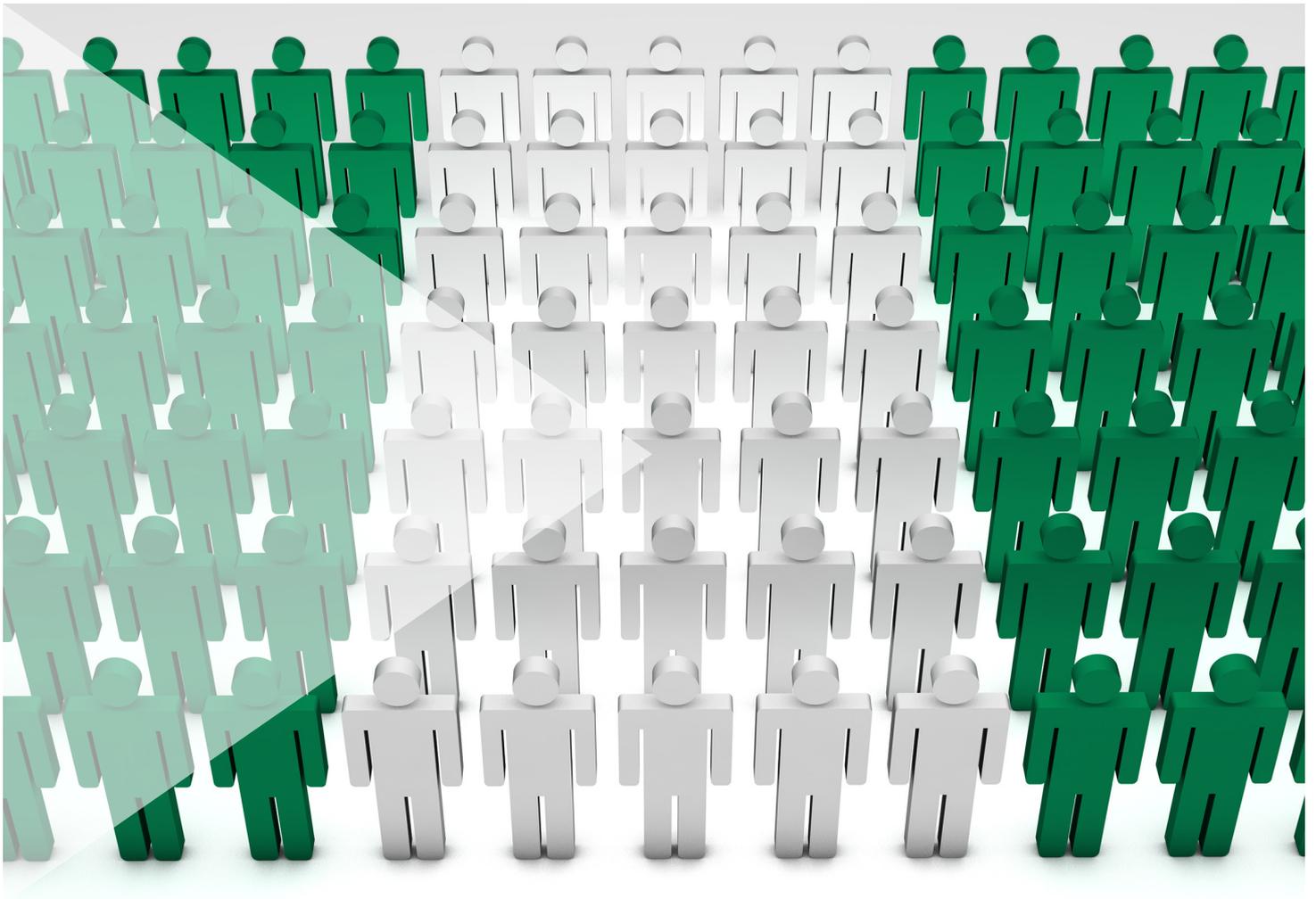


Global Agenda

# Prospects for Reaping a Demographic Dividend in Nigeria

A case study by the World Economic Forum's Global Agenda Council  
on Population Growth

Mai 2014



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REF 290414

# Executive Summary



**Nigeria's population is expected to surpass that of the US by 2050.**



UN World Population Prospects: the 2012 Revision

With an estimated population of 170 million people, Nigeria is the seventh most populous country in the world. The country has a very youthful age structure, with nearly three-quarters of its population under the age of 30. Even if its fertility and mortality rates decline substantially, Nigeria will still have a youthful age structure which is projected to increase by 40% by 2025. Without effective population policy to reduce the high fertility rate, Nigeria will become among the fourth or fifth most populous country in the world with a projected population of almost **400 million by 2050**.

## Implications

This demographic trend has implications on Nigeria's economic development because the youth population are dependents who need access to education, healthcare and other social services. It would mean that rapid population growth will put **substantial pressure on the country's capacity to provide quality social services** such as new schools, more clinics, adequate sanitation, as well as food and provisions to meet basic needs. Most importantly, the **economy will have to generate enough jobs to absorb the millions of young people joining the labour market every year**.

While Nigeria has become Africa's largest economy based on GDP, the economic growth has not been equitable or broadly shared, with almost **60% of the population living on a \$1 a day**. However, the country has made significant progress in reducing child mortality rates, achieving universal primary education, combating diseases and improving maternal health.

## Demographic dividend

While providing for such a large population poses a significant economic challenge, its age structure can be a potential key to Nigeria's sustainable economic development. This is the so-called "demographic dividend" – **the economic benefit arising from a significant increase in the ratio of working-aged adults relative to young dependents**.

When birth rates decline significantly, the age structure shifts towards more working-aged adults, which can in turn help in accelerating economic growth through increased productivity, greater household assets and lowering costs for provision of basic social services to younger segment of the population. To achieve this, the number of working-age adults must increase relative to the number of dependents.

How fast for this to materialize will depend to a large extent on the speed at which the decline in the dependency ratio (decline in fertility) takes place.

## Purpose of the case study

The case study was undertaken to highlight the prospects for Nigeria to reap economic growth benefits from its demographic structure, drawing insights from population analysis at sub-national levels and present policy recommendations to Nigeria's federal and state governments.

It is in the interest of policy-makers as well as the private sector and civil society leaders to achieve the prospects of a demographic dividend in Nigeria. The dividend is a one-time opportunity that will not last indefinitely. Although disconnected from the more immediate political cycles, it has long-term implications for national development that leaders have a responsibility to harness; otherwise the dividend will not materialize and can lead to adverse effects on the economy.

## Recommendations

### Federal level

- Ensure the immediate review and revival of the National Population Policy and its implementation mechanisms, with strong leadership from the president and National Assembly
- Accelerate ongoing efforts to improve maternal and child health, and ensure all unmet needs for family planning are met with federal government resources; this includes focusing on teenage-friendly reproductive health services
- Accelerate access to, and quality of basic, secondary and post-secondary education for girls and boys
- Enact culturally appropriate affirmative action policies and laws to encourage women's participation in the work force and business opportunities, particularly in the northern parts of the country.
- Use various media and the local film industry to promote culturally appropriate role models for girls and young women
- Constructively engage religious and traditional leaders with positive assurances of the government's intention

### State level

- Each state should review its own population policy and implementation approaches, deriving guidance from the reviewed national policy

Each state needs to commit its own resources to complement federal government efforts in the areas mentioned above.

Nigeria is Africa's most populous nation with an estimated population of more than 170 million, having grown at 2.7-3.2% annually for the past several decades. By 2050, Nigeria will be among the five most populous countries in the world, with a projected population of almost 400 million.

# Introduction

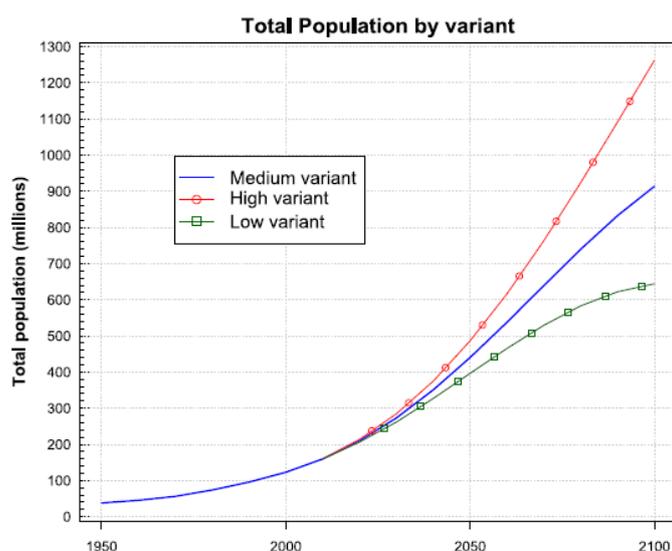
Despite the recent GDP rebasing, median incomes remain very low, with almost 60% of the population living on \$1 a day, according to a recent survey. Culture and economic marginalization remain key factors in explaining the high rate of population growth. The rate of population growth (excluding migration) correlates with the incidence and distribution of poverty.

While providing for such a large population poses a significant economic challenge, the age structure can also be a potential boon to growth. This “demographic dividend” occurs when there are many more people of working age relative to those who are not, because they are either too young or too old. In this paper, it is argued that Nigeria is poised to avail itself of such a boon. Recent estimates show that it can be substantial. But the dividend will not come automatically. To seize the opportunity, Nigeria must adopt policies that will develop its workforce and ensure that it is productive. Equally important, the policies must be consistent with the varying realities of Nigeria’s regions.

The purpose of this report is to highlight the prospects for Nigeria to reap economic growth benefits from its demographic structure, drawing insights from population analyses at sub-national levels and presenting policy recommendations for the federal and state governments.

## Figure 1: Population Projection

Source: UN Population Division



## Nigeria’s Demographic Dividend

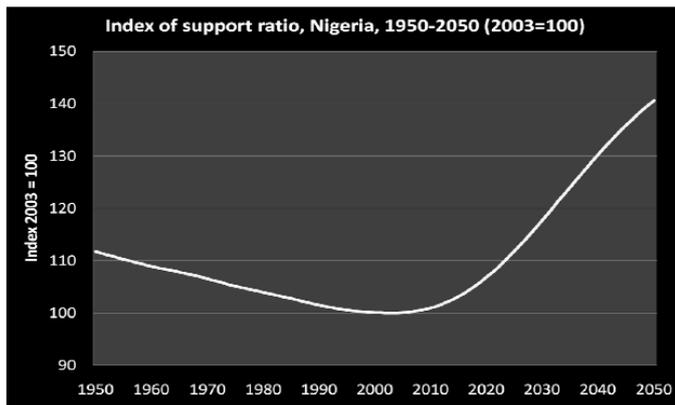
A country’s population level depends on its fertility and mortality rates. Most developing countries experienced high population growth rates in the 1960s-1990s due to dramatic declines in mortality, especially among infants, as public health improved. Population growth began to stabilize when fertility rates also fell. The population age structure began to look less like a pyramid, with many young children and progressively fewer older cohorts. Instead, a “youth bulge” began to appear as the number of infants declined while the youth began to age – entering working age and eventually older ages.

A country can reap a demographic dividend if the size of its working age population increases while the number outside that range declines due to sustained lower fertility (average number of children per woman). A workforce with fewer dependents relative to the working age population has the potential to boost economic growth. The East Asian “economic tigers” – such as Hong Kong, South Korea, Singapore and Taiwan – may owe up to a quarter or a third of their economic growth to this phenomenon (Bloom et al., 2000). Similarly, a significant portion of Ireland’s growth can be attributed to the legalization of contraception (Bloom and Canning, 2003). Is such a demographic dividend possible for Nigeria? Recent work suggests that it is – and, with the right policies, that it can be substantial.

