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THE IMMINENT POPULATION DECLINE IN TURKEY AFTER COVID-19 AND THE SYRIAN CRYSIS

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Abstract

This study examines recent demographic trends in Türkiye and provides population projections for the 2023–2040 period. Using 2014–2022 panel data from TURKSTAT, based on registered addresses and disaggregated by place of birth, we distinguish between native (81 provinces) and foreign-born populations. Historical population growth rates are calculated and future trends are projected using regression-based models. Given the sharp decline in population growth observed in 2020 due to the COVID-19 pandemic, two scenarios are considered: one assuming a permanent effect, and another assuming a temporary shock. Our findings indicate a rapid decline in native population growth, turning negative by 2028, with the native population peaking at approximately 83 million. Nearly half of current population growth is attributable to the foreign-born population, which is officially near 5 million and expected to rise further. By 2040, the native population is projected to fall to 76 million, while the total population is expected to range between 86 and 94 million—depending on immigration policies—of which 11% to 19% (up to 18 million people) will be foreign-born. The results suggest that natural population growth in most Turkish provinces has nearly ceased, and immigration has become the dominant driver of demographic change.

Keywords: Population Growth, Fertility, Covid-19, Immigrants, Foreign-Born Population, Public Policy

JEL Codes: D84, F22, J11, J13, Q56

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INTRODUCTION

Population refers to a group of people that live in a specific area during a specific time period and share certain common characteristics or attributes (Babbie, 2021, p. 86). While population was largely viewed through the lens of pure numbers until the advent of industrialization, population movements as well as the characteristics of the population gained significant steam after the 20th century (Akbaş, 2016, p. 2). Migrations, as well as natural causes, have led to drastic and rapid population changes throughout history (McKeown, 2004). In recent years, these demographic shifts have become especially prominent in regions affected by conflict, including Turkey, the European Union (EU), and the surrounding areas as a result of the Syrian (Yazgan et al., 2015; Buonanno, 2017) and Ukrainian crises (Duszczyk et al., 2022).

After the eruption of the civil war in Syria in 2011 (Ford, 2019), millions of immigrants from Syria, Iraq and other countries have flocked to Turkey, either as a permanent residence or simply a gateway to Europe. The Covid-19 epidemic also has had significant effects on the fertility rates and demographic structure of many countries (Cohen, 2021), whose combined effects could be devastating and unpredictable on the socio-economic and demographic structure of the country, necessitating a new detailed demographic projection, differentiating between local and foreign people and their growth patterns.

The primary motivation for this study stems from several critical gaps in existing demographic research on Türkiye. First, there has been no comprehensive population projection that utilizes provincial-level data disaggregated by place of birth. This study is the first to offer such a projection, providing a novel analytical framework that distinguishes between native-born and foreign-born cohorts. By isolating these population groups, the analysis enables a more accurate understanding of the differential growth patterns and quantifies the true demographic contribution of recent immigration flows, particularly from Syria and neighboring regions, to Turkey's overall population dynamics.

Second, existing population projections for Turkey are not only outdated and overly optimistic, but also fail to account for the massive migratory disruptions that have occurred over the last decade. The influx of refugees and migrants has fundamentally altered the demographic landscape, rendering earlier assumptions about fertility, mortality, and migration obsolete. With the advent of the Address-Based Population Registration System (ADNKS) and the availability of granular provincial data by place of birth, it is now possible to update these projections using more empirically grounded, high-resolution data, without relying exclusively on abstract or overly complex mathematical models.

Finally, the COVID-19 pandemic has introduced additional volatility into population growth trends. The sweeping public health measures implemented in response to the crisis, including mobility restrictions, disruptions in healthcare access, and changes in reproductive behavior, have produced observable demographic effects, particularly in 2020. To account for this, the study incorporates two projection scenarios: a low-growth scenario, which assumes that the COVID-19 shock had a permanent effect on population dynamics, and a high-growth scenario, which assumes that the disruption was temporary and growth patterns eventually normalized.

Together, these three pillars, disaggregation by place of birth, recalibration using updated migration-sensitive data, and integration of COVID-19 effects, aim to deliver a more accurate, context-sensitive, and policy-relevant understanding of Turkey's future population trajectory. To this end, the study utilizes provincial-level data classified by place of birth, distinguishing between native-born and foreign-born cohorts across all 81 provinces. This approach enables a granular assessment of spatial and cohort-specific population growth trends, revealing how native population dynamics differ from those shaped by recent immigration. Accordingly, we estimate population growth not only for each province and for foreign-born residents, but also for the country as a whole. In addition, we incorporate the demographic shock induced by the COVID-19 pandemic, particularly the marked drop in population growth observed in 2020, by presenting both a controlled scenario, where the pandemic's impact is treated as temporary, and an uncontrolled scenario, where the effect is assumed to be permanent.

LITERATURE REVIEW: POPULATION GROWTH

Demographic Theories and Transition Patterns

Population is subject to constant change across time and region (Tanoğlu, 1969, p. 29), via births, deaths, and migrations, which are collectively studied under the field of population geography (Flowerdew & Green, 2019, p. 65). Contemporary population surveys (or censuses) aim to collect a significant amount of useful demographic information about the population including but not limited to sex, age, place of birth, education status, work life, immigration patterns, and urbanization characteristics (Akbaş, 2016, p. 5), which help governments develop more adequate social policies and development plans (DPT, 1963).

Among the most influential paradigms used to explain population change over time is the Demographic Transition Theory (Lee, 2003), which offers a historical and economic explanation of how population patterns evolve as societies modernize. It posits that populations shift from a pre-industrial

regime of high fertility and mortality to a post-industrial regime of low fertility and mortality. The transitional process begins with improvements in public health and sanitation, which reduce death rates while birth rates remain high, causing rapid population growth. As societies urbanize and industrialize, fertility begins to fall due to greater access to contraception, rising education levels, especially among women, and shifting social norms around family size and reproductive behavior. In the final stage, both birth and death rates are low, and in some countries, fertility rates even fall below the replacement level, leading to aging and eventual population decline.

Though initially developed to describe demographic change in Western European societies, the theory has since been applied, often with contextual modifications, to various countries across different levels of economic development. In the Turkish context, the Demographic Transition Theory offers a compelling framework to interpret the shifts observed over the last century. Early in the Republican era, Turkey implemented pronatalist policies to rebuild its population following the War of Independence. Fertility rates were high, consistent with a rural, agrarian society characterized by large family structures. However, from the 1960s onwards, Turkey began to experience significant fertility decline due to the introduction of antinatalist population policies, a growing urban population, widespread improvements in public health and education, and increased female participation in the workforce (Samancı Tekin & Kara, 2018, p. 223). These trends indicate a movement into the third stage of the demographic transition.

Although Turkey has historically maintained a younger population than many European countries (Worlddata.info, 2022), more recent indicators suggest that the country is on the verge of completing its demographic transition. According to Bostan and Sertkaya Doğan (2019, p. 63), Turkey is typically classified as a Stage-3 country but is expected to be considered a Stage-4 country from 2023 onwards due to its rapidly aging population and continued decline in fertility (Bostan & Sertkaya Doğan, 2019, p. 61). Supporting this classification, Turkey's total fertility rate (TFR) fell to 1.51 in 2023, significantly below the replacement level of 2.1 (TURKSTAT, 2023d). This trend indicates not only a slowdown in population growth but also a transition into a period characterized by aging, declining youth cohorts, and increasing dependency ratios.

Recent scholarly work has further refined the classical model by proposing a potential fifth stage, where low fertility persists despite high levels of economic development and institutional support for family formation (Kirk, 1996; Skirbekk, 2008). While Turkey has not yet definitively entered this speculative fifth stage, the persistence of sub-replacement fertility and the rapid aging of its population signal that it may be moving in that direction. These dynamics necessitate a reassessment of population-

related policy tools, particularly in areas such as labor force sustainability, social security reform, retirement planning, and support for family life.

In conclusion, the Demographic Transition Theory remains a vital lens through which to understand Turkey's population dynamics. Its explanatory power helps trace how structural shifts, spanning education, health, employment, and gender, translate into macro-level demographic change. However, the Turkish case also illustrates the importance of contextualizing the theory within specific historical, cultural, and political settings. As the country transitions into the final stages of the demographic model, it faces both the challenges and opportunities that accompany aging and population stabilization.

Population Growth In the World

These dynamics in Turkey are not occurring in isolation. In fact, they reflect broader global patterns, as many countries undergo similar transitions marked by declining fertility and shifting age structures. Closely intertwined with the demographic transition framework is the issue of global population growth and the ongoing transformation of age structures around the world. One of the most notable features of the past five decades has been the sharp decline in global fertility, which has dropped from an average of five children per woman in the 1970s to 2.7 in recent years. This trend is expected to continue toward the replacement level of approximately 2.1 children per woman in the near future (Samancı Tekin & Kara, 2018, p. 223). Such a decline has profound implications, particularly in terms of age distribution, leading to what has been termed the "global aging phenomenon", a process that is increasingly reshaping the demographic landscapes not only of developed countries but also of emerging and developing economies, including Turkey (Soy, 2012, p. 1).

Historically, population aging was primarily associated with Western Europe, North America, and East Asia. However, recent research shows that the aging process has accelerated globally, even in regions that previously experienced rapid population growth. Declining fertility rates, in conjunction with rising life expectancy, have resulted in a growing share of elderly populations and a shrinking proportion of younger cohorts in many parts of the world. This shift is expected to place pressure on social welfare systems, healthcare infrastructure, and labor markets, and is already influencing migration patterns, retirement policies, and economic growth trajectories.

In light of these dynamics, global population projections have become a key focus of international demographic research. The United Nations' 2017 population forecast anticipated a continued rise in the global population, projecting 8.5 billion by 2030, 9.7 billion by 2050, and 11.1 billion by 2100 (United Nations, 2017). However, subsequent revisions have consistently lowered these estimates. The 2019

update projected a more moderate peak of 10.8 billion by the end of the century (United Nations, 2019), and the most recent revision in 2022 further reduced the peak estimate to 10.4 billion by 2100, while maintaining intermediate milestones of 8.5 billion in 2030 and 9.7 billion in 2050 (United Nations, 2022). This downward adjustment is indicative of the increasingly conservative assumptions about future fertility rates, especially in regions like South Asia, Latin America, and sub-Saharan Africa, which had previously been considered the engines of global demographic growth.

What makes these successive downward revisions particularly significant is the speed with which they have occurred. In less than a decade, peak population estimates have declined by nearly one billion people, reflecting growing recognition that fertility behavior is changing more rapidly and globally than previously assumed. This emerging demographic realism has implications not only for international planning and policy coordination but also for individual states like Turkey that are navigating similar demographic shifts on a national scale.

Complementing the United Nations' projections are various academic models that attempt to simulate long-term global population dynamics. Lutz et al. (1997), using probabilistic forecasting methods, projected that the world population would reach 7.9 billion by 2020 and climb to 10 billion by 2050, with a likely peak at around 12 billion between 2070 and 2080 before gradually declining. Zhang (2008), using polynomial function modeling, produced comparable estimates, suggesting that the global population would range between 7.94 and 8.33 billion by 2030, peak around 9.5 billion in the 2050–2060 period, and subsequently decline (Zhang, 2008, p. 717). These academic efforts underscore the inherent uncertainties in population forecasting and highlight the role of model selection, assumptions about fertility and mortality, and socioeconomic feedback mechanisms.

