(1) **Introduction**

Population size has rapidly increased during the past decades to about 87 million inhabitants in 2016. Egypt will only be able to cope with its population-development challenges if it manages to significantly advance its economic development and slow population growth, where an emphasis on human capital formation (education) is likely to be a key factor. The working-age population (15-64) represents about 64% of the total population. However, only 50% of this age-group is engaged in the labor force, and more than 20% is illiterate; this percentage is even raised up among women of working age to 30%, which explains their low participation in the formal labor force: only 24%.

The projections of the labor force participation were conducted by using 4 scenarios for the period 2006-2051, combining different sets of projection scenarios and data/methodology:

- **Trend A**/ **Trend B** Scenario:
  - *Basic*: 2.9/3.0
  - *Secondary*: 9.7/9.7
  - *Tertiary*: 3.7/2.9
  - *Total*: 20.5/16.1

- **Ambitious A/ Ambitious B** Scenario:
  - *Basic*: 6.0/6.0
  - *Secondary*: 10.6/10.6
  - *Tertiary*: 3.7/2.9
  - *Total*: 20.7/16.1

(2) **Data and methodology**

Two main steps are required to produce labor force participation forecasts by age, sex, and level of educational attainment:

1. **Producing population projections by age, sex, and level of educational attainment**:
   - We use the multi-state population projections by Goujon et al. (2007) to 2051, after validation. The multi-state model is based on the demographic of the population by age and sex into subgroup or strata, such as educational attainment.

2. **Producing projection of the labor force participation rates by sex, age, and level of educational attainment to 2051**:
   - Labor force participation is collected/estimated from the 2006 census and from annual series of the labor force survey (2010-2014).

(3) **Projection scenarios**

The projections of the labor force participation were conducted by using 4 scenarios for the period 2006-2051, combining different sets of assumptions about A - demographic change (fertility, mortality, and migration), and education B - labor force participation:

- **Trend A**/ **Trend B** Scenario: This scenario reproduces the trend observed in education, fertility and labor force participation rates in the last years.
- **Ambitious A/ Ambitious B** Scenario: This scenario assumes that the total fertility rate will go down to replacement level (2.1 children) by 2017, and that the MDGs in terms of education have been achieved. It reproduces the labor force participation rates of the last years.
- **Trend A**/ **Ambitious B** Scenario: This scenario reproduces the trend observed in education and fertility in the last years. It implements gradually the 10th sustainable development goal (SDG) - "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of sex, disability, race, ethnicity, origin, religion or economic or other status". We assume the same labor force participation rate for men and women by 2021 for those with tertiary education, by 2026 for those with secondary, by 2041 for those with basic education, by 2046, for those who can just read and write, and by 2051, for those who are still illiterate.
- **Ambitious A/ Trend B Scenario**: This scenario assumes that the total fertility rate will go down to replacement level (2.1 children) by 2017, and that the MDGs in terms of education have been achieved. It implements gradually the 10th sustainable development goal (SDG) - "By 2030, empower and promote the social, economic and political inclusion of all, irrespective of sex, disability, race, ethnicity, origin, religion or economic or other status". We assume the same labor force participation rate for men and women by 2021 for those with tertiary education, by 2026 for those with secondary, by 2041 for those with basic education, by 2046, for those who can just read and write, and by 2051, for those who are still illiterate.

(4) **Conclusion**

The combined projection of population by levels of education and labor force participation shows the potential benefit for Egypt to invest in education with the challenges of sustainable population growth which is inevitable in the future. An educated labor force would also be an asset for the socio-economic development of Egypt.