Until recently, despite an acceleration in the measured rate of GDP growth, real GDP growth per capita had languished for many decades. Real GDP per capita in 2006 was virtually what it was 25 years earlier. Part of the drag on Nigeria’s economy has been its demographic structure with higher dependency. Nigeria’s fertility rate, even though lower than in previous years, is higher than that of sub-Saharan Africa as a whole and more than twice the world average. The high fertility rate combined with the welcome decline in mortality has resulted in what demographers and economists call a high “dependency rate” (the inverse of the “support ratio”). The large number of young children who are too young to work, along with older people above 65, have to be provided and cared for, resulting in a smaller share of working-age people compared to in other countries.

The economic support ratio for Nigeria is displayed in Figure 2. Since 1950, the support ratio declined as a result of high fertility rates. After 2003, the ratio increased and did so steeply, as birth rates declined and the share of the working-age population rose. Assuming a continued reduction in fertility, the share of working-age people should rise significantly by 2050. The ratio of the working-age to non-working-age population will rise to about 2 by 2050. If employed productively, the working-age group can cause Nigeria to reap a demographic dividend.

**Figure 2: Nigeria's Support Ratio 1950-2050**  
(Bloom et al., 2010)

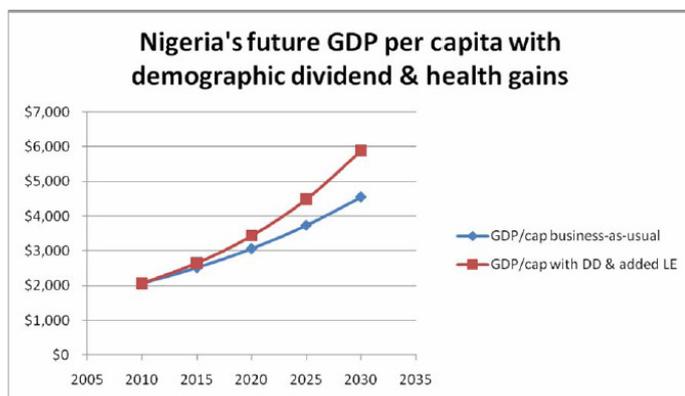


How much would this dividend be in the future? Specifically, how much more would Nigeria's economic growth be expected to increase if this dividend were to be realized?

A recent study has done this calculation and gives a rough order of the magnitude of the effect. Before reporting the results, it is important to outline the assumptions behind the model. The model used to project economic growth is based on a five-year panel dataset for 88 countries from 1965 to 2005. A variety of factors are taken into account – aside from demographic variables, there are variables to describe a country's geography, its human capital (including life expectancy), its policy towards openness, and the quality of its institutions. This model is then used to project growth for Nigeria under different economic, demographic and institutional scenarios; that is, what would Nigeria's growth rate be if it were to follow international trends?

The so-called "business as usual" scenario is revealing. This scenario assumes that Nigeria's average annual GDP per capita growth will be 4.02% from 2010 to 2030, or roughly the growth that Nigeria enjoyed from 2000 to 2008. While this is probably an optimistic scenario since Nigeria's recent growth is much higher than its growth since the 1980s (which was negligible), it is illustrative. The results are shown in Figure 3.

**Figure 3: Nigeria's GDP Growth with a Demographic Dividend**



Nigeria's GDP per capita would be almost 12% higher by 2020 and as much as 29% higher by 2030 as a result of simply demographic change and expected life expectancy increases. This means that the economy in 2030 could be more than three times larger than today with the demographic dividend and life expectancy increases, compared to around two times larger than today under the default growth scenario (Bloom et al., 2010).

Bloom et al. also say, though, that this dividend is not automatic. New jobs would have to be created for the labour force. And institutional capacity would have to be built to develop services, including safeguarding and building up human capital. This is discussed further below.

## Diversity

The Federal Republic of Nigeria is governed through three tiers of government: the central federal government, 36 states divided into six geopolitical zones, and 774 local government areas and the Federal Capital Territory. How would the demographic dividend projected for all of Nigeria hold true for these regions, given that the age structures for the regions vary dramatically?

To further understand the dynamics of population growth in the various sub-national units, population estimates by states were obtained from the National Bureau of Statistics and compiled into geopolitical regional units. Known fertility and mortality estimates for 2012 and projected changes in population structures in the six geopolitical zones over the period to 2030 and until 2050 were then applied. Using an established theoretical model, additional economic growth for each zone was determined, based on projected demographic change and increasing life expectancy, which resulted in per capita income projections.

Population trends vary drastically across Nigeria's regions. The three southern regions have much lower fertility rates (4.2-4.4 children per woman over her lifetime) than the three northern regions (5.4-7.2 over a woman's lifetime). Life expectancy is almost 15 years more in the south-west than in the north-east. These conditions generate vastly different demographic projections and estimates regarding the dividend.

Assuming a base case rate of growth of 3%, fertility rates continue to decline smoothly by 1.5 through 2030 (TFR3) and mortality in the northern region is reduced to that of Nigeria as a whole (MR2), the economies in the three northern zones would be 100-115% greater in 2030 than they are today. If, however, fertility rates do not change from what they are at present, the economies would only be 69-76% greater in 2030 than today.

The importance of sustained and faster lowering of fertility is also evident for the south, which is already benefiting from the demographic “window of opportunity”, which means its dividend will be lower than that of the north. With a faster decline in fertility, the economies would be 75-82% larger in 2030 than they are at present, assuming there is no further change – but if fertility does not decline, the economies would only be 45-48% greater in 2030 than today because of the ageing of the population.

In either case, the demographic dividend for the southern zones would be much smaller than for the northern zones. The increase in the economies is significantly higher if fertility continues to decline by 1.0 from 2030 to 2050 in both the north and the south, but also much higher in the north.

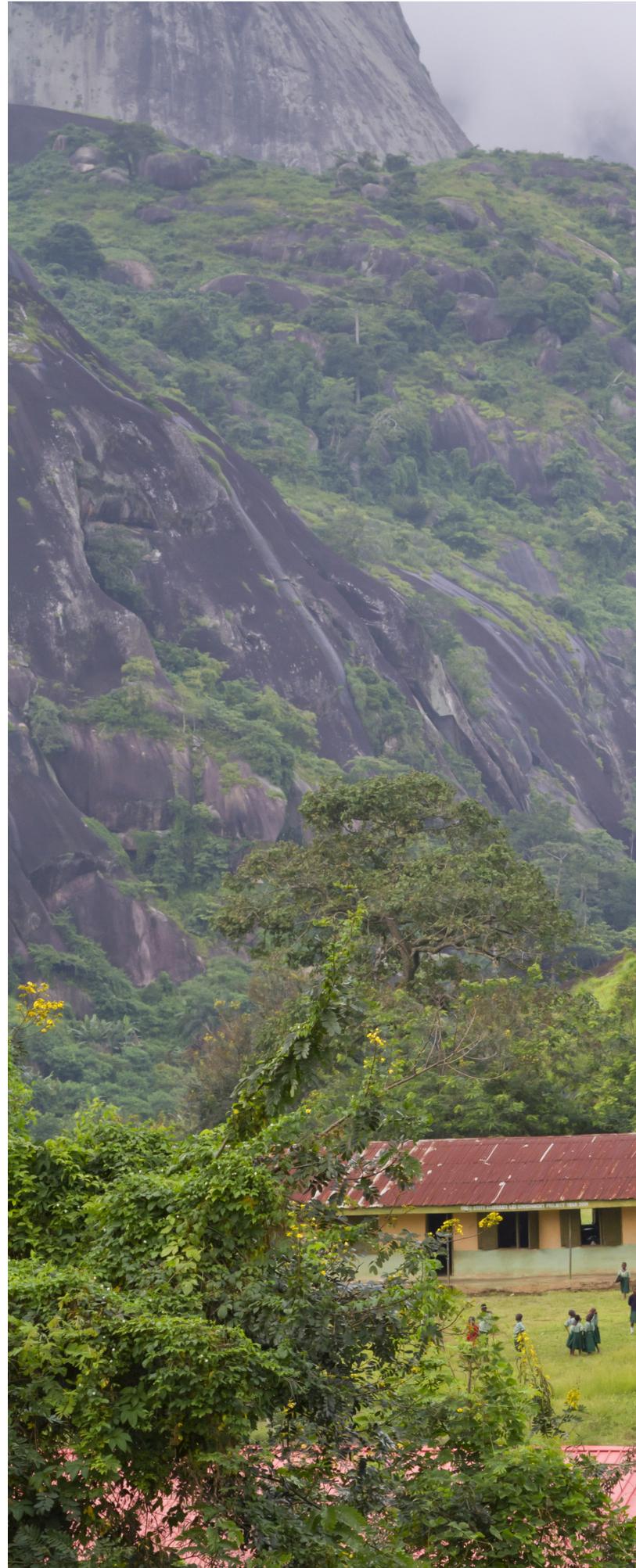
## Summary of the Four Key Results

*There is a demographic dividend in Nigeria's future.* Clearly, there are good prospects for Nigeria's demographic dividend, starting from the mid-2020s until 2050.

*But the dividend is not automatic.* To reap the dividend, Nigeria will need to accelerate progress in fertility and mortality reduction through quality reproductive health services and commodities. The country must also improve the access and quality of education for both boys and girls, and encourage women participation in the labour market while enacting policies to create meaningful jobs for the youth. The public sector and the private sector need to anticipate this and work together to create employment opportunities.

*The timing of Nigeria's demographic dividend varies by geopolitical zone.* The southern geopolitical zones (south-south, south-west and south-east) are already undergoing a demographic transition, with slower population growth and favourable age structures, and thus less dependency and consequent higher per capita incomes. The northern geopolitical zones (north-west, north-east, and north-central) have more rapid growth and youthful age structures, with higher dependency and lower per capita income. This decoupling of the timing of Nigeria's demographic dividend is worth noting for its policy implications to ensure more equitable national development into the future.

*Magnitude of the demographic dividend also varies by geopolitical zone.* It appears from the analysis that the northern geopolitical zones have the most to gain from the upcoming demographic dividend in terms of percentage increase in per capita income, even though all regions of the country stand to gain from the demographic dividend. The northern geopolitical zones, which have seen the highest dependency ratios and low per capita income growth, are likely to gain the most from any future demographic dividend.





## Seizing the Dividend during the Window of Opportunity

### *Population policy*

Nigeria has managed to grow economically off a low base so far. But future growth will require a different approach to population policy. The country is fast approaching the likely limits of current GDP growth based on only a larger population. Rising inequality amid continued unchecked population growth threatens both current and future prosperity.

National population policy is a government's effort to influence demographic variables such as fertility, mortality and migration towards national development. Nigeria's demographic profile has been characterized by high growth, its youthful nature – almost half of the population is under 15 years of age – rapid urbanization, high adolescent maternal mortality and high-risk pregnancies. Consequently, the country's National Population Policy (2006) was based on certain key principles:

- Nigeria's population is its greatest asset
- The government is committed to pursuing appropriate policies to ensure the sustainable development of its population
- Every Nigerian has a right to the highest level of health
- The family is the basic unit of society
- The well-being of children is the highest priority
- The government recognizes and will provide for the needs of young people to equip them to be future leaders
- Everyone has a right to information and education
- The government will pursue gender equality, equity and empowerment
- The needs of vulnerable members of society will be addressed

Following adoption of the national population policy, an institutional framework for implementation of the policy was put in place in 2008, comprising the National Council on Population Management to be chaired by the president, a population advisory group and a population technical working group. A strategic plan was approved in 2008 and a multi-sector, multi-tiered approach to implementation was adopted.

