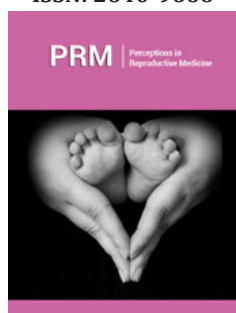


Critical Reflections on Demographic Transition Theory

Anwasha Sarkar*

Indian Institute of Technology Patna, India

ISSN: 2640-9666



*Corresponding author: Anwasha Sarkar,
Indian Institute of Technology Patna, Bihar,
India

Submission: 📅 March 21, 2025

Published: 📅 May 01 2025

Volume 6 - Issue 2

How to cite this article: Anwasha Sarkar*.
Critical Reflections on Demographic
Transition Theory. *Perceptions Reprod
Med.* 6(2). PRM. 000635. 2025.
DOI: [10.31031/PRM.2025.06.000635](https://doi.org/10.31031/PRM.2025.06.000635)

Copyright@ Anwasha Sarkar, This
article is distributed under the terms of
the Creative Commons Attribution 4.0
International License, which permits
unrestricted use and redistribution
provided that the original author and
source are credited.

Introduction

Socio-economic, political, and cultural factors and elements of public health standards and lifestyle changes shape population dynamics. The Demographic Transition Theory explains population changes over time, primarily influenced by economic and social developments. The theory outlines the stages of declining mortality and fertility Sen [1]. Over time, ageing populations, migration, and policy interventions have significantly reshaped population trends. To provide a more nuanced and critical understanding of demographic transition theory, the present paper critically reflects on the relevance and limitations of the theory. The paper attempts to assess whether it sufficiently explains modern demographic realities or requires theoretical refinement to accommodate diverse global contexts.

Chronology of demographic transition theories

The Demographic Transition Theory beholds a plausible explanation of the world's complex transformations of demographic patterns. Almost 80 years ago, this theory was promulgated by Frank Notestein in 1945. Before his work, eminent scholars like Warren Thompson, Adolphe Landry & Alexander Carr-Sunders [2-4] provided perspectives on the transformations in population trends, particularly in Europe.

Sen [1] mentioned that Notestein suggested three phases of demographic transition: the high growth potential stage, the transitional growth stage and the incipient decline stage. Pertinently, Notestein's views were inclined towards fertility factors. Over time, significant changes have occurred in world population trends. From the 19th century or later, the generalisation of demographic transition theory makes it less relevant for contemporary developing countries because there have been substantial differences in socioeconomic and demographic variables between these countries and Europe. Countries like Japan and France are experiencing negative growth rates, and the implementation of pro-natalist policies has been purported to increase family sizes. Thus, C.P. Blacker [1] has put forth five stages of the demographic transition to portray population dynamics. Fertility and mortality, along with other indicators viz- society, its norms, and gender relations, have witnessed changes which have significantly determined fertility or childbearing behaviours. The second demographic transition in the 20th and 21st centuries, as proposed by Lesthaeghe [5], was relevant and describes reality. Some anomalies in this theory have unfolded over time- as highlighted by Frejk [6]. He attempted to analyse the transitions in fertility rates in parts of Europe along with East and South Asia.

Contemporary transformation in demographic transition theories

The Cohort Total Fertility Rate (CTFR) and Periodic Total Fertility Rate (PTFR) efficiently calculate the fertility rates as they are modified from the traditional measurements. Only if

the PTFR method is discussed and applied along with the CTFR method can periodical analysis be shown along with historical analysis. This method becomes imperative for countries where vital registration systems are not conducted annually. However, cohort fertility is more stable than period fertility but has a disadvantage in that it relates to an earlier period and is not current. To control for this, the age and gender-specific fertility and mortality should be calculated as the proportion of the relevant population of a given age that gives birth or dies each year. Besides, cohort parity distributions and progression ratios are important fertility indicators. Mortality transitions can be coupled with life table analysis, and other important methods can be applied to show the trend of transition mortality. Another important measure for achieving the replacement level of fertility is the Net Reproduction Rate (NRR). These can be included to show the demographic transition model elaborately.

Spatially, the demographic transition patterns can be identified through the cohort fertility data. From 1830 to 1840, CTFR had four to five births per woman in the Western world. Towards the end of the 19th century, this rate declined. It came down to 2 births per woman in 1905. This decline is still occurring, as in 1950 and 1960, there were 1.6 births per woman. Population in South Europe is continuously declining, but its rate is very slow. After 1970, CTFR continued to decline; in Spain, it had 1.4 births per woman. The demographic scenario of Central and Western Europe differs slightly from the Western and South European populations. After 1960, CTFR declined to 1.6 births per woman in Russian, Czech and Slovak countries. The cohort fertility data for East and Southeast Asian countries are not adequately available; Japan and other developed nations have experienced a decline in fertility early.

Conclusion

The Demographic Transition Theory, while historically significant, requires critical evaluation for contemporary relevance. Originating from European observations, its generalisations are less applicable to developing nations with distinct socio-economic

contexts. Modern methodologies, like combined CTFR and PTFR analyses, are necessary for accurate demographic assessments. Regional variations, evidenced by differing fertility trajectories across continents, highlight the need for nuanced, spatially aware approaches. Future applications must integrate diverse global realities and contemporary demographic trends to maintain the theory's validity.

Moreover, migration is also an important indicator of population change. The impact of family planning program implementation as a cause of fertility decline may have been incorporated in this paper. Notestein once pointed out that formulating accurate reasons behind population changes is nearly impossible. However, significant causes like wars, famines, political turmoil, health hazards, lack of infrastructure, industrialisation, environmental pollution, social taboos, government policies, and others can be attributed to the dynamism of population changes. Currently, due to the COVID-19 pandemic, 4.2 lakh people have lost their lives, and this has shaken the world's concept of demographic transition. In the future, additional phases may be incorporated into this theory for the pandemic.

References

1. Sen K (1994) Ageing: debates on demographic transition and social policy. Zed Books, London, p. 143.
2. Thompson WS (1929) Population. *American Journal of Sociology* 34(6): 959-975.
3. Landry A (1909) The three main theories of population. *Science* 3(6): 121.
4. Carr-Saunders AM (1936) *World population: past growth and present trends*. Clarendon Press, Oxford University Press, UK, p. 329.
5. Lesthaeghe R (2010) The unfolding story of the second demographic transition. *Popul Dev Rev* 36(2): 211-251.
6. Frejka T, Gietel-Basten S, Abolina L, Abuladze L, Akshonova S, et al. (2016) Fertility and family policies in Central and Eastern Europe after 1990. *Comparative Population Studies* 41(1): 3-56.