Additionally, recent work by Vollset et al. (2020) introduced the role of education, female empowerment, and access to reproductive health as critical variables in projecting long-term fertility decline. Their study, published in The Lancet, predicted an even earlier and lower peak than the UN's 2022 estimates, with the global population peaking at 9.7 billion by 2064 before falling to 8.8 billion by 2100. This trajectory assumes rapid progress in educational attainment and contraceptive access, particularly in developing countries (Vollset et al., 2020).

Overall, the global discourse on population growth is rapidly evolving. Whereas concerns of overpopulation once dominated international debate, today the conversation has shifted toward underpopulation, workforce contraction (Maestas et al., 2016), and aging societies (Bloom & Luca, 2020). Turkey, while once grouped among countries with high population momentum, is now navigating similar

demographic headwinds. The global patterns of declining fertility, plateauing population growth, and demographic aging are now mirrored in Turkey's own trajectory, making it a case study in how global trends are playing out at the national level.

Population Growth In Türkiye

Understanding Turkey's demographic evolution requires a closer look at its historical population policies, census systems, and fertility transitions. Following the foundation of the Republic, Turkey conducted its first national census in 1927. From 1930 to 1990, censuses were carried out every five years, with a final traditional enumeration held in 2000 (Bostan & Sertkaya Doğan, 2019, p. 63). In 2007, Turkey adopted the Address-Based Population Registration System (ADNKS), which allowed for the annual tracking of population dynamics with greater spatial and temporal precision (RG, 2006). Under the influence of pronatalist policies, Turkey's population nearly doubled between 1927 and 1960, and the total fertility rate (TFR) remained high, averaging approximately six children per woman during this period. However, antinatalist policies introduced in the mid-1960s, combined with rising urbanization, improved healthcare, access to education, and greater female labor force participation, contributed to a sharp decline in fertility. The TFR fell from around 5 children to 1.99 by the 2010s, marking a shift toward sub-replacement fertility levels (Samancı Tekin & Kara, 2018, p. 223).

It is important to note that regional disparities persist within Turkey's demographic structure. Fertility rates vary substantially between provinces, with northwestern regions exhibiting lower fertility levels compared to the relatively higher rates in southeastern provinces (Başkaya & Özkılıç, 2017). This spatial heterogeneity reflects differences in socio-economic development, educational attainment, and cultural norms.

Turkey's future population trajectory has been the subject of numerous national and international projections, many of which now appear overly optimistic in hindsight. The United Nations' 2017 report projected that Turkey's population would reach approximately 97 million by 2060 and then decline to 87 million by 2100. Its low scenario forecasted a much sharper drop, to just 53 million by 2100, while the high scenario projected sustained growth to 130 million (United Nations, 2017). The 2019 revision moderated these estimates, suggesting a peak between 110 and 120 million depending on fertility trends (United Nations, 2019). However, a critical examination of these forecasts reveals a key flaw: they often assumed a TFR of around 2.0, despite Turkey's most recent official statistic, 1.51 in 2023, being significantly lower (TURKSTAT, 2023d). Without a substantial and sustained rise in fertility or a renewed wave of immigration, even the UN's lower-bound projections now appear inflated.

TURKSTAT's own projections have likewise undergone multiple revisions. The 2013 forecast predicted population growth until 2050, reaching 93.5 million before declining to 89.2 million by 2075. More optimistic variants in the same report anticipated much higher peaks: one scenario projected 119 million by 2075 based on a gradual fertility increase to 2.5; another envisioned up to 140 million, assuming fertility would rebound to three children per woman by 2050 (TURKSTAT, 2013). TURKSTAT's 2018 revision was somewhat more conservative, predicting a peak of 107.6 million by 2069, followed by a decline to 94.1 million by 2080 (TURKSTAT, 2018). However, even this outlook is now seen as overly hopeful given recent fertility declines. The 2024 revision finally acknowledged this reality, projecting a peak of just 90 million by 2040 and a decline to 77 million by 2100 (TURKSTAT, 2024).

These demographic forecasts are corroborated, and challenged, by a range of independent modeling efforts. Using Gompertz and Verhulst growth functions, İskender (2021) estimated that Turkey's population would reach 100.3 million in 2040, peak at 107.6 million by 2080, and then begin a slow decline, closely aligning with TURKSTAT's 2018 estimates. In earlier work using the Ricketts/Head Asymmetric Growth Function, İskender (2018) predicted a potential stabilization between 115–120 million, provided certain fertility and migration assumptions were met.

Alternative methodologies have produced contrasting projections. Öztürk et al. (2018) applied an artificial intelligence-based genetic algorithm, predicting a population of 111.1 million in 2020, a figure that notably overshot the actual count of 83.6 million reported by TURKSTAT (TURKSTAT, 2021). Conversely, Güven and Bilgin (2014) employed time-series mining to estimate Turkey's 2011 population with a 98.86% accuracy rate, illustrating the potential for more robust, data-driven forecasting techniques. Canpolat and Karakaya (2013), using cohort-component population projection models, estimated Turkey's population at around 84 million by 2023, correctly anticipating the slowing growth trend.

The divergence among these models underscores the uncertainty surrounding Turkey's demographic future, particularly in light of persistent fertility decline and potential shifts in immigration policy. Additionally, while early projections often focused on total population size, there is now greater emphasis on population structure, particularly the proportion of older adults. Even the most optimistic projections concur that the share of those aged 65 and over will increase significantly in the coming decades, posing serious challenges for social security, healthcare, and the labor market (Reznik et al., 2006).

Recent academic studies emphasize the growing risk of structural population shrinkage in countries experiencing persistent low fertility without compensatory immigration or productivity gains. As Beaujouan et al. (2019) argue, countries like Turkey must now prepare for a future defined not by demographic expansion, but by workforce contraction, rising dependency ratios, and an aging population structure, much like advanced economies across Europe and East Asia. In this context, one of the most critical and complex variables influencing Turkey's demographic outlook is the substantial influx of Syrian refugees and other migrant groups in the last decade.

Effects of Syrian Immigrants On Demographics

Migration flows, particularly those triggered by conflict, have a long history of reshaping the demographic landscapes of host nations. Due to its geographical proximity to Syria, Turkey has become one of the most heavily impacted countries since the Syrian Civil War began in 2011. As of 2023, Turkey hosts more than 3.3 million registered Syrian refugees, making it the largest refugee-hosting country in the world (UNHCR, 2023). This sustained and large-scale inflow has generated a growing body of literature exploring its multi-dimensional socio-economic and demographic consequences.

One of the key demographic dimensions explored in the literature is fertility patterns. Studies such as those by Newsham and Rowe (2021) indicate that refugee populations often bring with them higher fertility norms, influencing host country trends in the short term. This phenomenon is supported by Turkish data, where the fertility rate, which had declined steadily from 3.08 children per woman in 1990 to 2.05 in 2011, showed a brief uptick to 2.14 in 2015, shortly after the peak of Syrian refugee admissions (Gönder, 2017).

Nevertheless, this demographic boost appears to be temporary. Ediev and Yüceşahin (2016) caution that if most Syrians are to remain in Turkey permanently, they may eventually adopt the reproductive behavior of the host population. This is supported by more recent data: the TFR in Turkey dropped significantly to 1.51 by 2023 (TURKSTAT, 2023d), indicating that assimilation and structural economic pressures are overpowering initial fertility differentials. This aligns with Mayer and Riphahn's (2000) findings, which suggest that immigrant groups tend to converge toward the host country's fertility norms over time.

In addition to fertility, population distribution and regional demographic shifts have received attention. Altun (2021) emphasizes that Syrian immigrants disproportionately contribute to population growth in regions already experiencing below-replacement fertility, suggesting that refugees are not evenly spread across Turkey but tend to concentrate in urban and southeastern provinces such as

Gaziantep, Şanlıurfa, and Hatay. These are areas that already had demographic pressures, and the asymmetric growth they now experience complicates resource allocation, urban planning, and social cohesion. Furthermore, studies by Del Carpio and Wagner (2015) using labor market and demographic data underline how localized shocks caused by refugee inflows can exacerbate housing demand, educational needs, and public service burdens.

The age and gender profile of the Syrian refugee population also deviates from typical patterns seen in conflict-driven migration. While conventional theory expects a higher share of children and elderly among forced migrants, Türkoğlu and Elmastaş (2019) find that the Syrian case is dominated by individuals in the 18–49 age range, comprising the core of the working-age population. Additionally, the slight male dominance (52.4%) introduces unique challenges in employment, integration, and even security discourses. These demographic features imply that the Syrian presence in Turkey is not just humanitarian but also deeply tied to labor dynamics and long-term social integration, further complicating the cultural, economic, and most importantly demographic issues in the country (ORSAM, 2015).

Another critical area in the literature is assimilation and second-generation dynamics. Though still emerging, early evidence suggests that Syrian families are experiencing a gradual shift in cultural practices and educational preferences in urban areas (İçduygu & Diker, 2017). Education levels, gender roles, and family size preferences among young Syrians in Turkey may begin to resemble those of Turkish citizens over time, indicating deeper demographic integration.

Lastly, policy responses and demographic management are underlined in recent analyses. Scholars such as Aksakal (2022) stress that while refugees contribute to demographic renewal in aging regions and a marked increase in fertility rates among the natives through social interaction with refugees (Aboulhosn, 2025), relying on refugee inflows as a substitute for sustainable population policy is short-sighted. Without integration-focused policies, the long-term demographic benefits may be offset by social stratification and marginalization.

In conclusion, the literature suggests that Syrian immigration has had a complex, multi-layered effect on Turkish demographics, initially raising fertility rates and rejuvenating population structures in certain regions, but also introducing long-term challenges related to assimilation, resource management, and demographic sustainability. A deeper integration of demographic theory with empirical Turkish data remains necessary to fully understand and respond to this transformation.

DATA AND METHODOLOGY

This study utilizes two datasets. The first is the conventional five-year census data (TURKSTAT, 2023c) dating back to 1927, without distinguishing between native and foreign-born individuals. The second is the annual dataset based on the Address-Based Population Registration System (ADNKS) provided by TURKSTAT (2023b), available since 2014, which differentiates populations by place of birth, thereby distinguishing between native and foreign-born individuals. While both datasets are used to estimate the country's overall population, the provincial dataset is primarily used to derive separate estimates for the native-born population (across 81 provinces), and to distinguish this group from foreign-born and/or immigrant populations.

We primarily present and compare two sets of projections. The first set is based on nominal figures, which assume that the effects of the COVID-19 pandemic on population growth trends are permanent. The second set assumes the pandemic's impact was temporary and substitutes the 2020 value with the arithmetic average of the adjacent years (2019 and 2021). For instance, Turkey's population growth rates were 1.404%, 0.552%, and 1.275% in 2019, 2020, and 2021, respectively. While there was a significant drop in 2020, this pattern was not consistent across most provinces, and growth returned to expected levels in 2021. Therefore, an alternative estimate using the average of 2019 and 2021 for 2020 (i.e., 1.339% instead of 0.552%) is applied to represent a scenario where the COVID-19 effect is considered temporary. This adjustment is uniformly applied across all provinces.