Implementation of the national policy has been dismal. As a consequence, Nigeria's women and children still have high preventable morbidity, maternal mortality, early marriage and adolescent pregnancy with the resulting complications. The country has a persistently high, unmet need for contraception among women in all states and across all geopolitical zones and ethnic and religious groupings. Nigeria's commitments announced at the London 2012 Summit are yet to be fully implemented despite initial optimism. The commitments include increasing the federal government's budget allocation for family planning commodities to \$11.5 million annually, at least until 2016, to raise the contraceptive prevalence rate by 2% annually and save the lives of 23,000 women.

Policy-makers and private sector and civil society leaders must have an interest in the prospects for the demographic dividend in Nigeria. The dividend is a one-time opportunity that will not last indefinitely. Although disconnected from the more immediate political cycles, it has long-term implications for national development that leaders have a responsibility to harness; otherwise the dividend can turn into a disaster.

#### *Federal level*

- Immediately review and revive the National Population Policy and its implementation mechanisms, with strong leadership by the president and the National Assembly.
- Accelerate ongoing efforts to improve maternal and child health, and ensure all needs for family planning are met with federal government resources. This includes focus on teenage-friendly reproductive health services.
- Accelerate access to and the quality of basic, secondary and post-secondary education for girls and boys.
- Enact culturally-appropriate affirmative action policies and laws to encourage women's participation in the workforce and in business opportunities, particularly in the northern parts of the country.
- Use various media and the local film industry to promote culturally appropriate role models for girls and young women.
- Constructively engage religious and traditional leaders with positive assurances of the government's intentions.

#### *State level*

- Each state should review its own population policy and implementation approaches, deriving guidance from the reviewed national policy.
- Each state should commit its own resources to complement federal government efforts in the areas mentioned above.



# Acknowledgements

All Members of the World Economic Forum's Global Agenda Council on Population Growth contributed to the conceptualization, design and writing of this case study. Population and economic projections were carried out by David Bloom's team of researchers at Harvard University, Salal Humair and Simiao Chen. Yemi Kale, Director-General of Nigeria's National Bureau of Statistics, provided the population and economic data for the analysis. Prishanee Logan, Patrick McGee and Daniel Emejulu of the World Economic Forum provided overarching support throughout the process.

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# Annex

**Table 1: Data Source for Inputs**

Source: Population and income data obtained from the National Bureau of Statistics, 2013

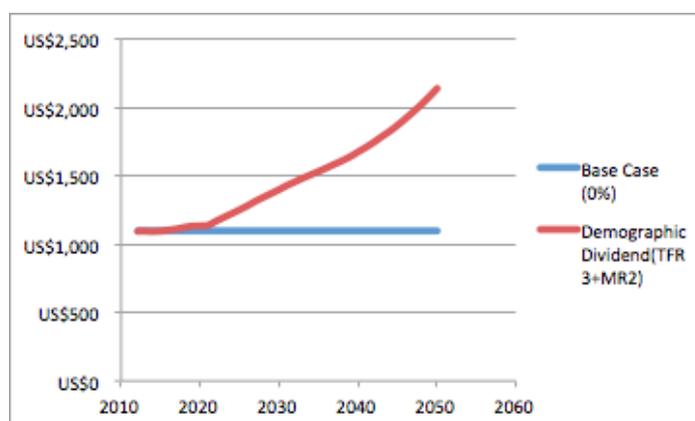
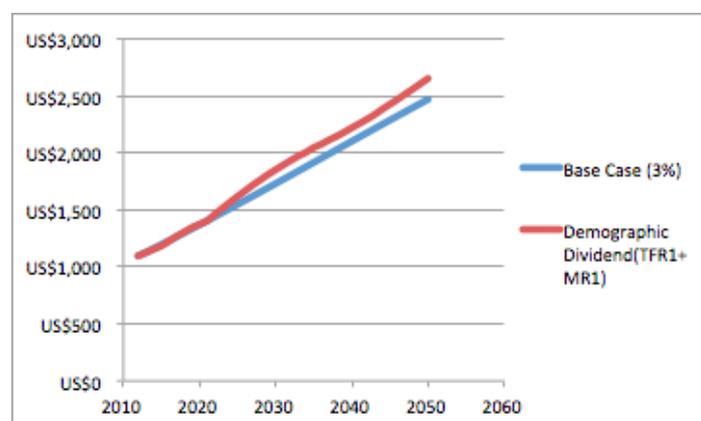
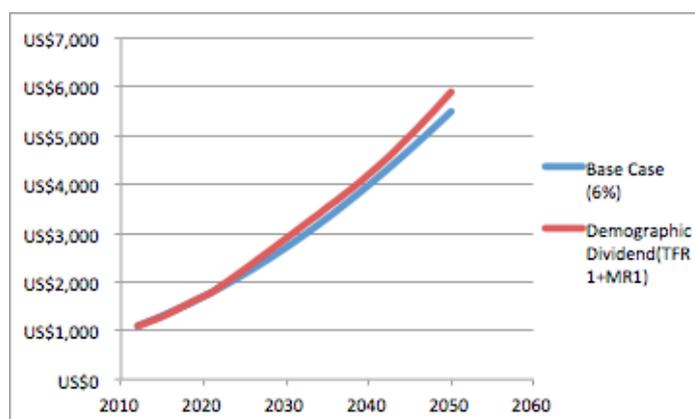
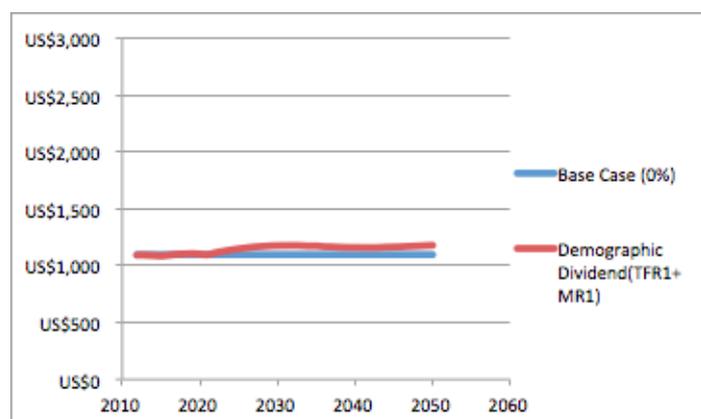
	TFR* in 2012	U5MR** in 2012	IMR** in 2012	LE*** in 2012
North-east	7.2	134	90	49.1
North-central	5.4	82	63	58.2
North-west	7.0	132	75	49.8
South-south	4.4	83	69	57.8
South-east	4.4	93	78	56.1
South-west	4.2	54	48	64.0

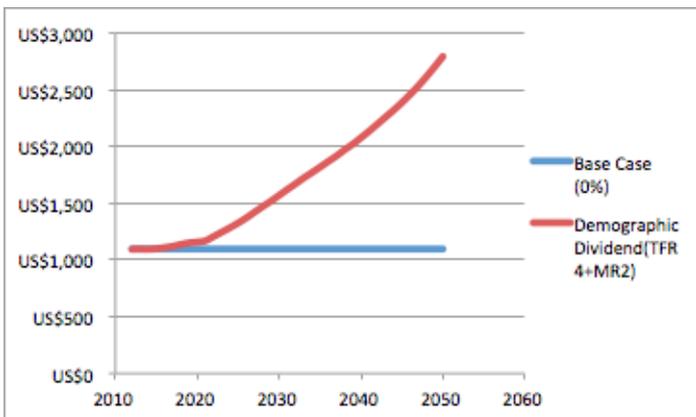
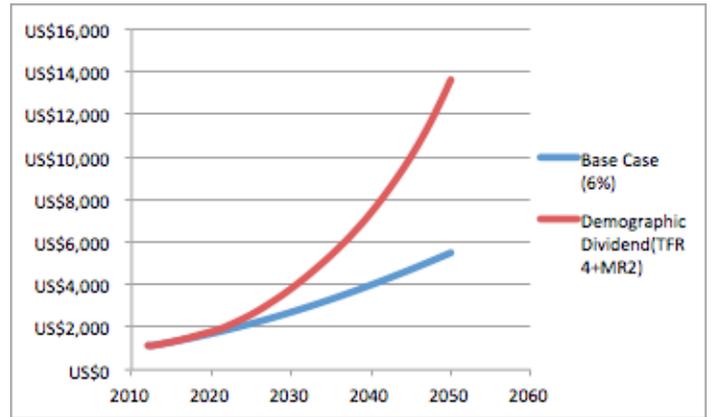
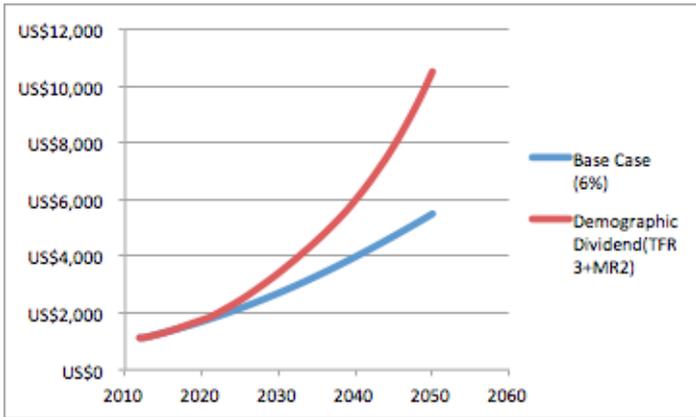
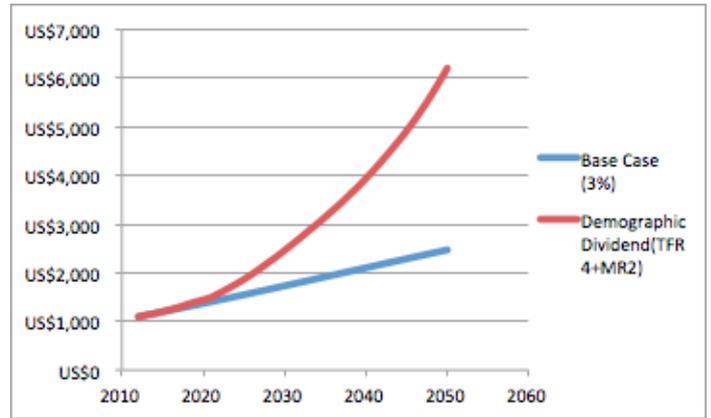
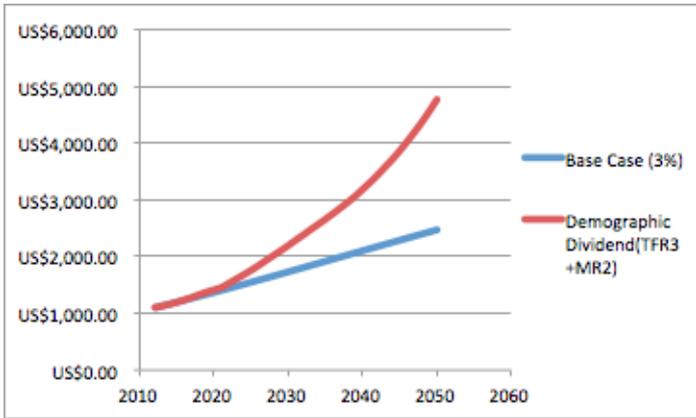
\* TFR in 2012 assumed to be equal with DHS 2013

\*\* Combination of data in DHS 2008, DHS 2013 and "Nigeria\_Demographic\_Trends\_12-5"

