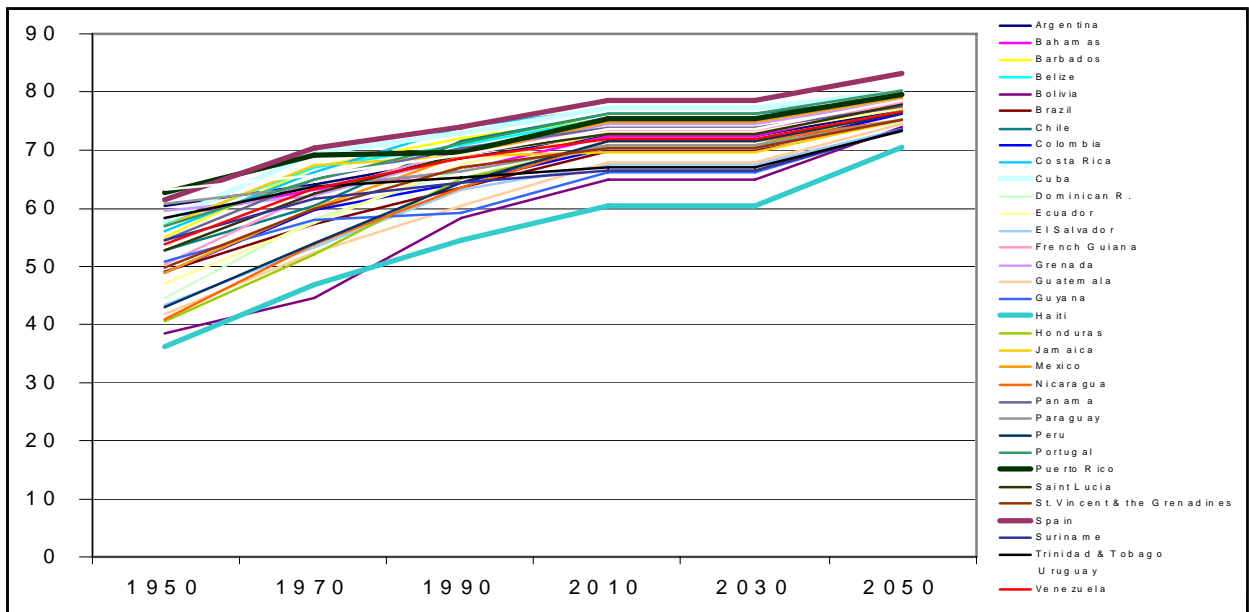
The gap between Latin America and the Caribbean and Northern American countries as far as life expectancy is concerned has been reduced considerably for both genders. In the early 1950s, there was a difference of around 17 years for males and 25 years for females. By the beginning of the 21<sup>st</sup> century, these differences had been reduced to just 7 years for males and only 5 years for females. Much of these improvements are related to a shift from mortality from communicable diseases to mortality from non-communicable diseases.

The future assumes continuing declines in mortality so that by 2050, the variance across countries of the region has reduced and life expectancies range from 70.5 years in Haiti to 80 years in Cuba for males, and from 74.6 years in Haiti to 86.6 years in Puerto Rico for females. Across the region as a whole, life expectancies at birth will have risen to 76.7 and 82.9 for males and females respectively, which compares with 81.1 and 86.0 years respectively in Northern America – another narrowing of the north-south gap in the Americas and the Caribbean.

Life expectancies at birth in Spain and Portugal for both males and females have constantly been in the upper end of the range across the regions and are expected to remain so. In terms of male healthy life expectancy today (WHO 2010), Costa Rica has the highest level in Latin America at 68 years, which means that 10.5 per cent of life expectancy is spent in ill-health, while Bolivia has the lowest at 57 years corresponding to 12.3 per cent of life expectancy in ill-health. In the Caribbean, Cuba leads with 68 years (10.5 per cent lost in ill-health) while Guyana has the lowest with 52 years (16.1 per cent lost in ill-health), and Spain has the higher of the two in the Iberian Peninsula with 71 years which corresponds to 9 per cent of life expectancy in ill-health while Portugal has 69 years (9.2 per cent in ill-health).