We do not impose specific assumptions regarding fertility or mortality rates for the native population. However, our projections implicitly assume that recent historical trends, particularly those observed in the post-Syrian crisis period, regarding fertility, mortality, and emigration rates will continue at both the national and provincial levels. It is important to emphasize that this study employs province-level data based on place of birth, which tracks annual birth cohorts and inherently excludes foreign-born individuals. This design eliminates the need to separately account for interprovincial migration or emigration. Moreover, our focus is not on measuring emigration directly, but rather on capturing the foreign-born population, which reflects the combined effects of emigration and the presence of foreign-born individuals, including children born to foreign nationals within the country.

There are three basic population growth models, arithmetic (linear), geometric, and exponential, as well as more complex models such as parabolic and logistic growth models based on multi-year census data (Karakaya, 2009, p. 19). In our analysis, we begin by calculating the population growth rate for each province and each year (e.g., the growth of province i in year t), and estimate trend trajectories using

linear regression for each province. Using these trends, we then forecast the expected future population for each province. Although our method is technically linear, the actual population trajectory behaves parabolically, initially at a declining rate and then at a negative rate.

$$G_{it} = (P_{it} - P_{it-1}) / P_{it-1} \quad (1)$$

$$\hat{G}_{it} = a_{it} + b_{it} * t \quad (2)$$

In Equation 1, G_{it} represents the population growth rate of province i at time t, while P_{it} denotes the population of province i at the same time. Similarly, Equation 2 presents a simple regression model used to estimate the population growth rate of province i in year t ($\hat{G}_{it}$), where b_{it} is the expected population growth rate for province i in year t and a_{it} is the intercept. For instance, if b_{it} = -0,133, this implies that population of province i is expected to decrease by 0.133% annually. Even though a linear population growth path is not perfectly accurate, as the data shows, the results appear sufficiently accurate for the short to mid-term.

$$\hat{P}_{it} = \hat{P}_{it-1} * \hat{G}_{it} \quad (3)$$

The populations of each province for each year is then recursively calculated based on the previous year's population ($\hat{P}_{it-1}$) and the estimated population growth rate ($\hat{G}_{it}$) as shown in Equation 3 above. The estimated total population of 81 provinces for each year is then obtained by summing provincial population estimates, as shown in Equation 4 below. In this context, $\hat{P}_{Pt}$ represents the estimated total population of 81 provinces in year t (excluding the foreign-born individuals). From this, the annual population growth rate of the entire set of provinces in each year ($\hat{G}_{Pt}$) is subsequently derived, as shown in Equation 5 below.

$$\hat{P}_{Pt} = \hat{P}_{1t} + \hat{P}_{2t} + \ldots + \hat{P}_{81t} \quad (4)$$

$$\hat{G}_{Pt} = \hat{P}_{Pt} / \hat{P}_{Pt-1} \quad (5)$$

The total population, including the foreign-born individuals, however, is estimated by using both provincial-level data (TURKSTAT, 2023b), and all available historical population censuses dating back to 1927 (TURKSTAT, 2023c), both of which incorporate the foreign-born individual population. The estimation procedure here follows a asimilar pproach. In Equation 6 below, G_{Tt} represents the total population growth rate at time t, while P_{Tt} represents the total population at the same time. Similarly, Equation 7 is a simple regression that is used to estimate the total population growth rate in year t ($\hat{G}_{Tt}$), where d_{it} is the expected population growth rate for province i at year t and c_{it} is the intercept. The total

population for each year is then recursively calculated based on the previous year's population ($\widehat{P}_{Tt-1}$) and the estimated population growth rate ($\widehat{G}_{Tt}$) as shown in Equation 8.

$$G_{Tt} = (P_{Tt} - P_{Tt-1}) / P_{Tt-1} \quad (6)$$

$$\widehat{G}_{Tt} = c_i + d_{it} * t \quad (7)$$

$$\widehat{P}_{Tt} = \widehat{P}_{Tt-1} * \widehat{G}_{Tt} \quad (8)$$

Foreign-born population at time t ($\widehat{F}_t$) is then derived by subtracting the total population of 81 provinces excluding foreign-born population ($\widehat{P}_{Pt}$) from the total population estimate ($\widehat{P}_{Tt}$), as shown in Equation 9. The population growth of foreign-born population ($\widehat{G}_{Ft}$) is then recursively calculated as shown in Equation 10.

$$\widehat{F}_t = \widehat{P}_{Tt} - \widehat{P}_{Pt} \quad (9)$$

$$\widehat{G}_{Ft} = \widehat{F}_t / \widehat{F}_{t-1} \quad (10)$$

This methodology is applied twice, once under the assumption of a permanent COVID-19 impact, and once assuming the effect was temporary. Additionally, a more advanced parabolic regression model is also evaluated for estimating growth rates. In Equation 11 below, $\widehat{H}_{it}$ denotes the projected population for province i at year t, with b_{1it} and b_{2it} capturing growth rates, and a_{it} serving as intercept. While this model improves accuracy and explanatory power, the gains are marginal for most provinces, and only significant for foreign-born population. Therefore, we adopt the simpler method for interpretability, but also report the results from the parabolic projection in Table 4c to have a more thorough analysis for the total population with and without foreign-born individuals. Please see Table 1 for a glossary of variable used.

$$\widehat{H}_{it} = a_{it} + b_{1it} * t + b_{2it} * (t-2014)^{0.5} \quad (11)$$

Table 1: Variable glossary for the model

Notation	Explanation
G_{it} and $\widehat{G}_{it}$	Growth rate and Growth rate estimate for province i at time t
G_{Pt} and $\widehat{G}_{Pt}$	Growth rate and Growth rate estimate for all provinces at time t
G_{Tt} and $\widehat{G}_{Tt}$	Growth rate and Growth rate estimate for total population at time t
G_{Ft} and $\widehat{G}_{Ft}$	Growth rate and Growth rate estimate for foreign-born population at time t
P_{it} and $\widehat{P}_{it}$	Population and Population estimate for province i at time t
P_{Pt} and $\widehat{P}_{Pt}$	Population and Population estimate for all provinces at time t
P_{Tt} and $\widehat{P}_{Tt}$	Population and Population estimate for total population at time t
F_t and $\widehat{F}_t$	Population and Population estimate for foreign-born population at time t

RESULTS

Population Growth Between 2014 and 2022

It is difficult to fully interpret census data by merely examining aggregate population statistics from TURKSTAT (2023a) and contrasting them with the sharp decline in fertility rates, from approximately 2.2 children per woman to just 1.5 within the span of a decade or two (TURKSTAT, 2023d). How can a country with a fertility rate well below the replacement level (Smallwood & Chamberlain, 2005) continue to grow at more than 1% annually? Although it typically takes at least one generation for the effects of declining fertility to manifest fully in population size, a noticeable slowdown in natural population growth would still be expected. What is often overlooked, or altogether omitted, from such analyses is the distinction between the native and foreign-born components of population growth. Our findings indicate that an increasingly significant portion of Türkiye's overall population growth is being driven by the foreign-born population.

Table 2: Population in Türkiye in thousands (2014-2022)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	77696	78741	79815	80811	82004	83155	83614	84680	85280
81 Provinces	74704	75701	76607	77483	78346	79121	79831	80391	80915
Foreign-Born	2992	3041	3208	3328	3658	4034	3783	4289	4364
Foreign %	3.9%	3.9%	4.0%	4.1%	4.5%	4.9%	4.5%	5.1%	5.1%

Source: Turkstat, 2023b

Table 3: Population growth rates in % (2015-2022)

	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	1.345	1.364	1.247	1.477	1.404	0.552	1.275	0.708
81 Provinces	1.334	1.197	1.144	1.114	0.990	0.897	0.702	0.652
Foreign-Born	1.613	5.514	3.725	9.932	10.267	-6.212	13.367	1.755
Foreign %	4.62	15.61	12.00	27.70	32.63	-54.55	47.44	12.56

Source: Turkstat, 2023b* (* derived from the source).

Tables 2 and 3 distinguish the population growth trajectories of native-born and foreign-born individuals. While total population growth remained strong through 2021, with the exception of the COVID-19 disruption in 2020, a closer examination reveals a markedly different pattern beneath the surface. Specifically, there has been a consistent decline in the population growth rate of the native-born population (depicted as "81 provinces" based on place of birth), falling from 1.334% in 2015 to 0.99% in 2019, and further to 0.652% by 2022. These figures indicate that the dramatic decline in fertility rates has indeed materialized, gradually but predictably, within the native population.

In contrast, fluctuations in total population growth are largely attributable to immigration-related dynamics and changes in the foreign-born population. For example, in 2021, nearly half of the total population growth stemmed from foreign-born individuals, up significantly from approximately one-third in 2019. Similarly, the steep declines in population growth observed during the COVID-19 pandemic in 2020 and again in 2022 (preceding the national elections) were primarily the result of abrupt reductions in immigration inflows rather than changes in natural population dynamics. Whenever immigration slows or halts, overall population growth rates drop sharply. Preliminary data for 2023 (TURKSTAT, 2023b) appears to confirm this trend.

These patterns underscore the importance of separating native and foreign-born population growth in demographic analyses. As of 2022, foreign-born individuals comprised 5.1% of Türkiye's total population, a figure that continues to grow. Accordingly, immigration is not merely a peripheral factor but has become central to understanding Türkiye's demographic future.

Population Growth Projection Between 2023 and 2040

Tables 4a and 4b present two scenarios for Türkiye's population growth, depending on whether the demographic effects of COVID-19 in 2020 are assumed to be permanent (Estimate 1; Tables 4a and 5a) or temporary (Estimate 2; Tables 4b and 5b). The difference between these two scenarios is negligible in the case of the native population, which is projected to begin declining around 2028 or 2029 regardless of the

assumption. However, the total population is expected to continue growing beyond 2030 due to the sustained increase in the foreign-born population. Estimate 1 (Table 4a), which assumes a permanent impact from COVID-19, yields a more moderate trajectory: the total population grows by 0.8% in 2023, followed by a steadily declining trend that dips into negative growth around 2032 or 2033. In contrast, Estimate 2 (Table 4b) assumes the COVID-19 effect was temporary, resulting in a substantially higher influx of immigrants. This leads to a 1.01% growth rate in 2023 and a more gradually declining, yet still positive, growth trend extending through 2040.

Whether the COVID-19 effect proves to be permanent or temporary has important implications for the share of the foreign-born population. With the native population poised to decline soon, the continued rise in foreign-born residents will play a defining role in shaping Türkiye's demographic future. In both scenarios, the foreign-born share increases to levels that carry significant socio-economic and political implications. The more conservative Estimate 1 projects the foreign-born share to reach approximately 7% by 2030, 9% by 2035, and between 11–12% by 2040. This corresponds to nearly 10 million foreign-born residents compared to a shrinking native population of around 76 million, substantially fewer than today. The more expansive Estimate 2 foresees even more dramatic shifts, with foreign-born individuals comprising 10% of the population by 2030, 14% by 2035, and 19% by 2040, an astounding 17 million foreign-born individuals against a stable or declining native population of 76 million.