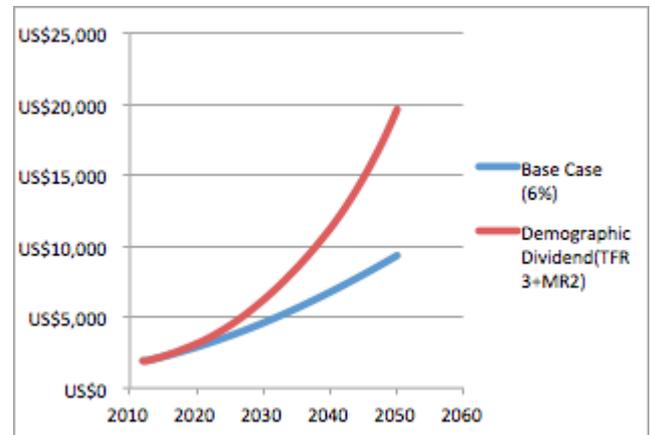
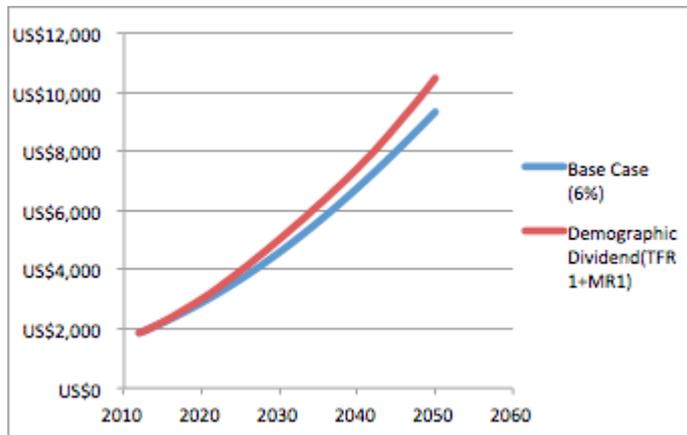
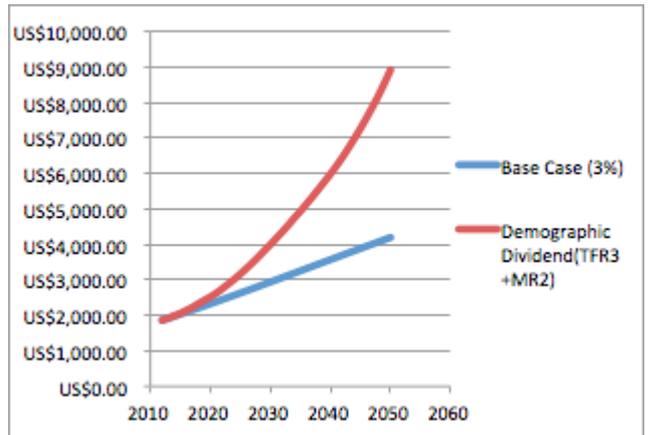
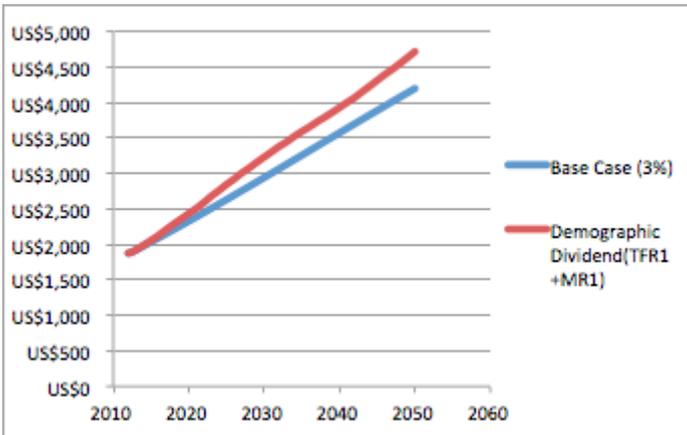
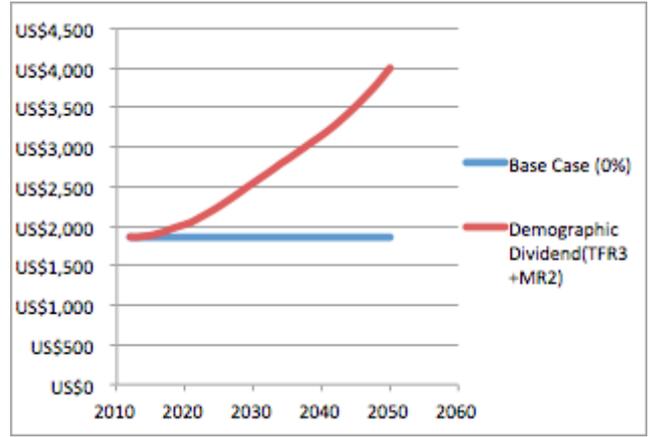
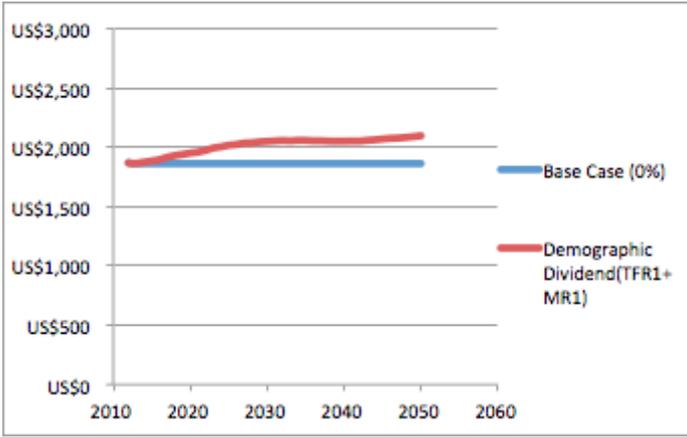
\*\*\* Deduced from U5MR and IMR; see the memo for details

## North-east

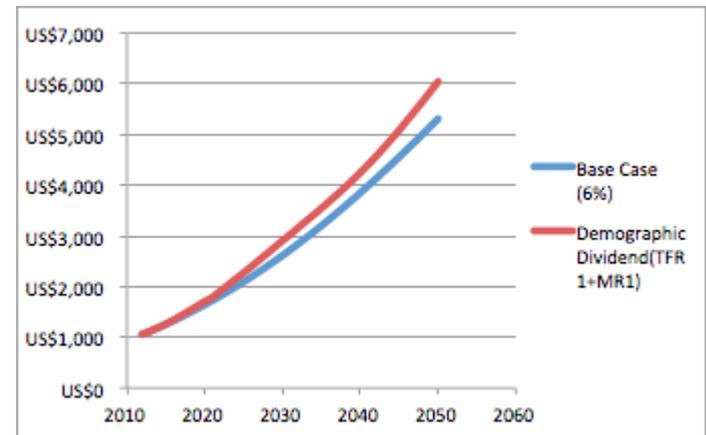
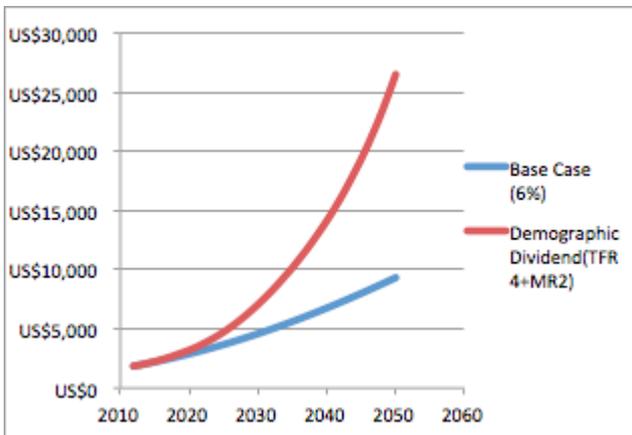
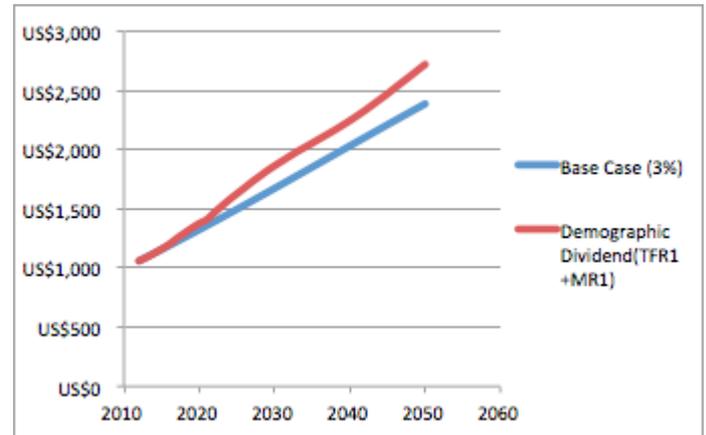
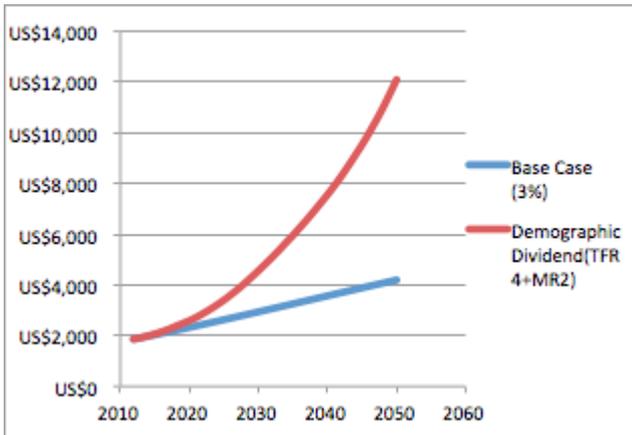
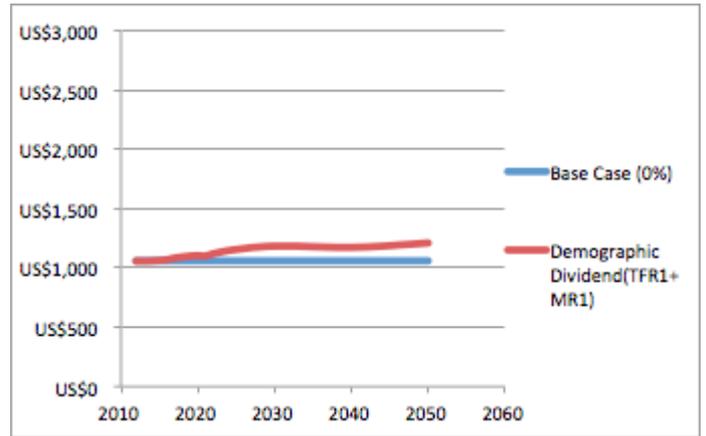
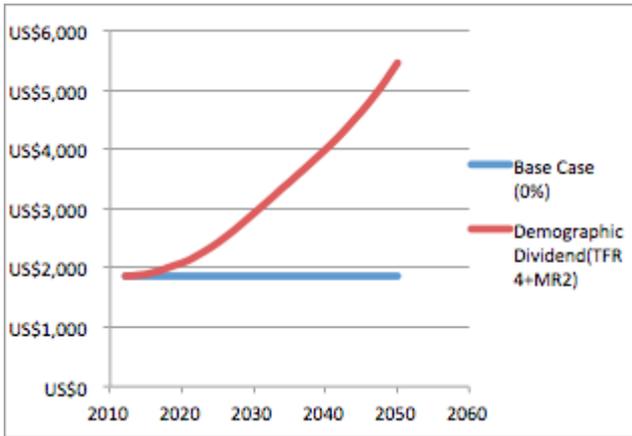