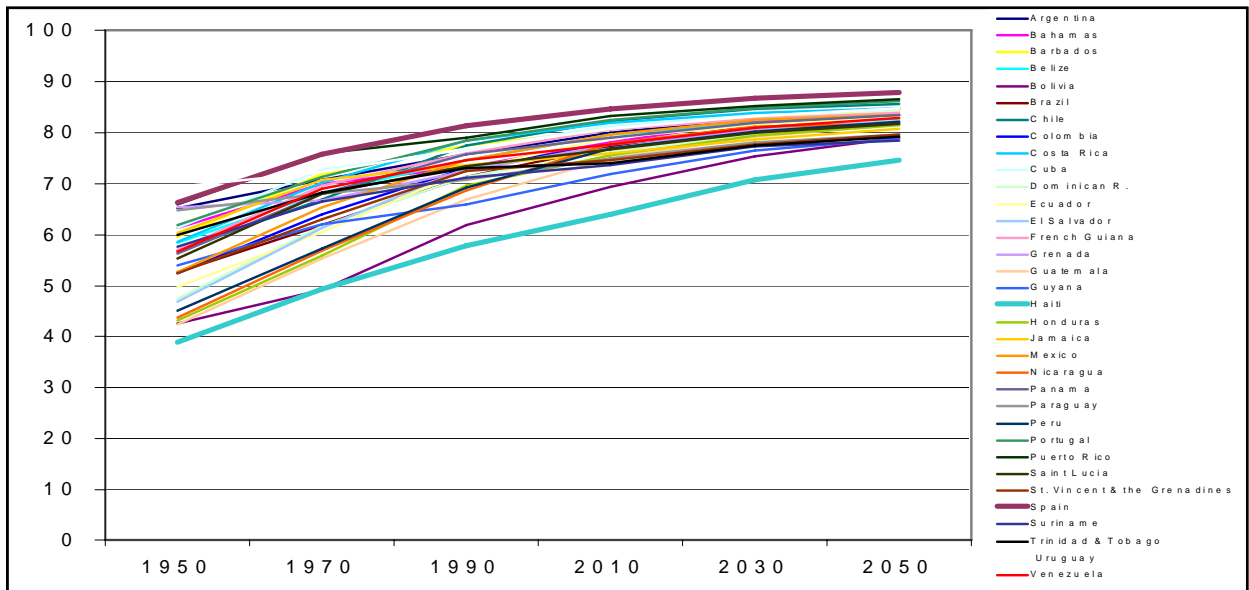


**Figure 3A. Life expectancy at birth for males in Latin America and the Caribbean, 1950-2050, by country.**



Source: United Nations (2009)

**Figure 3B. Life expectancy at birth for females in Latin America and the Caribbean, 1950-2050, by country.**



Source: United Nations (2009)

As far as female healthy life expectancy today is concerned, Chile has the highest level in Latin America at 72 years, which means that 12.1 per cent of life expectancy is spent in ill-health, while Bolivia has the lowest at 59 years corresponding to 13.2 per cent of life expectancy in ill-health. In the Caribbean, Cuba leads with 71 years (10.1 per cent lost in ill-health) while Guyana/Haiti have

the lowest with 55 years (19.1/14.1 per cent lost in ill-health respectively), and Spain has the higher of the two in the Iberian Peninsula with 76 years which corresponds to 9.5 per cent of life expectancy in ill-health while Portugal has 73 years (12 per cent in ill-health).