At this stage, the trajectory of the native population appears relatively fixed, and the future composition of the total population hinges largely on immigration policy. These findings are critical because, unlike much of the current literature, which fails to acknowledge that Türkiye has already entered Stage 4 of the demographic transition (Bostan & Sertkaya Doğan, 2019, p. 63) and continues to analyze total population trends without accounting for the effects of immigration (e.g., TURKSTAT, 2024) or the alarmingly low birth rates (TURKSTAT, 2023d), our analysis clearly demonstrates that recent population growth has been driven almost entirely by immigration. Figures 3 and 4 show that an increasing share of Türkiye's population growth over the past decade is attributable to foreign-born individuals. Without this component, population growth would have turned negative. Based on current trends, foreign-born residents are projected to account for nearly 100% of net population growth by 2028 or 2029 (see Tables 4a, 4b, and Figures 1 and 2). While immigration policy may fluctuate in the short term, it tends to follow broader structural patterns in the long term. Meanwhile, the outlook for the native population remains clear: long-term demographic decline is already underway.

Table 6 summarizes projected population figures for 2030 and 2040, distinguishing between total population (including foreign-born individuals) and the native population (based on the 81 provinces), using both linear and alternative polynomial models. Each projection is further divided into low and high scenarios, depending on whether the demographic impact of COVID-19 is assumed to be permanent or temporary. The native population estimates, represented by the 81 provinces, show minimal divergence between the linear and polynomial models, suggesting a relatively stable and predictable trend in native population decline. By contrast, the total population projections, which incorporate foreign-born individuals, show significantly greater variance, particularly in the low estimate. In both 2030 and 2040, the total population under the polynomial model is approximately 3–4 million lower than the linear estimate, highlighting the sensitivity of these projections to immigration trends and assumptions.

Figure 1: Population projection between 2015 and 2040

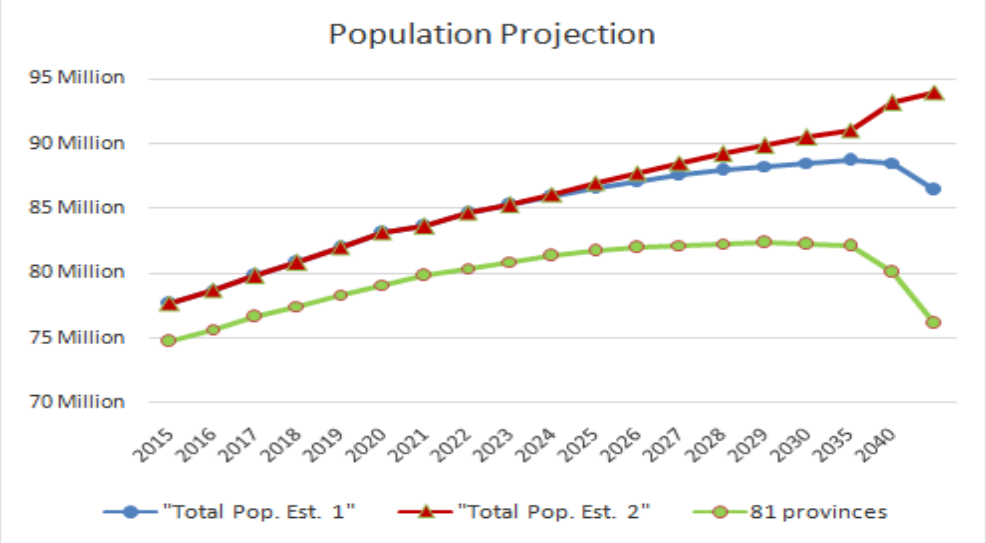


Figure 2: Population growth rate projection between 2015 and 2040

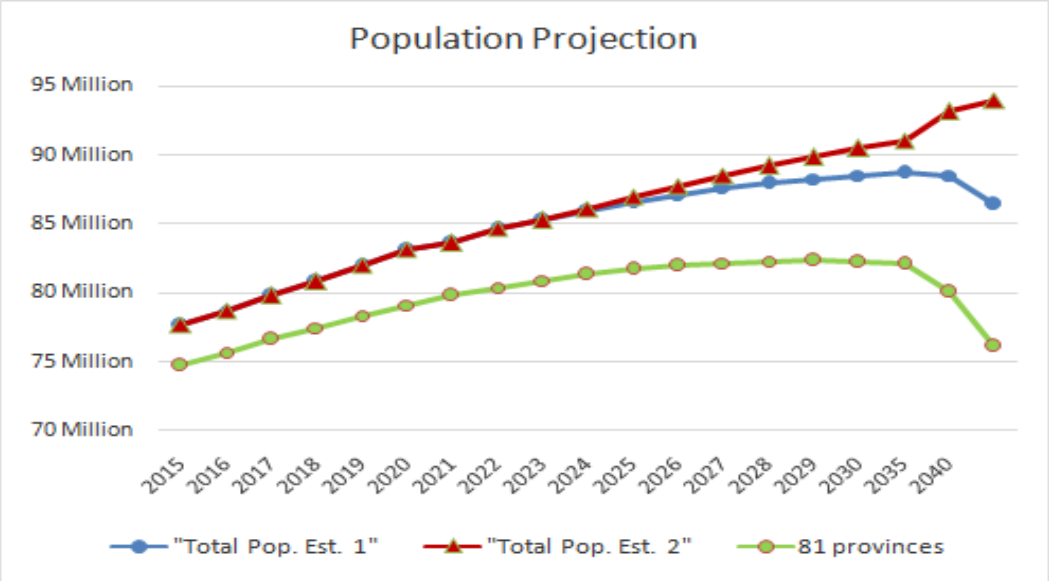


Table 4a: Population growth estimates (1)

	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2040**
Total Population	0.793	0.709	0.625	0.541	0.457	0.372	0.288	0.204	-0.637
81 Provinces	0.563	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.181
Foreign-Born	5.065	5.089	5.101	5.098	5.082	5.052	5.008	4.950	3.767
Foreign %	32.69	38.30	45.44	54.83	67.66	86.24	115.57	168.87	-780.41

Table 4b: Population growth estimates (2)

	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2040**
Total Population	1.018	0.962	0.906	0.850	0.794	0.738	0.682	0.626	0.066
81 Provinces	0.548	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.228
Foreign-Born	9.731	9.734	9.666	9.541	9.371	9.167	8.938	8.689	5.976
Foreign %	48.93	65.65	78.78	88.94	96.72	102.67	107.19	110.61	148.76

Table 5a: Population estimates (1)

	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2040**
Total Population	85956	86565	87106	87577	87977	88304	88559	88740	88526
81 Provinces	81371	81747	82042	82254	82384	82429	82389	82265	80384
Foreign-Born	4585	4819	5064	5323	5593	5876	6170	6475	8142
Foreign %	5.3%	5.6%	5.8%	6.1%	6.4%	6.7%	7.0%	7.3%	9.2%

Table 5b: Population estimates (2)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	86148	86976	87764	88510	89212	89870	90483	91049	93152
81 Provinces	81359	81721	82001	82197	82308	82333	82272	82125	80113
Foreign-Born	4789	5255	5763	6313	6904	7537	8211	8924	13039
Foreign %	5.6%	6.0%	6.6%	7.1%	7.7%	8.4%	9.1%	9.8%	14.0%

Table 6: Population in 2030 and 2040: Linear vs. polynomial estimates

		2030		2040	
	Low/High	Linear	Polinomial	Linear	Polinomial
Total Population	Low	88 739 798	87.918.080	86.470.808	82.609.245
	High	91.049.250	90.324.635	93.982.321	90.370.221
81 Provinces	Low	82.124.949	81.471.358	76.111.609	73.115.919
	High	82.264.550	81.502.792	76.533.717	73.186.349
Foreign-Born	Low	6.475.248	6.415.288	9.937.091	9.493.326
	High	8.924.301	8.853.277	17.870.712	17.183.872

Figure 3: % share of foreign-born population (2014-2040)

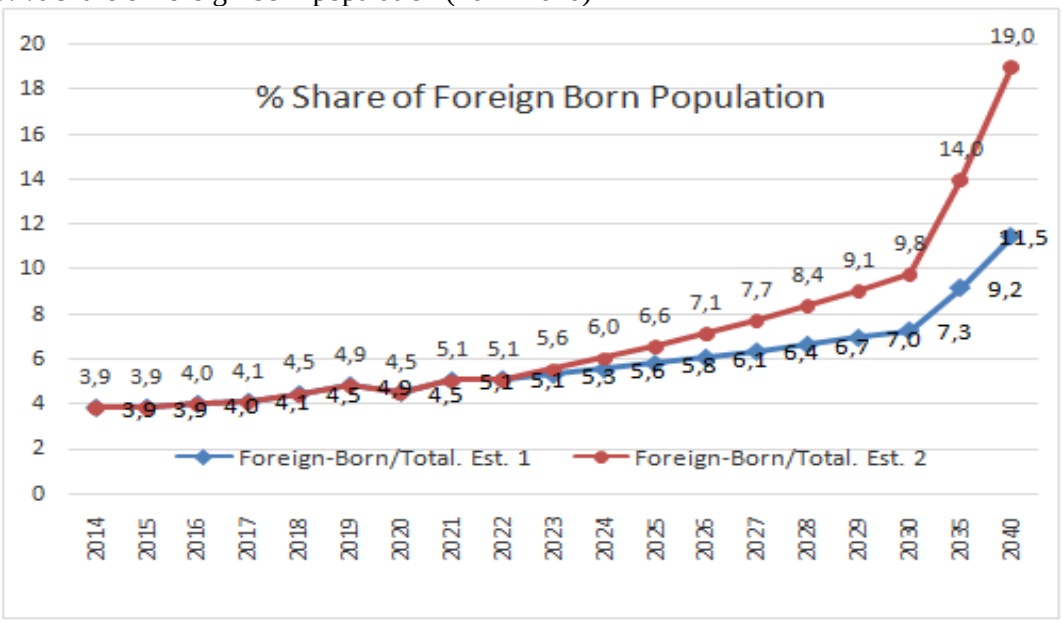
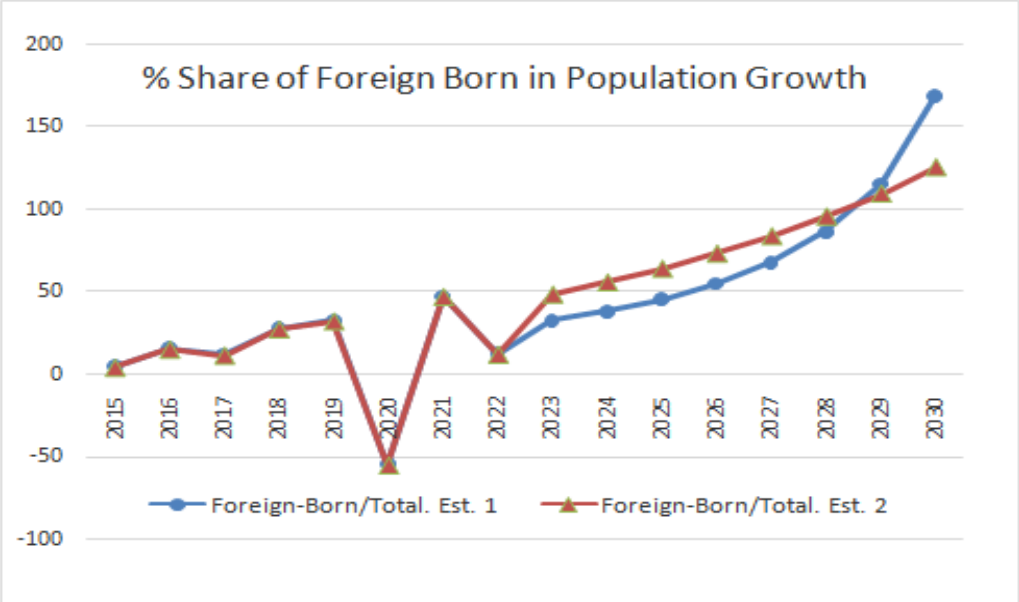


