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# Demographic Changes in Kurdistan Province from 1951 to 2041 and Their Policy Implications and Development

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### **Extended Abstract**

**Objective:** Demographic shifts have become a central focus in social, economic, and political contexts worldwide. In Kurdistan Province, notable changes in population size, growth rate, fertility rate, and age and sex composition are evident. Careful analysis and forecasting of these trends are essential for effective planning and policymaking, enabling us to maximize demographic dividends and mitigate adverse impacts. This study addresses the following questions: How have population trends evolved in Kurdistan Province? What are the primary drivers of demographic change? What roles do fertility, mortality, and migration play in shaping these trends? What is the projected outlook for population size and age structure in the province? Based on the current population dynamics and future projections, what policies would be most suitable for Kurdistan Province?

Methodology: This study uses secondary data analysis, relying on data from general population and housing censuses and annual vital statistics from the Civil Registration Organization. By applying demographic methods, future population trends are projected, and the factors underlying these changes are analyzed. Population data (by age and sex), along with migration, mortality, and fertility information from censuses conducted between 1956 and 2016, are utilized. Migration data are derived from census results and indirect methods, while mortality and fertility statistics come from the Provincial Civil Registration Organization and related surveys. Various demographic indicators and indices are employed to examine population structure and dynamics. Population forecasts are generated using the DemProj model within the Spectrum software.

**Findings:** Mortality rates were estimated using the Brass method, based on child survival probabilities, and life expectancy was calculated for 2006, 2011, and 2016, with future projections using a logistic equation. Life expectancy at birth in the province is expected to increase from 70.1 years in 2006 to 75.4 years by 2041. Fertility rates show a gradual upward trend from 1395 to 1420, reaching 2.31 by 2041. The province is experiencing out-migration. Under the chosen scenario of higher fertility rates and stable migration, the population is projected to stabilize at approximately 1.915 million. In

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alternative scenarios, population growth is anticipated to reach between 1.84 and 1.92 million by 1420, depending on varying fertility and migration conditions.

**Conclusion:** Recent shifts in age structure, characterized by an increasing elderly population and declining working-age demographic, present economic and healthcare challenges. If current trends persist, Kurdistan Province may face issues such as population aging and labor shortages. Given the current demographic window of opportunity, policies should focus on attracting and retaining the workforce and leveraging economic potential during this period. Without timely interventions, these opportunities may be lost, becoming economic burdens

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