



Woman in Development and Politics

Dynamic Analysis of the Economic Effects of Population Structural Changes in the Coming Decades of Iran (With Emphasis on the Role of Women)

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Article Info	ABSTRACT
<p>Article type: Research Article</p> <p>Article history: Received: 2 August 2023 Received in revised form: 2 October 2023 Accepted: 22 October 2023 Published online: 20 March 2024</p> <p>Keywords: Changes in Iran, Economic Effects, Structure, Demographic, System Dynamics, Women's Role.</p>	<p>Introduction The demographic trajectory of Iran's population over the next three decades will undergo profound transformations with regard to age distribution. In order for this process to emerge as a paramount challenge for the country in the decades to come. The aforementioned modifications will engender distinct ramifications and outcomes within the framework of political, economic, and social progress. Aware of the demographic makeup and structure of the populace with regard to gender and age, as well as conducting an analysis of the prevailing pattern and its prospective developments, assumes paramount significance and becomes an absolute necessity. Therefore, the purpose of this article is to provide a dynamic analysis of the economic ramifications of Iran's population structural changes in the future decades, focusing on the role of women.</p> <p>Methodology The current study is analytical-descriptive in nature and serves a practical purpose; the data sources utilized are library-based. In pursuit of this objective, we addressed problemology in the initial phase, which entailed an examination of the process of population structural changes and unbalanced population growth across various structures. In this manner, an attempt was made to gain a greater understanding of the population's structural alterations in four age groups between 1976 and 20176: those under 15 years, those between 15 and 44 years, those 45 to 64 years, and those over 65 years. The "Vansim" software was utilized in conjunction with the "World3" global model and dynamic systems modeling to simulate the country's population trend in order to forecast population structural changes. Dynamic hypotheses were developed by initially identifying the pivotal and influential variables, causal and causal relationships, and the interrelationships among the variables. Subsequently, the circular pattern between the variables and their polarity was ascertained in accordance with these relationships. Hypotheses were dynamically formulated in order to illustrate the problem's dynamic properties through the use of feedback and state-flow diagrams. The manner in which the variables interact and impact one another was subsequently specified through mathematical functions and relationships. Following this, the defined systemic relationship of each variable in the structure of causal and causal relationships, as well as the status of each variable in the system dynamics diagram, were determined by considering the interrelationships among the variables. A comprehensive model was introduced with the intention of fortifying and restoring the economic structure of the country. Subsequently, various scenarios, encompassing both optimistic and pessimistic conditions, were introduced to facilitate future policy formulation and planning. Following the definition of the system dynamics model, the subsequent phase (model simulation and validation) involved simulating its behavior to ascertain the population size within the four age categories specified for the intended time period. The future conditions of the variables were ascertained, and subsequently, the model's validity was assessed through sensitivity analysis and the implementation of various scenarios.</p> <p>Results On the basis of a potential fertility rate of 1.6 (statistics center research announcement), projections indicate that the population of the entire country's population will be increasing until 2076 and will decrease from that year onwards. Moreover, until 2076, the growth trend</p>

of the population in the age group under 15 years is decreasing, and the growth trend in the age group of the labor force (15-44 years and 45-64 years) will increase until 2076, and from this year onwards, the growth trend will increase in the age group over 65 years old. The findings indicate that the demographic trend of working age occurs about 10 years earlier than the declining trend of the entire population. Therefore, to compensate for the deficit of economically active labor and improve the production process and increase per capita, considering the existing capacities in the country, increasing the employment of women will be one of the most effective strategies to address this crisis. As the investigation progresses, a dynamic economic model constructed utilizing the Solow growth model is introduced.

The findings derived from the simulation indicate that by implementing the policy proposed in 1455 to increase the number of economically active women by 100,000 per year, the proportion of women in the labor force will surge from 4.83 million to 8.81 million. As a consequence of implementing this policy, output rises from 19.40 billion to 19.91 billion. In order to illustrate the impact of altering the composition of the workforce on the process of GDP growth, operational scenarios pertaining to the expansion of women's employment in the country's development and production are furnished.

Considering the upward trajectory of population demographics and the country's growing reliance on the labor force for economic development in the coming decades, as well as the fact that women comprise approximately 50% of the country's population and 56% of higher education graduates, the positive impact of women's education is warranted. Islamic countries' labor forces may perceive this capability as a proactive opportunity to formulate suitable strategies and policies that contribute to the country's progress and economic growth. Pertaining to this matter, it is critical to eliminate employment discrimination against women through the implementation of suitable measures. In addition, planning, support, and the implementation of measures that are essential for enhancing the quality of life and health, as well as creating the conditions where women's production-related experiences and expertise can be utilized to their full potential in old age, are required. Yet, it should be emphasized that parallel measures pertaining to the utilization of capital and technology should be taken into consideration by the country's policymakers and administrators, in addition to the presence of women in the workforce. Consideration of cultural and economic factors in elucidating the low labor force participation and work-life balance of women forms the basis of this study's findings.

Conclusion

According to The following recommendations are made in light of the research findings and an analysis of the structural changes that will occur in the Iranian population over the next few decades, with an emphasis on the role of women:

1. Providing instruction and enhancing the competencies and proficiencies of women to facilitate their integration into the workforce;
2. Pursuing higher education to prepare women for occupations in which they possess a great deal of expertise and efficiency;
3. Creating suitable working environments that respect the cultural and religious convictions of women;
4. Considering the dependence of the country's economic model on the labor force, as well as the structural changes of the study population, reducing the dependence of the country's economy on the labor force;
5. In light of the contribution of women to labor force compensation, research should be undertaken to explore strategies for enhancing women's economic participation;
6. In light of the anticipated demographic imbalance and the anticipated decline in fertility rates, it is recommended that an investigation be undertaken concerning employment opportunities that are conducive to the reproductive stages of future women.
7. Considering the upward trend of the age group over 65 years old, it is suggested to carry out research on the promotion of on strategies to increase women's economic participation in service, health, etc.;
8. With a focus on labor productivity, the dynamics and economic repercussions of population structural changes in Iran over the next several decades should be investigated.

Cite this article: Ghaiser, A., Eskandari Sabzi, S., Salmani, A., & Haj Asghari, Y. (2024). Dynamic Analysis of the Economic Effects of Population Structural Changes in the Coming Decades of Iran (With Emphasis on the Role of Women). *Women in Development and Politics*, 22(1), 1-37. DOI: <https://doi.org/10.22059/jwdp.2023.362558.1008358>



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Publisher: The University of Tehran Press.

DOI: <https://doi.org/10.22059/jwdp.2023.362558.1008358>