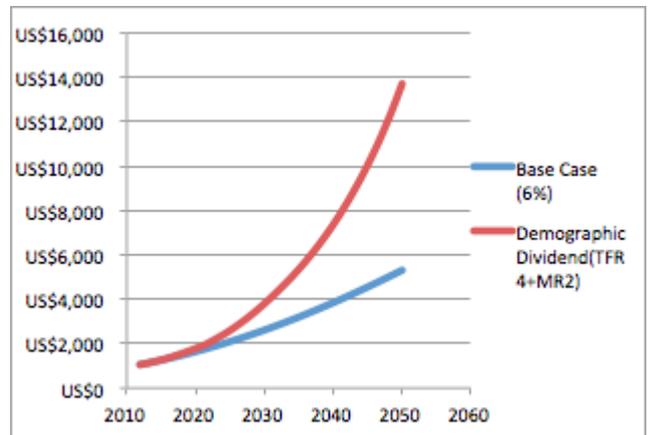
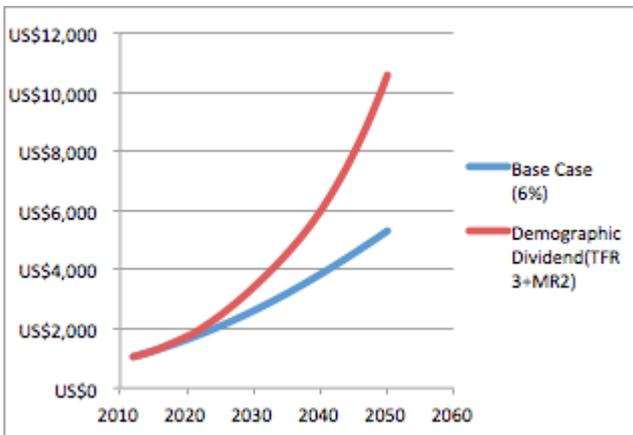
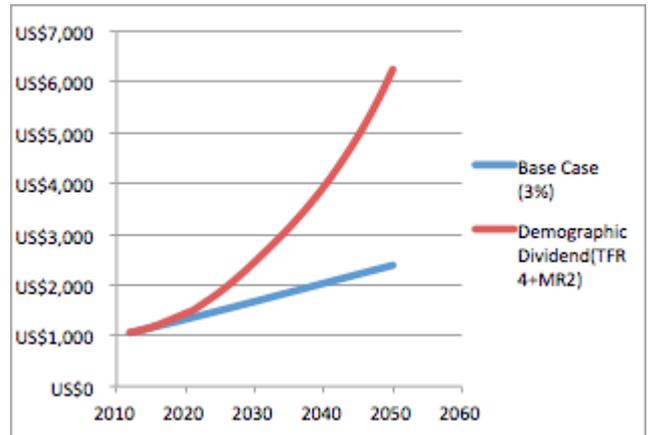
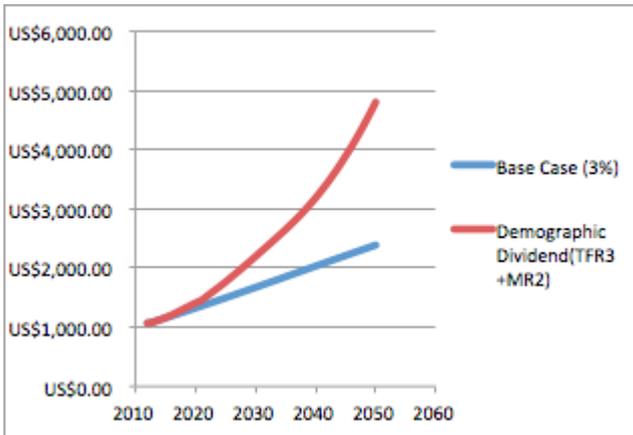
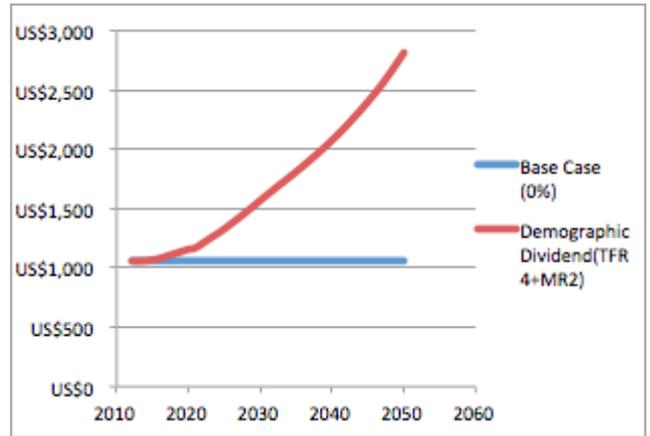
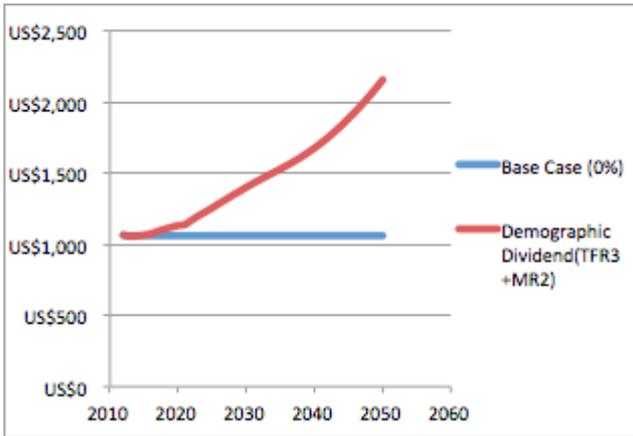


# North-central

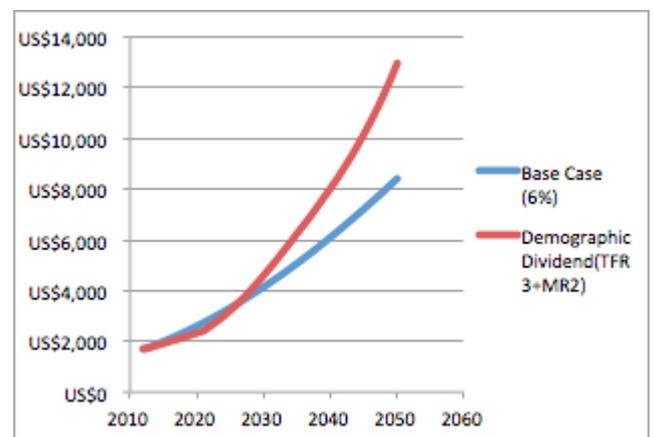
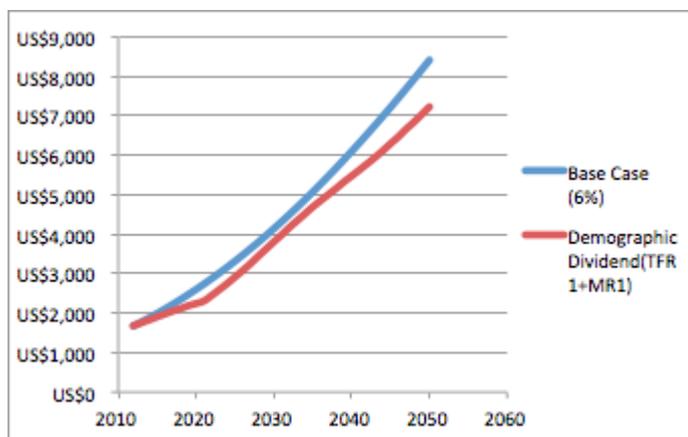
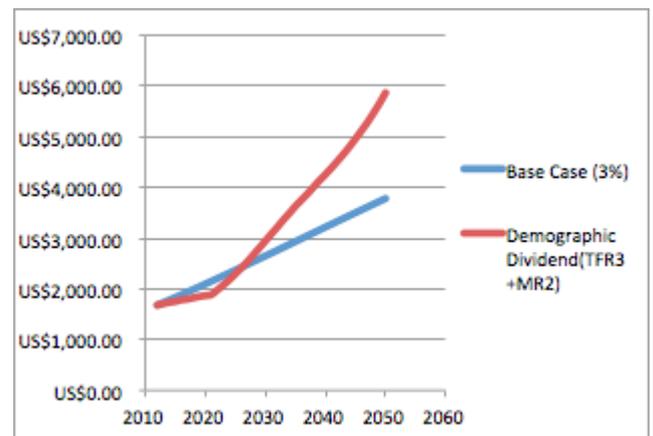
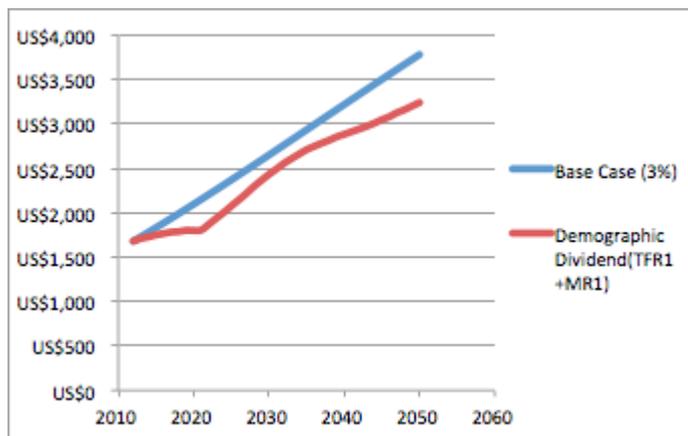
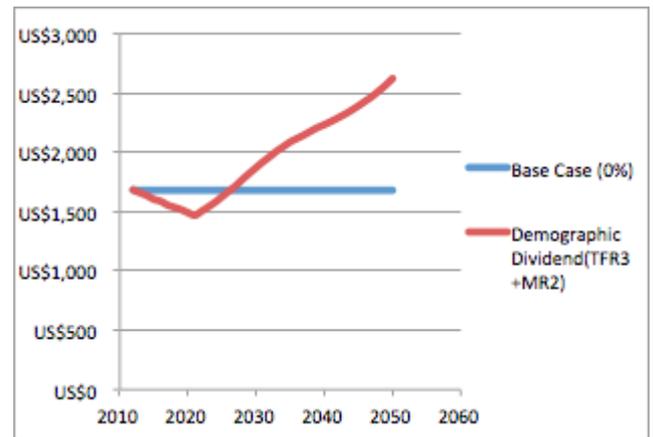
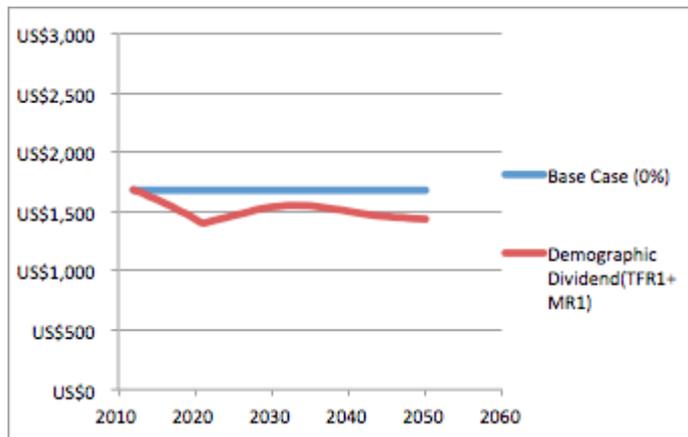