Figure 4: % share of foreign-born in population growth (2014-2040)



Population Growth For Geographical Regions and Provinces

Türkiye is divided into seven geographical regions, each exhibiting distinct and diverse demographic characteristics. Among them, Marmara, the most developed region, and Southeastern Anatolia currently demonstrate the highest population growth rates. In contrast, the Black Sea Region has been experiencing net population loss since 2020. Although all regions, except for the Black Sea, have continued to show positive population growth, they unanimously exhibit a persistent and steady decline in their growth rates (see Tables 7 and 8). For instance, the population growth rates of Marmara and Southeastern Anatolia were 2.29% and 1.94%, respectively, in 2015, but declined sharply to 1.22% and 1.33% by 2022.

Similarly, the national average across all 81 provinces dropped from 1.33% in 2015 to just 0.65% in 2022. This downward trend is consistently observed across nearly all provinces. Türkiye's three largest metropolitan areas, Istanbul, Ankara, and İzmir, also reflect this pattern. Their respective growth rates fell from 3.1%, 2.1%, and 1.8% in 2015 to 1.65%, 1.12%, and 0.83% in 2022. Moreover, the number of provinces experiencing negative population growth has more than doubled, increasing from 12 in 2014 to 31 in 2022. This suggests a widening geographic disparity and a more accelerated demographic decline in certain regions. For a more detailed breakdown of provincial population growth rates, refer to Tables 15–17 in the Appendix.

Population Projections For Geographical Regions and Provinces

Based on observed trends across all 81 provinces between 2014 and 2022, every region in Türkiye is expected to experience a continued decline in population growth. By 2030, all regions, with the exception of Southeastern Anatolia, are projected to have entered a phase of negative population growth. By 2040, all regions, even Southeastern Anatolia, are expected to begin shrinking, and at an alarming rate. The aggregate growth rate for all regions combined, including the 81 provinces, is projected to decline from 0.55% in 2023 to below zero by around 2028–2029, marking the peak of the native population at approximately 82–83 million. By 2040, the Marmara, Aegean, Central Anatolia, and Eastern Anatolia regions are each expected to lose roughly one million people relative to their 2023 levels. The Black Sea Region is projected to lose around two million people, while Southeastern Anatolia is expected to continue growing slightly, adding approximately one million people over the same period. These projections are detailed in Tables 9 and 10 and illustrated in Figures 6 and 7.

Table 7: Population by geographical region, given in thousands (2014-2022)

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Marmara	14076	14399	14705	14999	15290	15555	15807	16018	16214
Aegean	8274	8370	8451	8529	8604	8668	8724	8767	8805
Central Anatolia	12492	12627	12754	12871	12984	13087	13192	13265	13329
Black Sea	11745	11773	11788	11797	11798	11801	11788	11754	11720
Mediterranean	9036	9177	9307	9433	9558	9668	9771	9855	9938
Eastern Anatolia	9848	9942	10023	10105	10185	10257	10319	10362	10402
Souteastern Ana.	9233	9412	9579	9750	9927	10084	10230	10371	10508
81 provinces	**74704**	**75701**	**76607**	**77483**	**78346**	**79121**	**79831**	**80391**	**80915**

Table 8: Population growth rate by geographical region, in percentages (2015-2022)

	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Marmara	2.29	2.13	2.00	1.94	1.73	1.62	1.34	1.22
Aegean	1.16	0.97	0.92	0.89	0.74	0.65	0.49	0.44
Central Anatolia	1.08	1.00	0.92	0.88	0.79	0.80	0.55	0.48
Black Sea	0.24	0.12	0.08	0.01	0.03	-0.11	-0.29	-0.29
Mediterranean	1.56	1.41	1.35	1.33	1.15	1.06	0.86	0.84
Eastern Anatolia	0.96	0.81	0.81	0.79	0.71	0.60	0.42	0.38
Souteastern Ana.	1.94	1.78	1.78	1.81	1.59	1.45	1.37	1.33
81 provinces	**1.33**	**1.20**	**1.14**	**1.11**	**0.99**	**0.90**	**0.70**	**0.65**

Table 9: Population projection by geographical region, given in thousands (2023-2040)

	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2040**
Marmara	16387	16535	16658	16755	16825	16868	16883	16870	15285
Aegean	8833	8852	8862	8863	8855	8838	8811	8776	7960
Central Anatolia	13383	13425	13455	13473	13479	13473	13454	13423	12469
Black Sea	11677	11625	11564	11495	11417	11332	11238	11137	9752
Mediterranean	10007	10066	10115	10153	10180	10195	10200	10193	9532
Eastern Anatolia	10434	10458	10473	10480	10478	10467	10448	10420	9686
Souteastern Ana.	10638	10760	10873	10978	11074	11161	11238	11306	11426
81 provinces	**81359**	**81721**	**82001**	**82197**	**82308**	**82333**	**82272**	**82125**	**76112**

Table 10: Population growth estimates by geographical region, given in percentages (2023-2040)

	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2040**
Marmara	1.07	0.90	0.74	0.58	0.42	0.25	0.09	-0.07	-1.72
Aegean	0.32	0.22	0.11	0.01	-0.09	-0.20	-0.30	-0.40	-1.43
Central Anatolia	0.40	0.31	0.22	0.13	0.04	-0.05	-0.14	-0.23	-1.15
Black Sea	-0.37	-0.45	-0.52	-0.60	-0.67	-0.75	-0.83	-0.90	-1.66
Mediterranean	0.70	0.59	0.48	0.37	0.26	0.15	0.04	-0.07	-1.16
Eastern Anatolia	0.31	0.23	0.15	0.06	-0.02	-0.10	-0.19	-0.27	-1.10
Souteastern Ana.	1.23	1.14	1.05	0.96	0.87	0.78	0.69	0.60	-0.30
81 provinces	**0.55**	**0.45**	**0.34**	**0.24**	**0.14**	**0.03**	**-0.07**	**-0.18**	**-1.23**

The population growth rate projections for Türkiye's three largest provinces, Istanbul, Ankara, and İzmir, are estimated at 1.45%, 0.98%, and 0.66%, respectively, for the year 2023. These rates are projected to decline to near-zero or even negative levels by 2030 and continue to fall further by 2040. In parallel, the number of provinces experiencing negative population growth is expected to rise significantly, from 31 in 2023 to 61 in 2030, and to 77 by 2040 (see Figure 5). For a detailed breakdown of provincial population growth projections, refer to Tables 12–14 in the Appendix.

Figure 5: Number of provinces with a declining population (2015-2040)

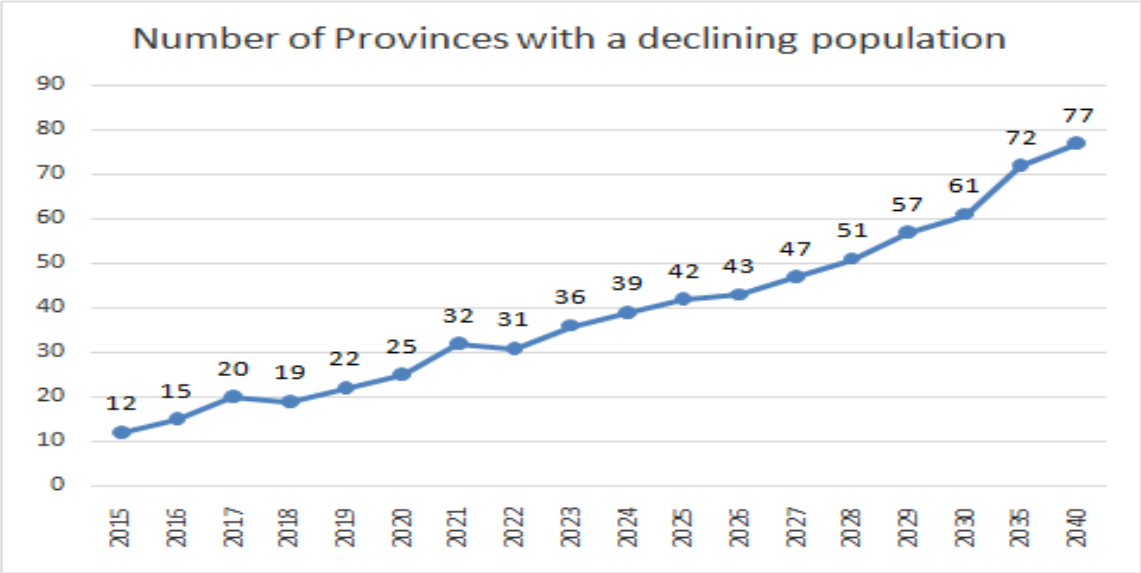


Figure 6: Population trends by geographic regions (2014-2040)

