Population, Employment and Employability Skill

Does the population growth help to grow the country's economy? One with inferred wisdom would endorse with positive words. This is what is expected, because more production is achieved with more employment of factors of production of which labour is the most important. But then, what are the conditions that are conducive for sustained long term growth? Amongst others, a stable and macroeconomic environment, fiscal and financial solvency, low rate of unemployment, high rate of labour force participation and addition of physical and human capital are important. Of all these components, addition to human capital improves the quality of the workforce, which in turn helps make all factors of production more productive. Trend analysis of the business cycle shows that GDP and employment are strongly correlated.

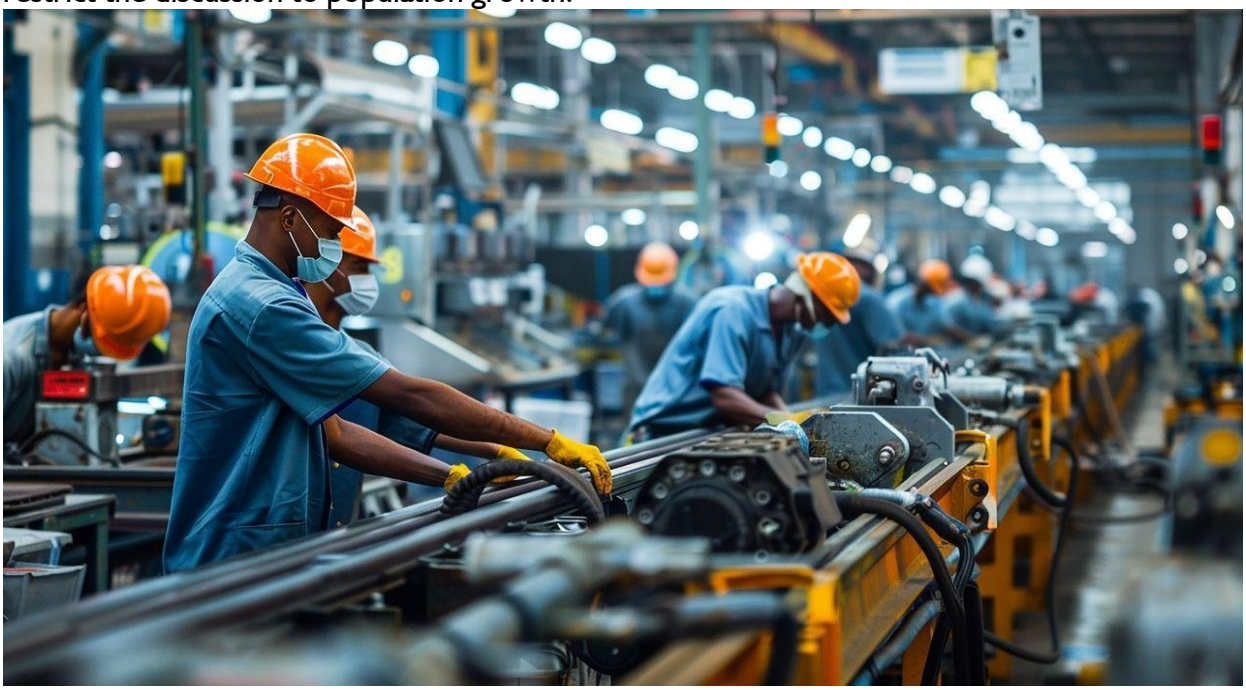


A general theory of national income determination propounded by Keynes states that employment determines the level of output, besides employment and output are determined solely by the factors operating in the supply side of the labour market.

There are many theories linking economic growth and high rate of employment. What do we learn from those? Employment and economic growth are the two primary objectives of macroeconomic policies of most of the countries. Full employment, according to Keynes is a situation in which aggregate employment is inelastic in response to increase in the effective demand. There is, however, a rider. The issue of cost of economic growth in terms of degradation of social life and environment has overtaken the issue of growth. Emphasis has shifted from growth to the eradication of poverty and economic inequality. The economists are now in favour of policy reform that takes care of poverty as this will take care of the GNP.

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After having discussed so far, we have to resolve the issue – whether population growth can be a stimulant for economic growth. The Solow growth model shows how saving, population growth, and technological progress affect the level of an economy's output and its growth in time. In this paper, we make an attempt to analyse the role of population growth only. As one knows, the basic Solow model shows that capital formation alone cannot explain sustained economic growth, population and technological progress play a significant role. For the sake of brevity, we would restrict the discussion to population growth.