## North-west

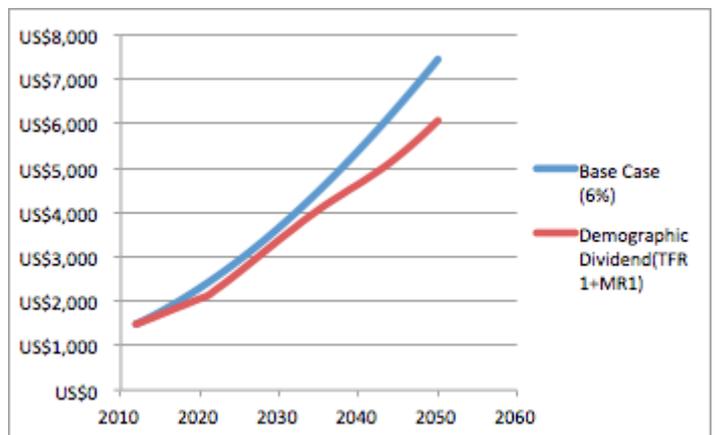
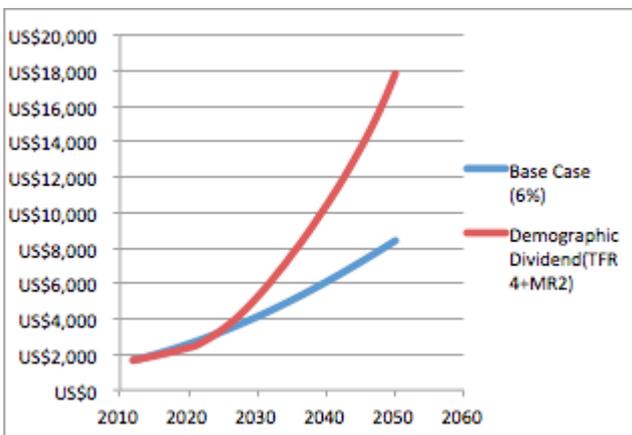
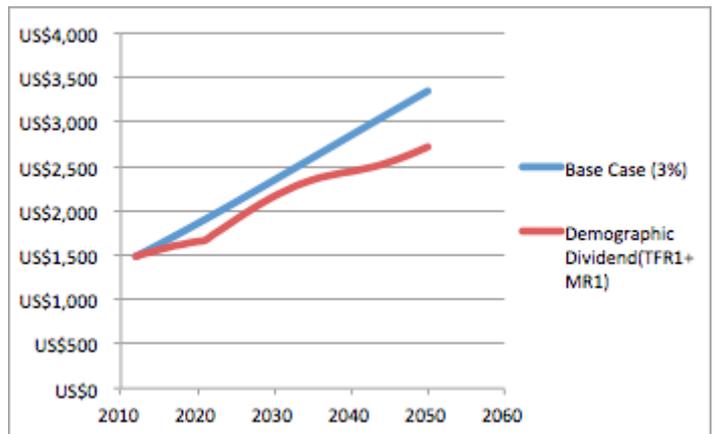
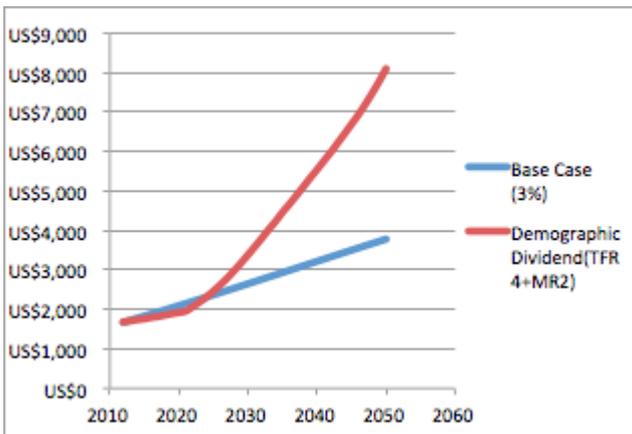
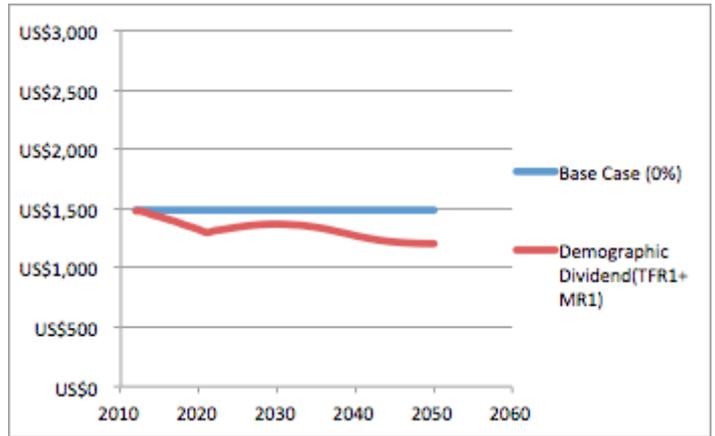
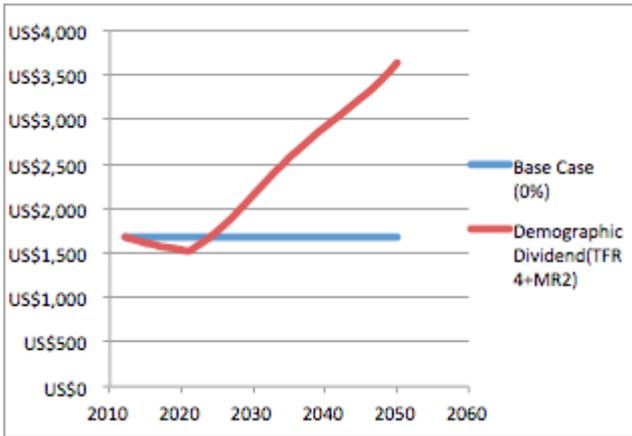


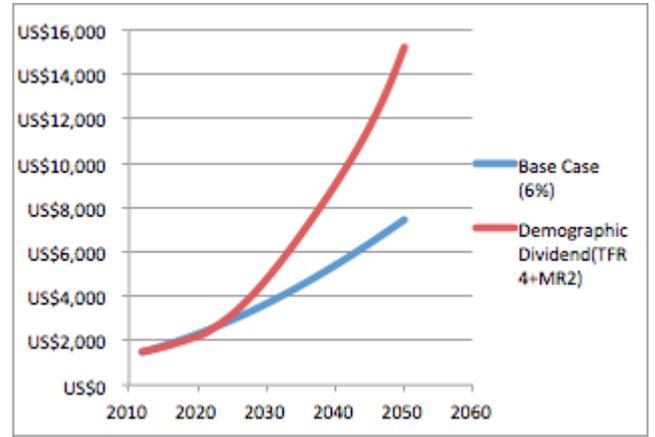
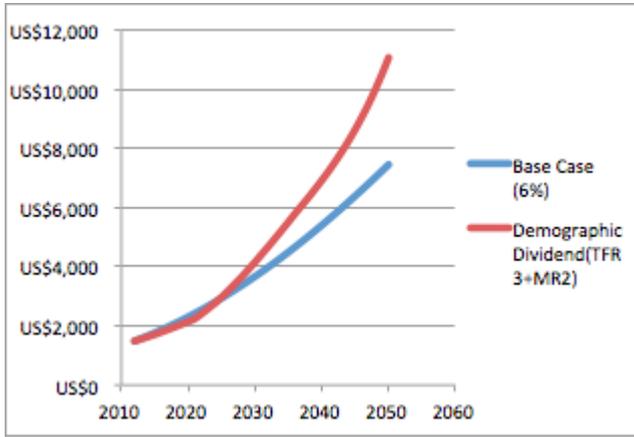
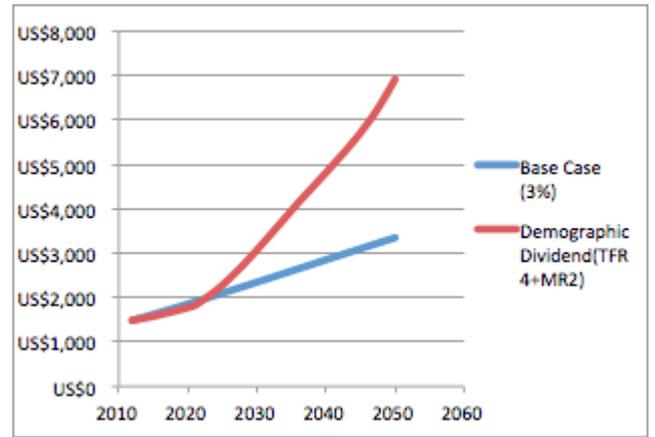
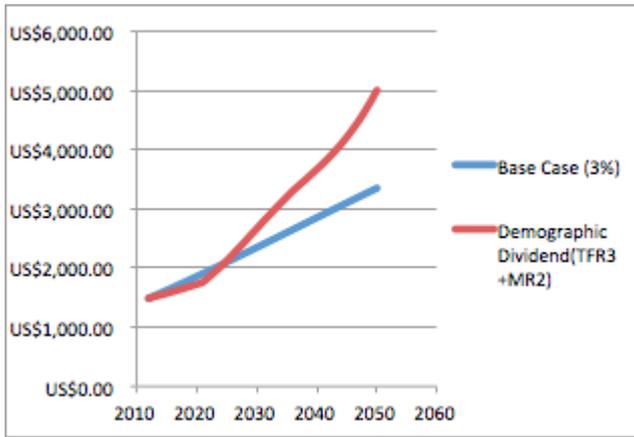
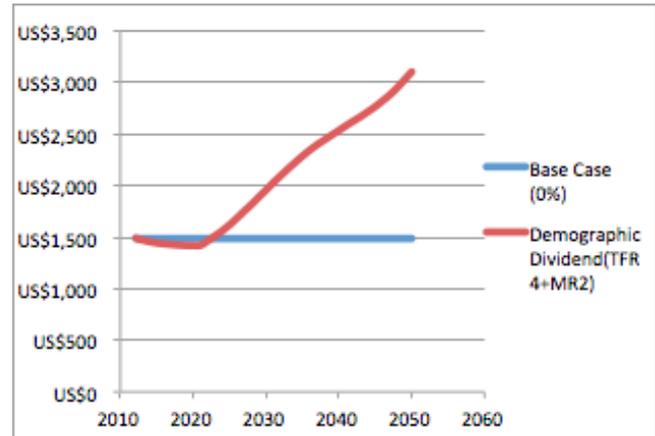
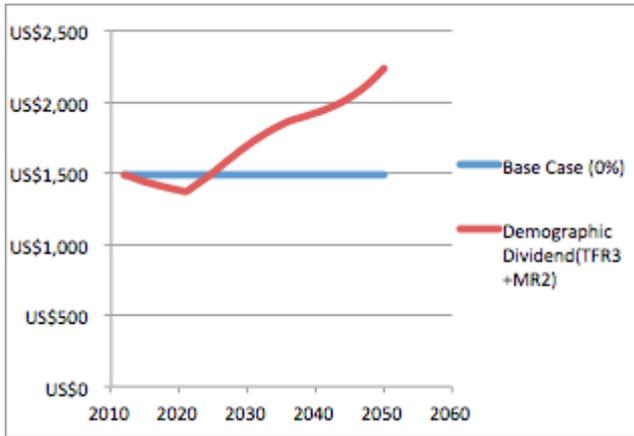