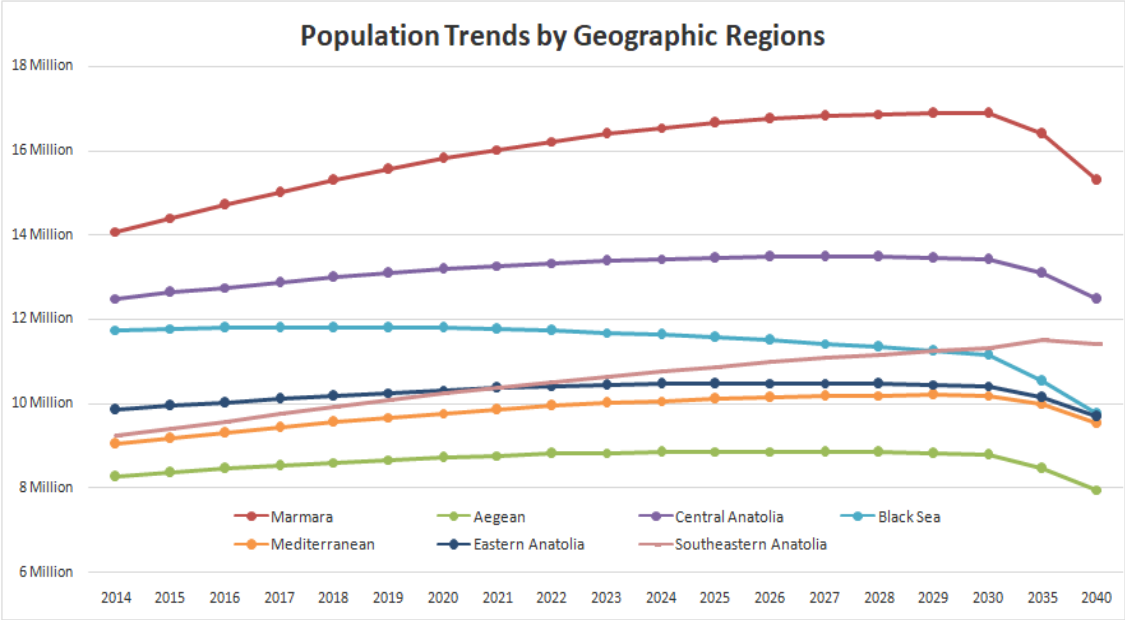
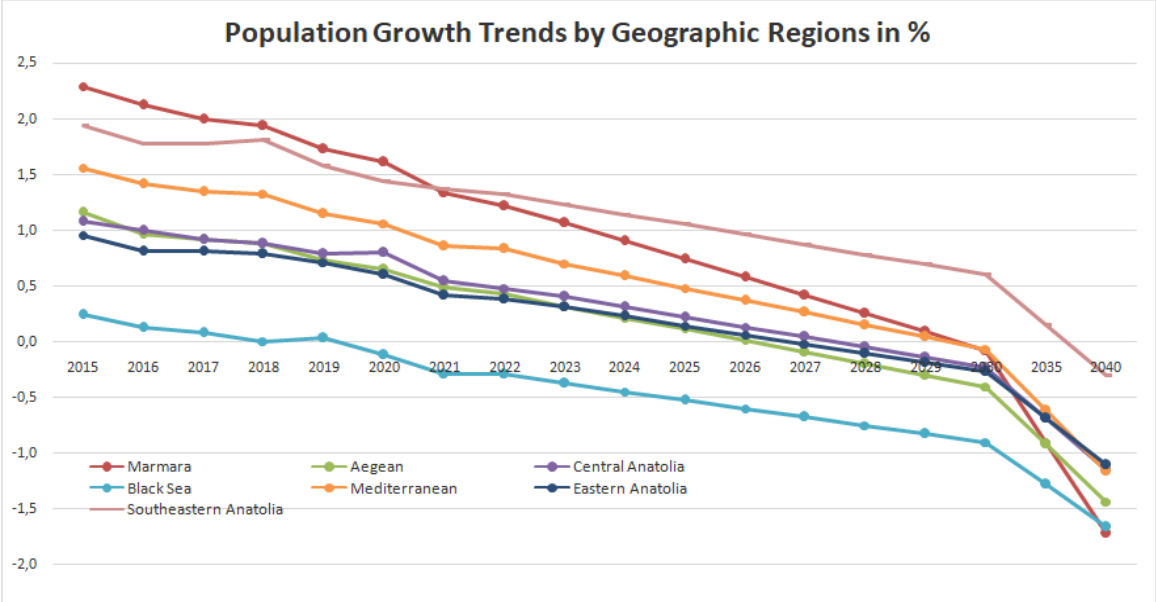


Figure 7: Population growth projections by geographic regions (2014-2040)



Comparison with Previous Population Projections

As Table 11 and Figure 8 illustrate, both the UN and TURKSTAT have revised their long-term population projections downward in their subsequent updates. According to these estimates, Türkiye's population is expected to range between 91 and 94 million by 2040. While the high-scenario projection in this study aligns with these conventional forecasts (approximately 94 million), the low-scenario projection falls significantly below expectations (approximately 86 million). This discrepancy cannot be fully understood without distinguishing between the native and foreign-born segments of the population.

The province-level data, which captures only the native-born population, reveals that population growth has already plateaued and is projected to reach its peak before 2030. This distinction is both clear and critical. TURKSTAT and the UN report aggregate population figures, which effectively mask the underlying decline of the native population. The gap between the "Total Population" and "81 Provinces" projections in this study reflects the demographic weight of foreign-born individuals, particularly those resulting from Syrian and other conflict-driven refugee inflows, cross-border economic migration, and second-generation immigrants born in Türkiye but classified as foreign-born by place of birth.

Figure 8: Comparison of population projections for Türkiye (2023- 2100)

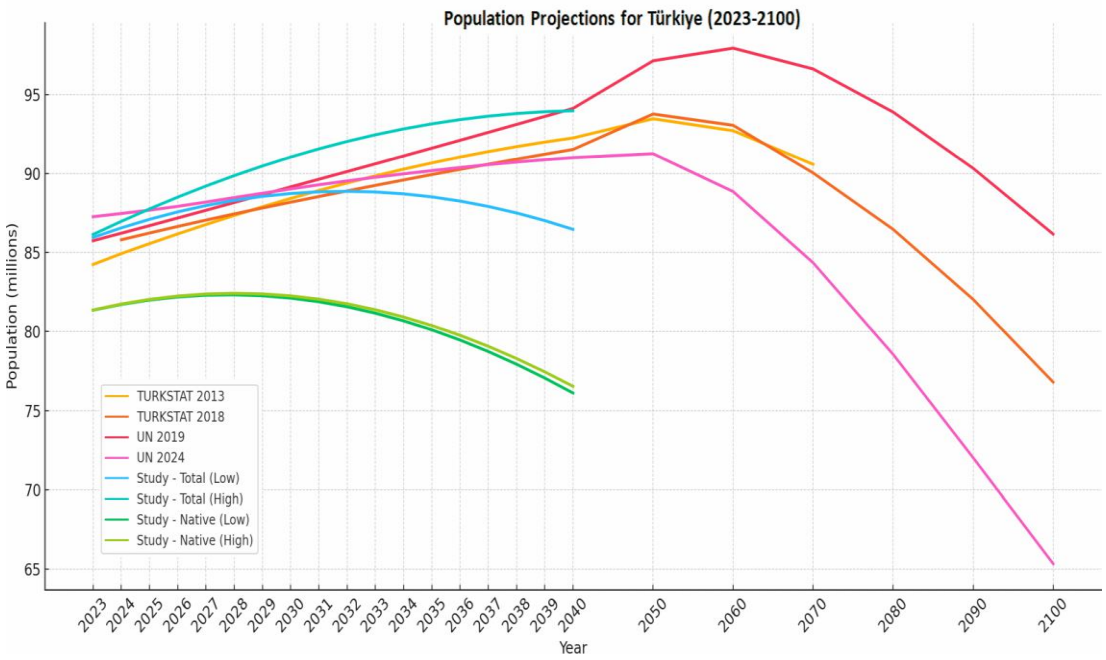


Table 11: Comparison with Turkstat and UN population projections

	Turkstat		**UN**		**This Study**			
	2013	.8	9	?2	:al	:al		
					ɔ.	ɔ.	ıvinces	ıvinces
					w)	gh)	w)	gh)
2023	84.247	85.812	85.751	87.271	85.956	86.148	81.359	81.371
2024	84.936	86.239	86.227	87.474	86.565	86.976	81.721	81.747
2025	85.569	86.654	86.705	87.685	87.106	87.764	82.001	82.042
2026	86.183	87.057	87.190	87.926	87.577	88.510	82.197	82.254
2027	86.777	87.447	87.678	88.198	87.977	89.212	82.308	82.384
2028	87.349	87.824	88.169	88.480	88.304	89.870	82.333	82.429
2029	87.900	88.188	88.662	88.755	88.559	90.483	82.272	82.389
2030	88.428	88.548	89.158	89.028	88.740	91.049	82.125	82.265
2031	88.930	88.903	89.643	89.293	88.846	91.568	81.892	82.055
2032	89.407	89.253	90.131	89.538	88.878	92.038	81.573	81.762
2033	89.858	89.599	90.622	89.769	88.836	92.460	81.169	81.384
2034	90.282	89.939	91.115	89.985	88.718	92.831	80.682	80.925
2035	90.680	90.272	91.611	90.189	88.526	93.152	80.113	80.384
2036	91.050	90.597	92.110	90.385	88.260	93.422	79.464	79.764

2037	91.393	90.916	92.611	90.570	87.921	93.640	78.737	79.067
2038	91.708	91.227	93.115	90.735	87.509	93.807	77.934	78.294
2039	91.997	91.530	93.622	90.881	87.025	93.921	77.058	77.449
2040	92.258	93.775	94.132	91.010	86.471	93.982	76.112	76.534
2050	93.476	93.060	97.140	91.258				
2060	92.717	90.044	97.941	88.863				
2070	90.589	86.472	96.624	84.359				
2080		82.043	93.897	78.556				
2090		76.799	90.336	72.021				
2100		85.812	86.170	65.338				

Source: Turkstat, 2013; UN, 2018; UN, 2019; UN, 2022

In the absence of continued immigration, Türkiye's demographic base would be shrinking at a much faster rate than official projections suggest. While the UN and TURKSTAT generally assume a gradual fertility rebound or demographic stabilization, our model, especially at the province level, implicitly challenges this optimism and highlights the imminence of population decline. The growing divergence between our study's low and high estimates, as well as between our findings and conventional projections, underscores the pivotal role of future immigration policy,whose direction remains uncertain. Depending on the approach taken toward the foreign-born population, Türkiye may face a demographic contraction far earlier than anticipated, a prospect that is also somewhat reflected in the UN's most recent, and notably more cautious, estimates.

This discrepancy underscores the critical role of immigration policy in shaping Türkiye's long-term demographic trajectory. While native population decline appears imminent and measurable, the future size and structure of the total population remain highly contingent on the scale and continuity of foreign-born inflows, which are influenced by geopolitical factors, state policies, and international migration dynamics.

CONCLUSION

There is widespread agreement in the existing literature that Türkiye's population will likely never exceed 100 million and that the country is gradually approaching the final stage of the demographic transition. Most studies predict that population decline will begin around 2050, under the assumption of a slow and steady reduction in fertility and population growth. However, few, if any, distinguish between native and foreign-born population growth in their projections. This study fills that crucial gap by

disaggregating these two demographic segments and demonstrating how this distinction profoundly alters the population outlook.

Unlike the conventional narrative, our findings show that Türkiye's population decline will occur much sooner than previously estimated. The native population is projected to begin shrinking as early as 2028–2029, peaking at around 82–83 million, while the total population—including foreign-born residents—will continue to grow until the early 2030s, depending largely on immigration trends and the permanence of the COVID-19 impact on migration. Even under optimistic immigration scenarios, the entire population is expected to peak between 88 and 94 million before entering decline by 2040. This makes it evident that population growth in Türkiye is increasingly dependent on foreign-born inflows.