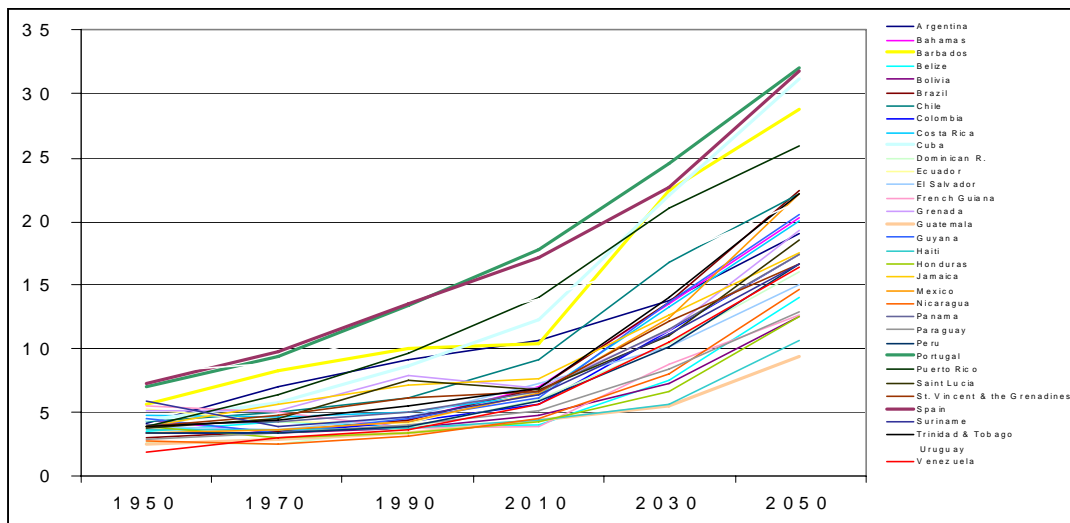
### The Ageing of the Population

While increases in longevity and life expectancy relate to our individual ageing, the declines in mortality and fertility relate to population ageing, a situation in which the number of older people and their share of the population increases. As mentioned in the introduction, given the demographic development outlined in the preceding sections, Latin America and the Caribbean now stand on the brink of their own ageing challenge as both individuals and populations age significantly.

Why is ageing so important? In fact, one could argue that ageing per se is not important, but what is important is the age structure of a population as this impacts on more or less all social phenomena from child care and schooling to housing and transport; from hospital care to long-term care; from the workplace to community services (Leeson 2009).

For most of the 20<sup>th</sup> century, Latin America and the Caribbean had youthful populations, and it was not until the 1980s that the proportion of the population aged under 15 years dropped below 40 per cent. By 2010, less than 30 per cent of the population was aged under 15 years, while the proportion aged 65 years and over stood at around 7 per cent, having been at most 5 per cent for most of the century (see Figure 4).

**Figure 4. The proportion of the population aged 65 years and over in Latin America and the Caribbean, 1950-2050, by country.**



Source: United Nations (2009)

In 1950, the region's oldest population was to be found in Uruguay, where 8.2 per cent of the population were aged 65 years and over. In Brazil and Mexico, this proportion was around 3 per cent. By 2010, Argentina, Barbados, Cuba, Puerto Rico and Uruguay all had proportions exceeding 10 per cent. However, as appears from Figure 4, the variance across countries of the region seems to have increased from 1950 to 2010 as the pace of ageing differs.

However, the next 40 years are predicted to witness a veritable explosion in the number and proportion of older people in the region with only Guatemala still having less than 10 per cent of its population aged 65 years and over in 2050 (United Nations 2009). The oldest population of the region is expected to be Cuba with 31.1 per cent of its population aged 65 years and over. But again, the pace of ageing varies across the region and the variance has increased even more by 2050.

Cuba, thus, towers above the rest of the region in terms of ageing progressing from around 4 per cent aged 65 years and over in 1950 to more than 30 per cent 100 years later. This country also represents all too keenly the challenges facing the region in respect of infrastructures not adequately geared to such an ageing population. But elsewhere, the ageing of population is dramatic enough. By 2050, 22.5 per cent of Brazil’s population and 22.1 per cent of Mexico’s population will be aged 65 years and over.

Not surprisingly, given the development of fertility and mortality outlined above, the populations of Spain and Portugal began to age earlier than those of Latin America and the Caribbean. Already in 1950, around 7 per cent of the population of the Iberian Peninsula was aged 65 years and over, increasing steadily to almost 18 per cent by 2010. However, over the next four decades this Iberian ageing is expected to develop even more markedly with the proportion of those aged 65 years and over reaching more than 30 per cent by 2050 (United Nations 2009).

But as mentioned above, the region does have a window of opportunity – the so-called demographic dividend – as the decline in youth and the increase in older persons actually coincide to provide a period of declining dependency.