## South-east

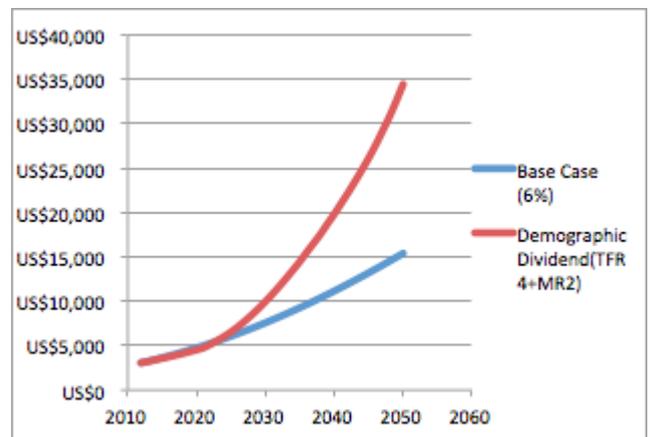
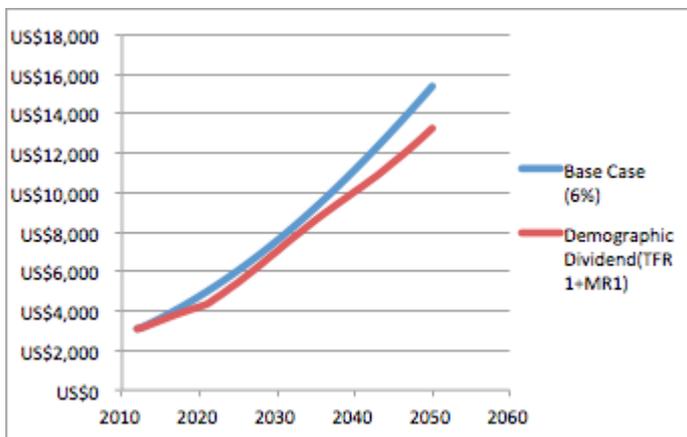
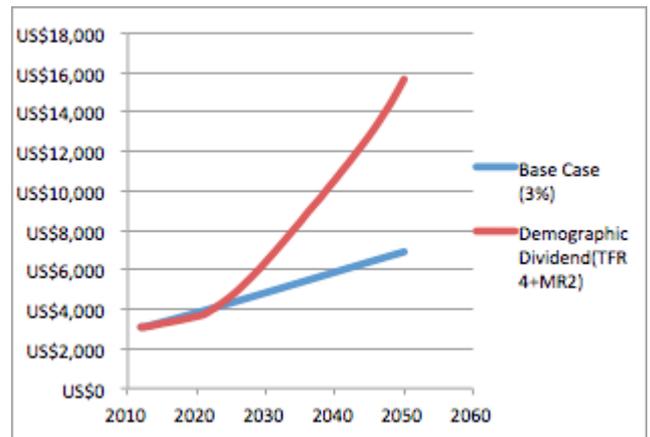
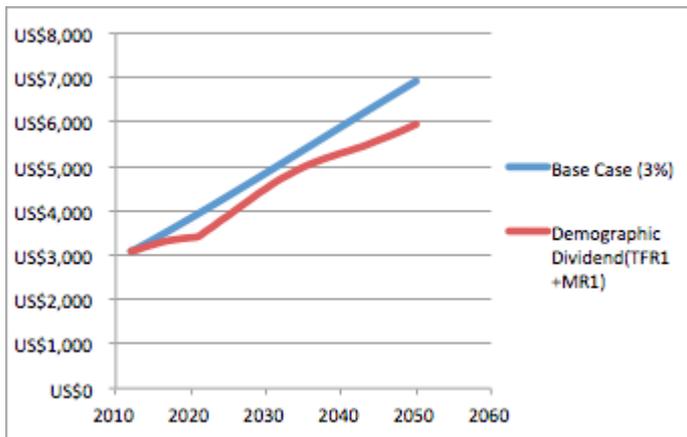
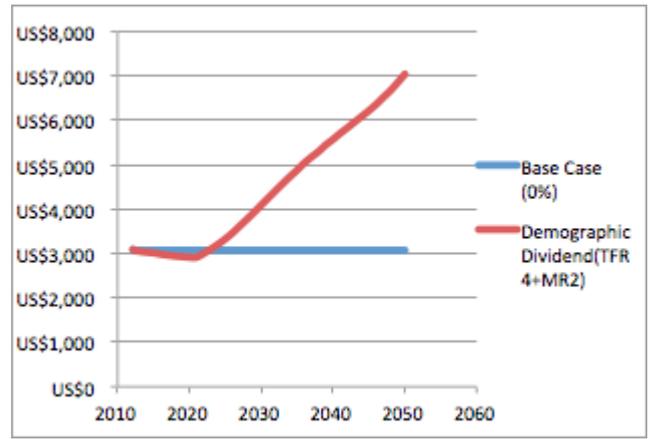
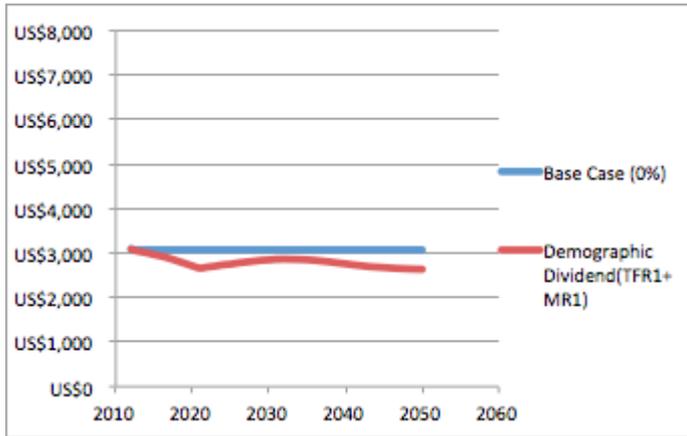


## South-west





# South-south



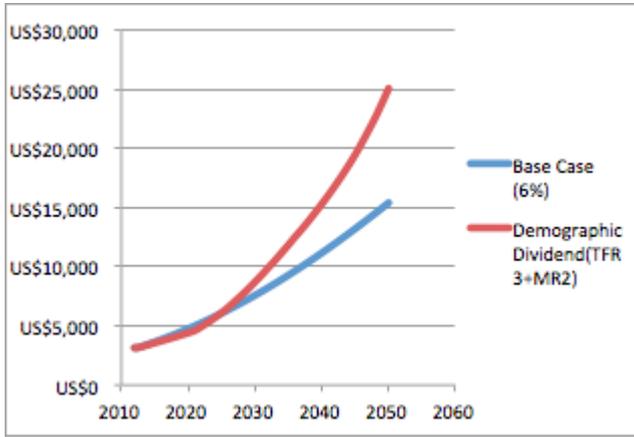
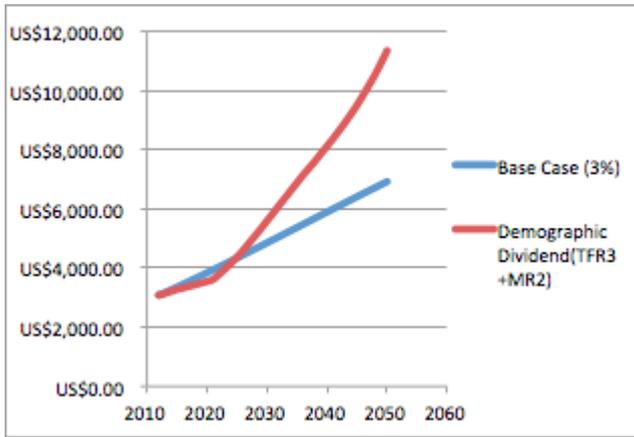
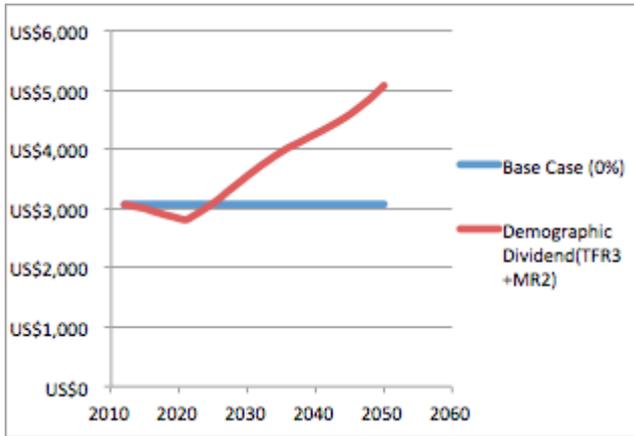


Figure 4: Cartogram Based on Nigeria's Regional Population, 2012

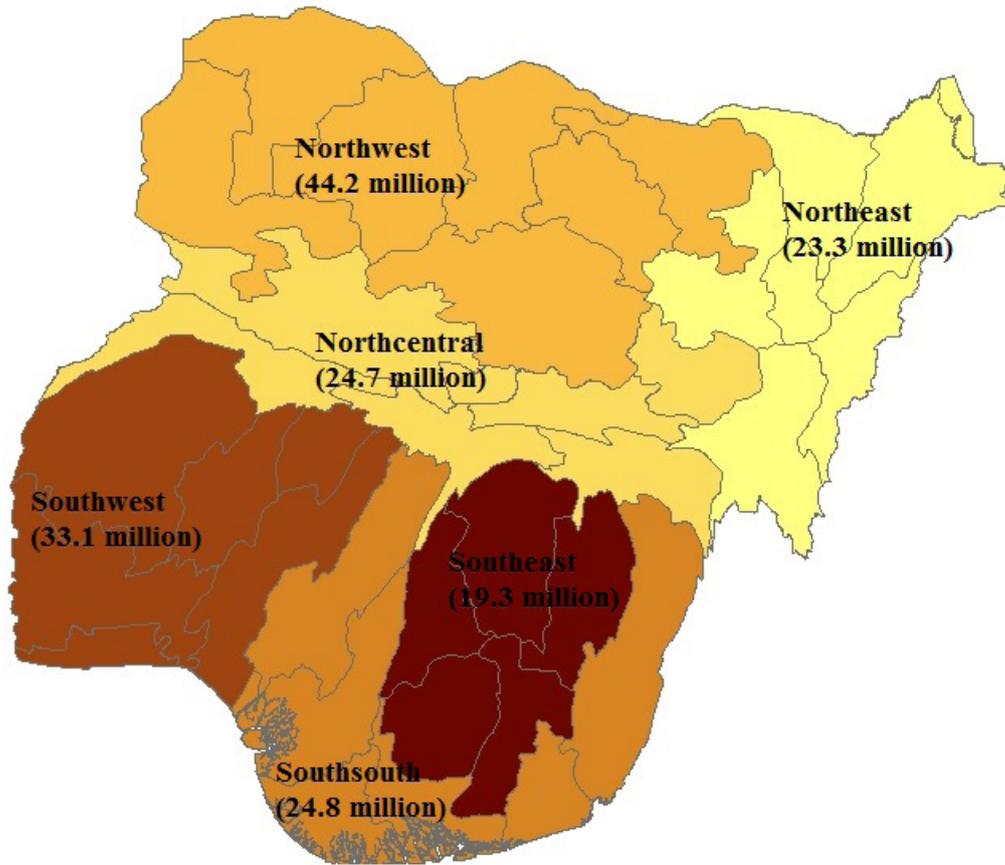


Figure 5: Cartogram of Nigeria's Projected 2050 Regional Population Scenario TFR1 + MR1