As one knows, while depreciation reduces the capital stock per worker, population growth also reduces the capital per worker. In the steady state of economy, the positive effect of investment on the capital stock per worker exactly balances the negative effects of depreciation and population growth, when the rate of growth of population and the growth rate of total capital and total output are same.

Our aim to empirically find out the relationship of India's current demographic dividend and its growth rate with its economic growth. This issue would be dealt with the available relevant data. Source is National Sample Survey Office. We have analysed data for the last five years. What we find are: average y-o-y growth rate of population during the last 5 years was 2.24 per cent, the percentage of age-wise workforce reveals that there is a demographic transition. Worker with age 18 to 35 years was 34.36 percentage. The same with age 36 to 55 years was 38.42 percentage. Workers with higher age group 56 to 70 years constituted 27.16 percentage. Y-o-y growth rate of value of output was 7.65 percentage.

The outcome of the data analyses lay bare the following: India is currently on the cusp of a profound demographic transition due to its demographic dividend. With almost 70 percent of its population being in the age of 15-59 years, and the median value of the age being 28 years, reaping the benefits of an economic growth of 7 to 8 per cent is plausible.

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India's working-age population has been larger than its dependent population. Applying predictive model, this gap is expected to last for another thirty years. This shift has happened largely because of a falling fertility rate, fewer children being born per family, which naturally raises the share of working-age adults over time. According to the estimate of United Nations Population Fund (UNFPA) (Source: UNFPA, India's Demographic Dividend: A Window of Opportunity, 2022) India's working-age population will touch one billion by 2047, which means the dividend is not a short-lived opportunity but it will be the most important factor of production in future.

Having young workforce on hand, the question arises whether there would be growth in labour productivity each year. That depends on two things happening together: enough jobs being created, and workers acquiring skill sufficient for doing their jobs with perfection. The jobs being created today being very different from the nature of jobs that were to be executed ten years ago, we need to refer to the theory of labour productivity. It is, in simple term, a ratio between value of total output and number of workers, but to define meaningfully, number of working hours. Labour productivity depends on many components, namely, technology, quality of inputs, acquired skill, adaptability to any kind of change in the production process and overall favourable working environment. Outcome of data analysis shows, two units producing same products, may have different labour productivity due to quality of total factors of production. Studying a seminal article on the subject (N. G. Mankiw, D. Romer, and D. Well, 'A contribution to the Empirics of Economic Growth', Quarterly Journal of Economies, May 1992.) we find from the mathematical model developed in the article shows that an additional unit of labour increases the value of output by 2 units if the marginal product of labour is 2. For additional 100 units of labour, increase in value of output will be 200. But, is that feasible? Yes, it is feasible provided there is increase in additional infrastructural facilities.

From above, one can say that population growth can increase to production subject to certain economic constraints. Studying Solow Model, what emerge are that the economy reaching its steady state, output per worker stops growing unless input of updated technology is kept in the components of factors of production. Unless the technology used in the production process is improved, the higher rate of population growth may lower the level of output per worker.

Appearing irrelevant in the context of the topics though, one should explain the impact of two economic events that have emerged of late; the first is Artificial Intelligence (AI). With adoption through expansion of the periphery of knowledge, artificial intelligence can make workers more productive at every level. Used carelessly or left unaddressed by the policy, AI could instead automate away the entry-level jobs like the call centre role, the basic coding task, the routine back-office job that has historically been the first step in the hierarchy for a new entrant in the labour market. In such an event, India could end up with large working-age population and not enough productive work for it to do. The second is the Skill India Mission. It has already trained over 16 million people from 2015 to 2025 and the Pradhan Mantri Kaushal Vikas Yojana runs around 3,000 centres imparting training the workers in construction, automotive, healthcare, and IT (Source: Ministry of Skill Development and Entrepreneurship (MSDE), Government of India). Yet the scale of the challenge ahead is large because nearly half of India's workforce would need skill development by the end of 2027.

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The silver lining is a billion working-age Indians. It is an opportunity. It becomes a productivity dividend only if skilling keeps pace with job creation, and only if digital technology and artificial intelligence are treated as tools that multiply a worker's output rather than creating threats to their livelihood. India's demographic dividend, in the end, will not be measured by a billion working hands. It will be measured by a billion productive ones, carrying the country in 2047 as a nation that turned its youth into its greatest strength.

THANK YOU

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