The implications of this shift are profound. As of 2022, foreign-born residents made up 5.1% of the total population, and their share is expected to rise sharply. Depending on immigration policy, this figure could reach 7–10% by 2030, and as high as 11–19% by 2040, translating into up to 17 million foreign-born individuals. Meanwhile, the native population is in terminal decline. By 2040, all seven geographical regions of Türkiye—starting with the Black Sea, followed by Marmara, Aegean, Central Anatolia, and eventually Southeastern Anatolia—are expected to show negative growth. The number of provinces with shrinking populations is projected to rise from 31 in 2023 to 77 by 2040.

The sharp fluctuations in the foreign-born population shares—particularly between 7–10% in 2030 and 11–19% in 2040—stem from two alternative projection scenarios. The low-migration scenario (Estimate 1) assumes that the sharp slowdown in migration during the COVID-19 period produced a permanent structural break, resulting in a foreign-born population of around 10 million (about 11.5% of the total) by 2040. The high-migration scenario (Estimate 2), by contrast, treats the pandemic years as a temporary distortion, adjusting those data points by interpolating the adjacent years' averages. Under this case, the foreign-born population reaches nearly 18 million by 2040, or roughly 19% of the total. This increase is driven mainly by Syrian and, to a lesser extent, Afghan refugee inflows, as both direct migration and natural growth among their descendants continue to shape the demographic landscape.

This emerging demographic reality presents significant socioeconomic and political challenges. The growing share of the foreign-born population, combined with native population decline, raises pressing concerns about labor market saturation, social cohesion, pressure on public services, and long-term fiscal sustainability. Moreover, while TURKSTAT and UN projections continue to report aggregate growth figures, these mask the underlying demographic contraction among native-born citizens, misleading both policymakers and the public.

Our findings call for an urgent recalibration of population policy. Türkiye's demographic future now hinges not only on birth rates but also on how the state manages immigration, including refugee integration, border control, and the legal status of long-term residents. Policymakers must confront a future in which immigration is not a temporary buffer but a structural component of population maintenance. Without strategic foresight and comprehensive planning, Türkiye may face heightened risks of social tension, economic instability, and regional demographic collapse.

The rising share of the foreign-born population has both positive and challenging implications for Turkey's long-term social and economic outlook. On the one hand, migrants contribute significantly to the social security system and help offset labor shortages, particularly in agriculture, construction, and manufacturing. For example, providing targeted social security premium incentives for legally employed foreign workers could further enhance these contributions. On the other hand, rapid demographic change also carries risks of increased social tension, cultural frictions, and challenges to national identity and cohesion. To mitigate these, comprehensive integration programs are essential—such as sustained language education, vocational training, and cultural orientation for Syrian and Afghan refugees. Likewise, clearer procedures for long-term residence and citizenship, with transparent criteria and gradual rights acquisition, can strengthen public trust while fostering integration. These policies should aim to maximize economic contributions while minimizing social dislocation.

In short, the dominant demographic question in Türkiye has shifted: from how fast the population will grow, to how soon and how sharply it will decline—and who will be counted in it.

Methodological Note On Model Diagnostics

As for model diagnostics, this study intentionally does not report year-by-year confidence intervals or error margins. The projections are based on deterministic linear and polynomial trend extrapolations using complete provincial data (2014–2022), rather than stochastic or sample-based forecasting. Since the models are applied across all 81 provinces and summed nationally, random deviations largely offset each other, making the overall statistical error extremely small. In most scenarios, the reported R^2 levels are over 0.95 and p-values are below 1%. Moreover, the two projection scenarios, the low-migration and high-migration cases, already represent the plausible lower and upper bounds of demographic uncertainty. Therefore, introducing artificial confidence intervals would add unnecessary complexity without improving interpretability. The methodological focus here is on revealing clear demographic directions, not on probabilistic modeling of already well-defined trends.

AUTHOR STATEMENT

The author declares that all contributions to this manuscript were made solely by the author. The author also declares that there are no conflicts of interest.

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APPENDIX

Table 12 (Part 1): Province populations 2014-2022 (in thousands)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	77696	78741	79815	80811	82004	83155	83614	84680	85280
81 Provinces	74704	75701	76607	77483	78346	79121	79831	80391	80915
Foreign-Born	2992	3041	3208	3328	3658	4034	3783	4289	4364
Adana	1.981	2.017	2.048	2.078	2.107	2.133	2.156	2.175	2.194
Adıyaman	889	898	905	913	921	928	933	938	943
Afyonkarahisar	909	913	917	920	922	924	927	928	928
Ağrı	904	916	925	935	944	951	957	962	964
Amasya	462	463	463	464	464	464	464	462	461
Ankara	3.336	3.406	3.473	3.536	3.597	3.654	3.711	3.757	3.799
Antalya	1.301	1.333	1.362	1.389	1.417	1.441	1.465	1.486	1.505
Artvin	337	336	334	332	330	328	325	322	319
Aydın	861	870	878	886	894	900	905	909	913
Balıkesir	1.071	1.077	1.080	1.083	1.087	1.090	1.091	1.091	1.091
Bilecik	193	193	192	191	191	190	189	187	186
Bingöl	413	416	419	422	425	427	430	432	433
Bitlis	562	568	574	580	586	591	595	599	603
Bolu	360	362	362	363	364	365	365	364	364
Burdur	305	305	305	305	304	303	302	300	299
Bursa	1.804	1.840	1.872	1.905	1.938	1.968	1.995	2.019	2.041
Çanakkale	457	458	459	460	461	461	461	460	458
Çankırı	377	376	375	373	371	370	368	365	363
Çorum	960	961	961	960	960	959	958	955	951
Denizli	949	959	967	975	983	989	994	998	1.001
Diyarbakır	1.898	1.936	1.971	2.007	2.047	2.082	2.113	2.142	2.171
Edirne	443	445	446	447	447	447	447	445	444
Elazığ	697	703	709	715	721	726	731	735	738
Erzincan	432	432	432	431	430	430	430	428	427
Erzurum	1.448	1.456	1.462	1.468	1.474	1.478	1.480	1.480	1.480
Eskişehir	722	730	737	744	751	756	762	767	770

Source: Turkstat, 2023b

Table 12 (Part 2): Province populations 2014-2022 (in thousands)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	77696	78741	79815	80811	82004	83155	83614	84680	85280
81 Provinces	74704	75701	76607	77483	78346	79121	79831	80391	80915
Foreign-Born	2992	3041	3208	3328	3658	4034	3783	4289	4364
Gaziantep	1.718	1.763	1.806	1.847	1.889	1.927	1.962	1.996	2.029
Giresun	750	749	747	746	744	742	739	735	730
Gümüşhane	306	305	308	309	301	303	298	297	295
Hakkari	295	300	304	308	312	316	319	323	326
Hatay	1.590	1.616	1.640	1.663	1.689	1.710	1.731	1.747	1.764
Isparta	473	476	479	482	485	487	490	492	493
Mersin	1.431	1.454	1.474	1.495	1.515	1.533	1.550	1.563	1.577
İstanbul	7.331	7.558	7.778	7.987	8.190	8.379	8.561	8.719	8.863
İzmir	2.547	2.594	2.636	2.675	2.713	2.747	2.778	2.803	2.826
Kars	666	667	669	670	670	671	670	669	667
Kastamonu	615	614	611	609	606	604	600	596	592
Kayseri	1.343	1.363	1.381	1.398	1.414	1.429	1.442	1.454	1.465
Kırklareli	349	350	350	350	349	349	348	346	344
Kırşehir	401	402	402	402	401	400	400	398	397
Kocaeli	950	977	1.004	1.030	1.056	1.080	1.102	1.122	1.140
Konya	2.173	2.200	2.225	2.250	2.273	2.296	2.318	2.335	2.352
Kütahya	685	687	687	687	686	685	684	681	678
Malatya	1.076	1.084	1.090	1.095	1.102	1.107	1.110	1.112	1.114
Manisa	1.320	1.332	1.342	1.353	1.363	1.372	1.378	1.384	1.390
Kahramanmaraş	1.385	1.398	1.412	1.426	1.440	1.451	1.462	1.471	1.479
Mardin	1.149	1.164	1.179	1.194	1.211	1.225	1.238	1.249	1.261
Muğla	620	628	636	643	650	657	662	667	671
Muş	685	692	699	706	713	719	724	728	731
Nevşehir	393	395	396	397	398	398	400	400	400
Niğde	497	501	504	507	510	512	514	514	515
Ordu	1.165	1.169	1.171	1.172	1.173	1.174	1.174	1.170	1.167
Rize	580	581	581	581	581	581	579	576	574

Source: Turkstat, 2023b

Table 12 (Part 3): Province populations 2014-2022 (in thousands)

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	77696	78741	79815	80811	82004	83155	83614	84680	85280
Foreign-Born	2992	3041	3208	3328	3658	4034	3783	4289	4364
Sakarya	841	851	861	871	881	890	899	906	912
Samsun	1.645	1.657	1.667	1.677	1.686	1.694	1.700	1.703	1.705
Siirt	571	577	581	586	591	595	599	602	605
Sinop	437	435	433	430	427	424	421	416	412
Sivas	1.253	1.253	1.253	1.252	1.252	1.250	1.249	1.245	1.240
Tekirdağ	531	542	552	563	573	583	592	600	608
Tokat	1.011	1.013	1.013	1.013	1.014	1.013	1.012	1.008	1.006
Trabzon	1.229	1.233	1.235	1.237	1.239	1.240	1.240	1.238	1.235
Tunceli	216	214	213	212	211	210	209	207	205
Şanlıurfa	2.153	2.204	2.254	2.304	2.354	2.400	2.445	2.491	2.535
Uşak	383	386	388	391	393	394	396	397	397
Van	1.296	1.323	1.347	1.370	1.394	1.418	1.438	1.455	1.473
Yozgat	857	854	853	851	850	848	848	845	841
Zonguldak	750	753	755	757	758	760	761	761	760
Aksaray	475	478	482	485	489	492	498	501	503
Bayburt	202	202	201	201	200	199	198	197	195
Karaman	267	270	272	275	276	278	280	281	283
Kırıkkale	397	399	401	402	403	403	404	403	403
Batman	652	666	678	692	706	720	732	745	757
Şırnak	510	522	530	541	551	561	571	580	589
Bartın	273	274	274	274	273	273	272	271	270
Ardahan	368	368	366	364	363	361	359	356	354
Iğdır	279	283	285	288	290	293	295	297	299
Yalova	105	108	111	114	117	119	122	125	127
Karabük	296	298	299	300	301	302	303	303	303
Kilis	204	205	205	206	207	207	207	207	208
Osmaniye	570	579	587	595	602	609	616	621	627
Düzce	367	370	372	374	376	377	378	379	380