By way of example, let us consider the regions two most populous countries Mexico and Brazil. Table 1 illustrates the development in the total demographic dependency from its peak in both countries in 1965 to 2050. Total demographic dependency is defined as the ratio of those aged 0-14 years and those aged 65 years and over to the population aged 15-64 years. This is of course not a true reflection of dependency in the population but is purely a demographic proxy of the ratio of those not working to those working. A total demographic dependency of 50 indicates that there are 100 people of working age for every 50 persons not of working age (either young or old).

**Table 1. Total demographic dependency in Mexico and Brazil, 1965-2050. Percentage.**

<b>Country</b>	<b>1965</b>	<b>2010</b>	<b>2025</b>	<b>2050</b>
Mexico	102	53	46	62
Brazil	89	48	42	59

The total dependency peaked in both countries in 1965 at 102 in Mexico and 89 in Brazil and since then the dependency has declined steadily to 53 and 48 respectively and will decline further to their lowest levels in 2025 (46 and 42 respectively). Thus, in both countries, the total dependency has been “favourable” and “improving” for 45 years and will continue to do so for another 15 years. The demographic shifts produced by the declining fertility in particular have increased the size of the labour force in relation to the non-working segment of the population, providing in theory a demographic backdrop for economic expansion – which in turn can be invested to offset the effects of ageing, which produce an increasing total dependency from 2025.

In other words, these countries – and others in the region – still have more than 20 years before this demographic window of opportunity begins to close.

By contrast, the demographic window of opportunity in the Iberian Peninsula is closing. Having declined from 56 in Spain and 59 in Portugal in 1965 to 47 and 49 respectively in 2010, the total demographic dependency is expected to increase to 55 in both countries in 2025 and further to 87 in Spain and 83 in Portugal by 2050, returning the Peninsula to a demographic of the 1960s.

### **Discussion**

This paper has presented data for the demographic development in Latin America and the Caribbean as well as the Iberian Peninsula over the period 1950 to 2010, and beyond to 2050. The Latin America and Caribbean region is characterised by dramatic declines in fertility and equally dramatic declines in mortality. The result is an ageing of the populations across the region.

Is an ageing population a particularly good or a particularly bad demographic? Demographically, there is no reason why a particular age structure of a population should be good or bad. The causes for concern are linked more to the ability of societal infrastructures at the local, regional and national levels to accommodate changes in age structures, in this instance the transition from lots of young to lots of old people. However, a population with few young people may not be a sustainable, just as continued and uncontrolled population growth is unsustainable. Therefore, a balance of young and old in a stabilised population may be the most preferable option – but it may be a most difficult one to achieve.

The question is really whether individual and societal aspirations match this balance? Do individual aspirations to have few children and to live long, healthy lives collide with the concept of population balance? Do societal aspirations to achieve population balance collide with these individual aspirations? Should we dissuade medical science from finding the cure for diseases of old age, thereby reducing our longevity and life expectancy? Should we exempt couples with 3 or more children from paying income tax? Is it possible to offset the population imbalance by way of international migration (Leeson 2004)?

What is particularly pertinent in this angle of the debate is the extent – if at all – to which these demographic trends can be reversed if so desired. So, for example, what will it take to convince young people to form families and have more (than one or even two) children? In the past, children were a resource. They contributed to family welfare (by working) and surviving children provided for security in old age of their parents. Today, one could argue that children are a drain on a family's resources, and survival is almost guaranteed, as we shall see in the following section.

Demographically, of course, children are important to provide new generations of workers and to maintain the population's continued existence. This has to be seen against a backdrop of increasing concern about population development and environmental change.

Equally pertinent is the extent to which individuals and governments are able to accommodate these individual and population changes in respect of increasing longevity and therefore increasing working life, for example, not to mention the issue of financial security in old age .

It is a complex equation.

However, there is some comfort to be found in the demographics at least. As exemplified in this paper by the experience of Mexico and Brazil, countries of the region have actually had a lengthy period of demographic opportunity in which the total demographic dependency has been declining providing in theory a backdrop for economic expansion fired by a growing labour force. While it may have been difficult as yet for some countries to have taken optimal advantage of this opportunity, the demographic window remains open for at least 20 years.

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