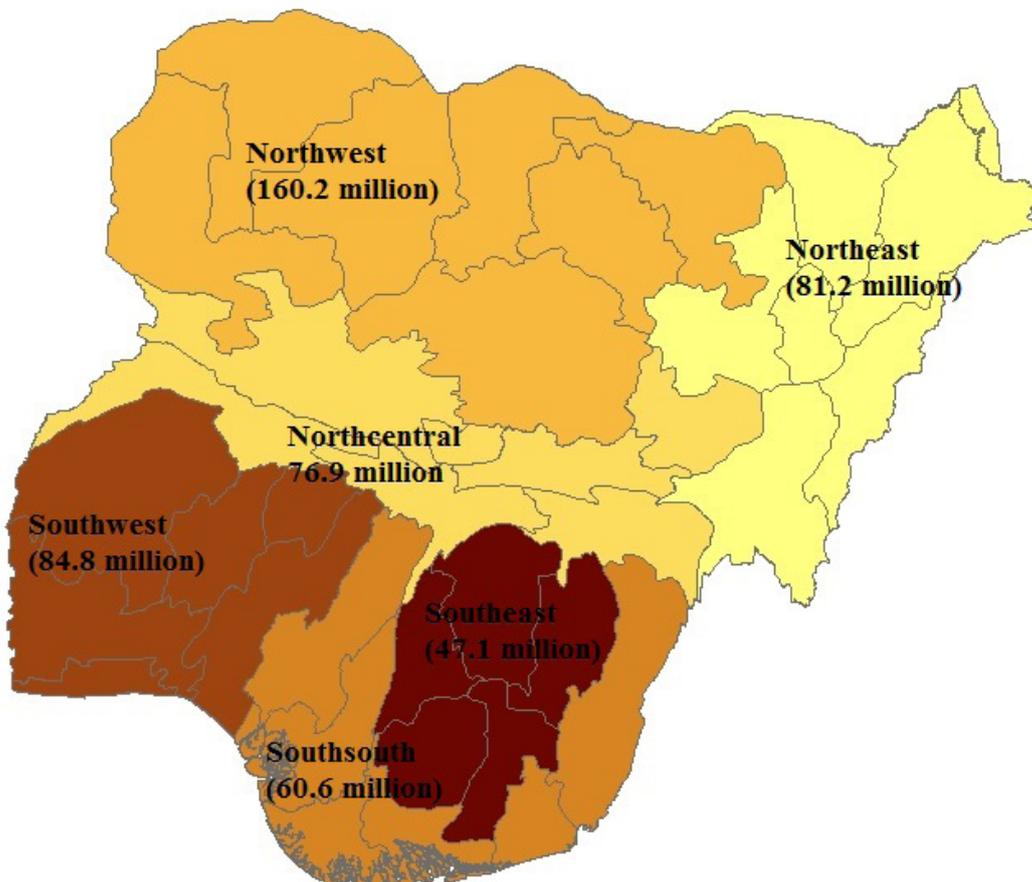


Figure 6: Cartogram of Nigeria's Projected 2050 Regional Population Scenario TFR3 + MR2

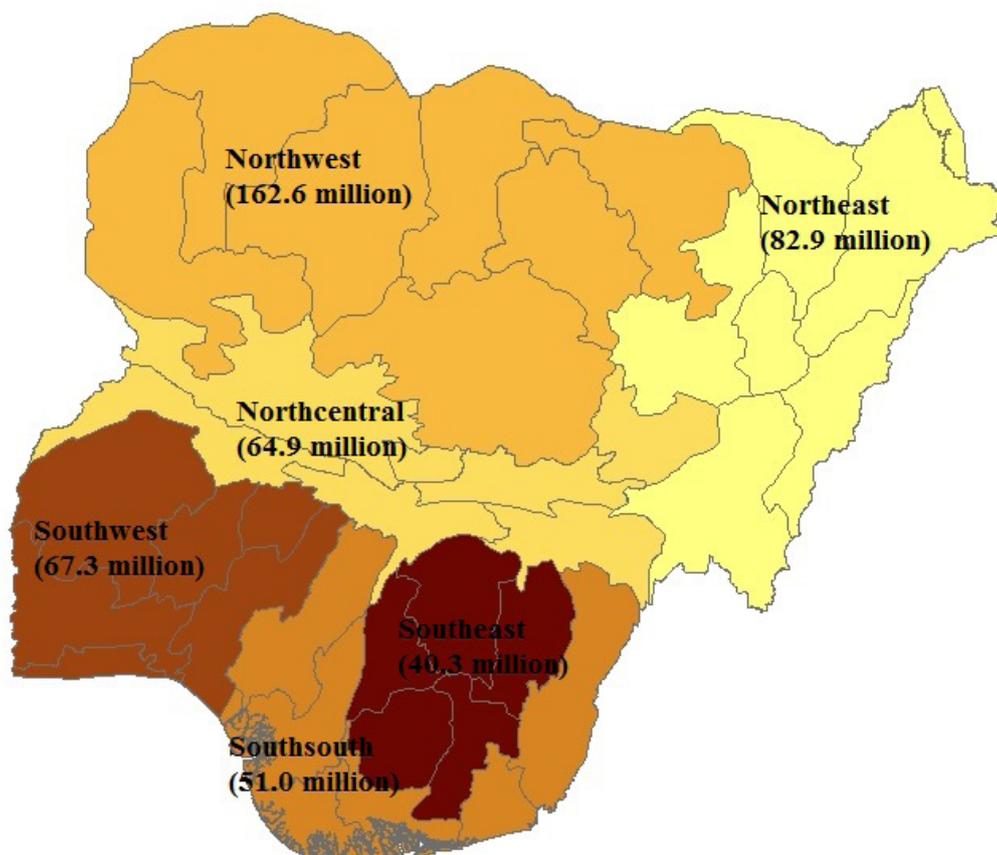
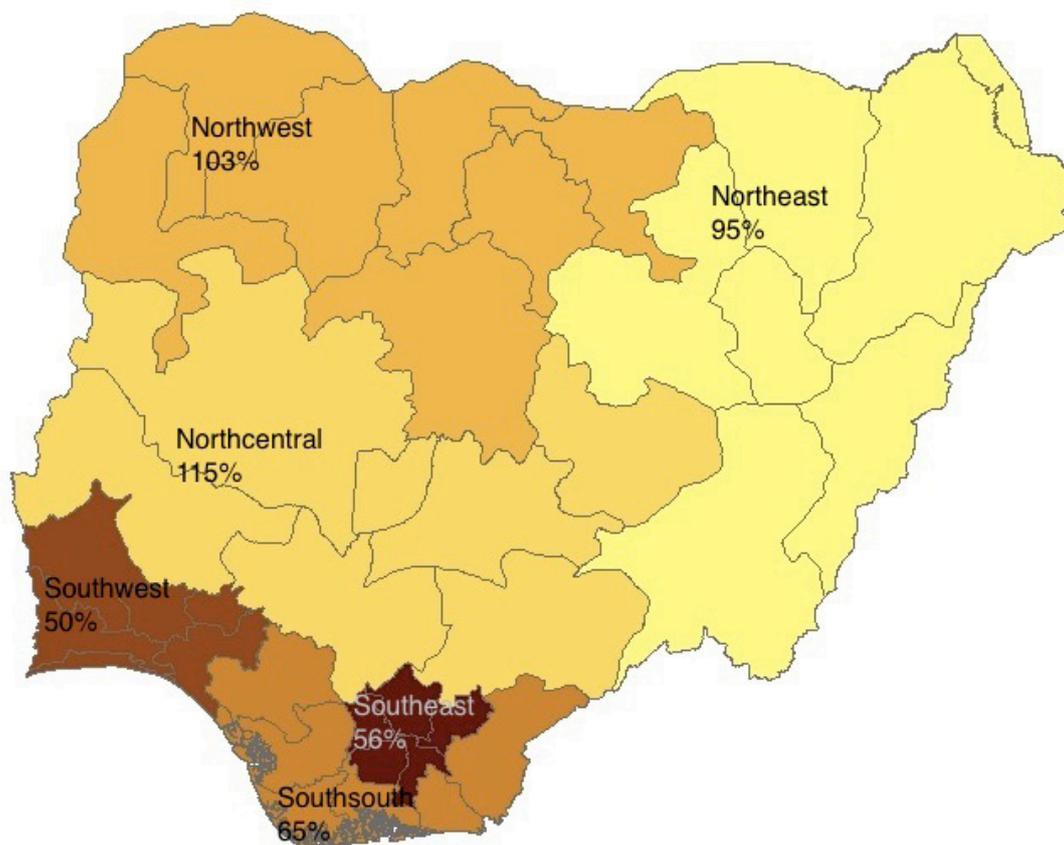
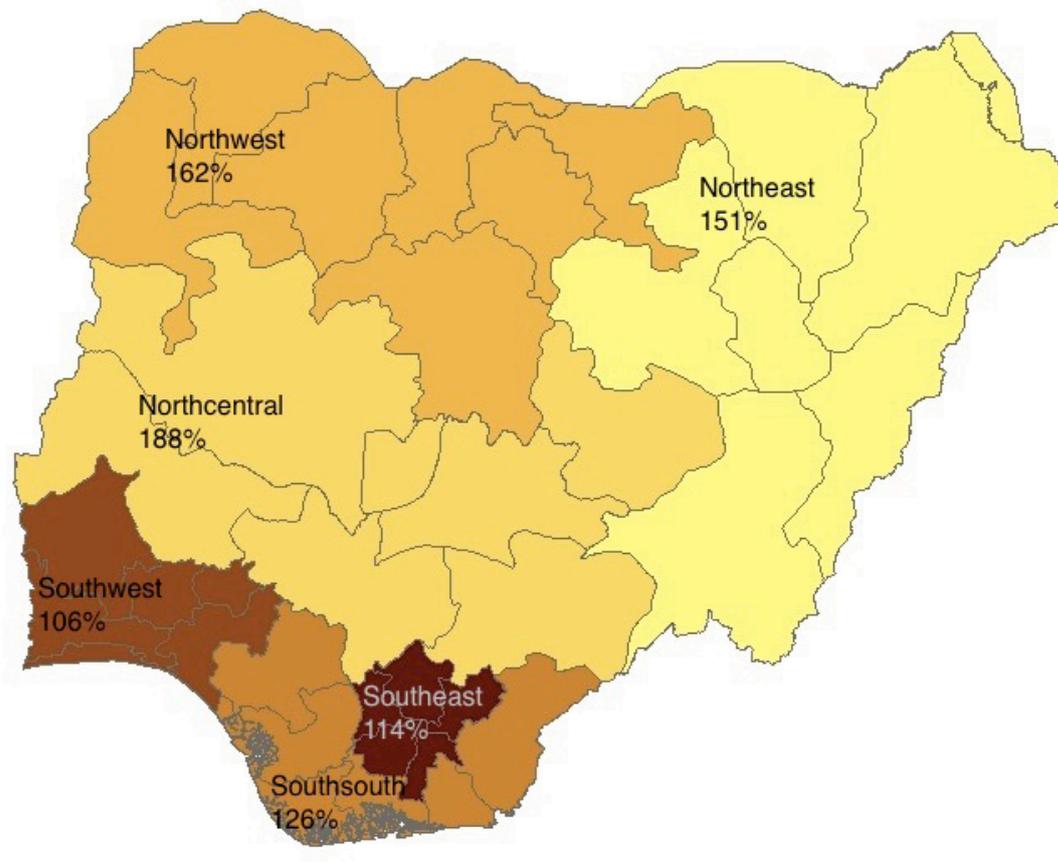


Figure 7: Cartograph of Nigeria with Demographic Dividend 2050 (TFR3 + MR2) with a Basic Case Rate of 0%



**Figure 8:** Cartograph of Nigeria with Demographic Dividend 2050 (TFR3 + MR2), with a Case Rate of 3%





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