Source: Turkstat, 2023b

Table 13 (Part 1): Province population estimates 1 (in thousands)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	85.956	86.565	87.106	87.577	87.977	88.304	88.559	88.740	88.526
81 Provinces	81.371	81.747	82.042	82.254	82.384	82.429	82.389	82.265	80.384
Foreign-Born	4.585	4.819	5.064	5.323	5.593	5.876	6.170	6.475	8.142
Adana	2.209	2.221	2.231	2.237	2.241	2.242	2.239	2.234	2.165
Adıyaman	946	950	952	954	955	956	956	955	940
Afyonkarahisar	928	927	926	925	922	920	917	913	887
Ağrı	966	967	967	965	962	957	952	945	893
Amasya	459	457	455	452	449	446	442	438	414
Ankara	3.838	3.872	3.901	3.926	3.945	3.958	3.967	3.970	3.905
Antalya	1.523	1.538	1.551	1.561	1.570	1.575	1.579	1.580	1.550
Artvin	316	312	309	305	301	297	292	288	263
Aydın	916	918	919	920	919	918	915	912	885
Balıkesir	1.090	1.088	1.085	1.082	1.078	1.073	1.067	1.061	1.018
Bilecik	185	183	181	179	177	175	173	171	158
Bingöl	434	436	437	438	438	439	439	439	436
Bitlis	606	609	612	614	615	616	617	617	610
Bolu	363	362	361	359	358	356	353	351	335
Burdur	297	295	292	289	287	284	280	277	256
Bursa	2.062	2.080	2.097	2.110	2.122	2.130	2.137	2.140	2.121
Çanakkale	457	455	452	449	446	443	439	434	408
Çankırı	360	357	354	351	347	344	340	336	315
Çorum	947	943	938	932	926	920	913	905	860
Denizli	1.004	1.005	1.006	1.006	1.004	1.002	998	994	959
Diyarbakır	2.199	2.224	2.248	2.270	2.290	2.308	2.323	2.337	2.372
Edirne	442	440	437	434	431	427	423	418	390
Elazığ	741	743	745	747	748	748	748	747	737
Erzincan	425	424	422	420	418	416	414	411	397
Erzurum	1.479	1.476	1.472	1.467	1.460	1.453	1.444	1.434	1.367
Eskişehir	774	776	779	780	781	781	781	779	764
Gaziantep	2.059	2.086	2.110	2.132	2.150	2.166	2.179	2.189	2.190

Source: Turkstat, 2023b

Table 13 (Part 2): Province population estimates 1 (in thousands)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	85.956	86.565	87.106	87.577	87.977	88.304	88.559	88.740	88.526
81 Provinces	81.371	81.747	82.042	82.254	82.384	82.429	82.389	82.265	80.384
Foreign-Born	4.585	4.819	5.064	5.323	5.593	5.876	6.170	6.475	8.142
Giresun	725	720	715	709	702	695	688	680	636
Gümüşhane	291	287	283	278	273	268	262	256	221
Hakkari	328	331	333	335	336	338	339	339	338
Hatay	1.779	1.792	1.804	1.814	1.822	1.828	1.833	1.835	1.821
Isparta	494	496	496	497	497	497	497	497	490
Mersin	1.589	1.599	1.607	1.614	1.619	1.623	1.624	1.624	1.599
İstanbul	8.994	9.108	9.205	9.284	9.344	9.386	9.409	9.412	9.141
İzmir	2.845	2.860	2.871	2.878	2.881	2.880	2.875	2.866	2.762
Kars	665	662	659	656	652	647	642	637	604
Kastamonu	587	582	576	571	564	558	551	544	504
Kayseri	1.474	1.482	1.488	1.493	1.496	1.498	1.498	1.497	1.468
Kırklareli	342	339	336	333	330	326	322	318	293
Kırşehir	395	393	390	388	385	381	378	374	352
Kocaeli	1.157	1.172	1.186	1.197	1.206	1.213	1.219	1.221	1.203
Konya	2.367	2.381	2.394	2.404	2.413	2.420	2.426	2.430	2.421
Kütahya	675	671	666	661	656	649	643	636	594
Malatya	1.115	1.116	1.115	1.114	1.112	1.109	1.105	1.101	1.067
Manisa	1.394	1.397	1.399	1.400	1.399	1.398	1.395	1.392	1.358
Kahramanmaraş	1.487	1.494	1.499	1.504	1.508	1.511	1.513	1.513	1.502
Mardin	1.272	1.282	1.292	1.301	1.309	1.317	1.323	1.329	1.346
Muğla	675	678	680	682	683	683	683	682	667
Muş	733	736	737	738	738	738	736	734	715
Nevşehir	400	400	400	399	399	398	397	396	388
Niğde	515	515	515	514	512	510	508	505	485
Ordu	1.163	1.159	1.153	1.147	1.140	1.132	1.123	1.113	1.053
Rize	571	567	563	559	554	548	542	536	499
Sakarya	919	925	930	935	939	942	944	946	946

Source: Turkstat, 2023b

Table 13 (Part 3): Province population estimates 1 (in thousands)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	85.956	86.565	87.106	87.577	87.977	88.304	88.559	88.740	88.526
81 Provinces	81.371	81.747	82.042	82.254	82.384	82.429	82.389	82.265	80.384
Foreign-Born	4.585	4.819	5.064	5.323	5.593	5.876	6.170	6.475	8.142
Samsun	1.707	1.707	1.705	1.702	1.698	1.692	1.685	1.677	1.615
Siirt	607	609	611	612	613	613	613	612	602
Sinop	408	403	398	393	387	382	376	370	337
Sivas	1.235	1.229	1.223	1.216	1.209	1.200	1.192	1.182	1.126
Tekirdağ	615	622	628	633	638	643	646	649	654
Tokat	1.002	998	993	988	982	975	968	960	912
Trabzon	1.232	1.228	1.223	1.217	1.210	1.203	1.194	1.185	1.127
Tunceli	204	203	201	200	198	197	195	194	186
Şanlıurfa	2.577	2.618	2.657	2.694	2.729	2.762	2.793	2.822	2.932
Uşak	397	397	397	396	395	394	392	390	375
Van	1.489	1.503	1.516	1.527	1.536	1.543	1.549	1.553	1.546
Yozgat	838	835	832	828	825	821	817	813	792
Zonguldak	759	757	755	752	749	745	741	736	705
Aksaray	507	510	513	517	520	523	526	529	543
Bayburt	194	192	190	188	186	184	182	180	167
Karaman	283	284	285	285	285	285	284	283	277
Kırıkkale	402	401	399	398	396	393	391	388	369
Batman	769	781	793	804	815	826	836	846	890
Şırnak	597	606	614	622	630	637	644	650	677
Bartın	269	268	266	264	262	259	256	254	237
Ardahan	351	348	345	342	338	335	331	327	306
Iğdır	300	301	302	303	303	303	303	303	298
Yalova	129	132	134	136	138	140	141	143	148
Karabük	303	303	303	302	302	301	300	298	289
Kilis	208	207	207	206	206	205	204	203	196
Osmaniye	632	637	641	644	647	649	651	652	648
Düzce	380	380	380	380	379	378	377	375	364

Source: Turkstat, 2023b

Table 14 (Part 1): Province population estimates 2 (in thousands)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	86.148	86.976	87.764	88.510	89.212	89.870	90.483	91.049	93.152
81 Provinces	81.359	81.721	82.001	82.197	82.308	82.333	82.272	82.125	80.113
Foreign-Born	4.789	5.255	5.763	6.313	6.904	7.537	8.211	8.924	13.039
Adana	2.209	2.221	2.230	2.236	2.239	2.240	2.237	2.231	2.159
Adıyaman	946	950	952	954	955	956	955	955	940
Afyonkarahisar	928	927	925	923	921	918	914	910	882
Ağrı	966	967	967	965	962	957	951	944	892
Amasya	459	457	454	452	449	445	441	437	413
Ankara	3.836	3.868	3.895	3.916	3.932	3.943	3.948	3.948	3.862
Antalya	1.522	1.537	1.550	1.560	1.568	1.573	1.576	1.576	1.542
Artvin	316	312	309	305	301	296	292	287	262
Aydın	916	918	919	920	919	918	916	912	885
Balıkesir	1.089	1.087	1.085	1.081	1.076	1.071	1.065	1.058	1.013
Bilecik	185	183	181	179	177	175	173	171	158
Bingöl	434	435	436	437	437	437	437	437	431
Bitlis	606	609	612	614	615	616	617	617	611
Bolu	363	362	360	359	357	355	352	349	332
Burdur	297	294	292	289	286	283	280	276	255
Bursa	2.062	2.080	2.096	2.109	2.120	2.129	2.134	2.138	2.115
Çanakkale	457	454	452	449	445	441	437	433	405
Çankırı	360	357	354	351	348	344	341	337	316
Çorum	947	942	937	931	925	918	911	903	855
Denizli	1.004	1.005	1.006	1.005	1.004	1.001	998	993	957
Diyarbakır	2.199	2.225	2.249	2.272	2.292	2.311	2.327	2.342	2.381
Edirne	442	440	437	434	430	426	422	417	389
Elazığ	740	743	745	746	746	747	746	745	733
Erzincan	425	423	422	420	417	415	413	410	394
Erzurum	1.479	1.476	1.472	1.467	1.461	1.453	1.444	1.434	1.368
Eskişehir	773	776	778	779	779	779	778	776	757
Gaziantep	2.059	2.087	2.112	2.134	2.153	2.170	2.183	2.194	2.200

Source: Turkstat, 2023b

Table 14 (Part 2): Province population estimates 2 (in thousands)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	86.148	86.976	87.764	88.510	89.212	89.870	90.483	91.049	93.152
81 Provinces	81.359	81.721	82.001	82.197	82.308	82.333	82.272	82.125	80.113
Foreign-Born	4.789	5.255	5.763	6.313	6.904	7.537	8.211	8.924	13.039
Giresun	725	720	714	708	701	693	686	678	632
Gümüşhane	293	291	289	286	283	280	277	274	253
Hakkari	329	331	333	335	337	339	340	341	341
Hatay	1.778	1.791	1.802	1.811	1.819	1.824	1.828	1.830	1.810
Isparta	494	496	496	497	497	497	497	496	489
Mersin	1.588	1.598	1.606	1.612	1.617	1.620	1.621	1.620	1.590
İstanbul	8.991	9.102	9.195	9.270	9.327	9.364	9.381	9.379	9.078
İzmir	2.845	2.859	2.870	2.876	2.879	2.877	2.871	2.861	2.752
Kars	665	662	659	655	651	646	641	635	601
Kastamonu	587	582	576	570	564	557	550	543	502
Kayseri	1.474	1.482	1.488	1.492	1.496	1.497	1.498	1.496	1.467
Kırklareli	342	339	336	333	330	326	322	317	292
Kırşehir	395	392	389	386	382	379	375	370	345
Kocaeli	1.157	1.172	1.186	1.197	1.207	1.214	1.220	1.223	1.206
Konya	2.367	2.381	2.392	2.402	2.411	2.417	2.422	2.425	2.412
Kütahya	675	671	666	661	655	649	642	635	593
Malatya	1.115	1.116	1.115	1.114	1.112	1.109	1.106	1.101	1.068
Manisa	1.394	1.397	1.399	1.400	1.400	1.399	1.397	1.394	1.362
Kahramanmaraş	1.487	1.493	1.499	1.503	1.506	1.509	1.510	1.511	1.497
Mardin	1.272	1.282	1.292	1.301	1.309	1.316	1.322	1.328	1.344
Muğla	675	678	680	682	683	683	682	681	665
Muş	733	735	736	737	737	736	734	732	710
Nevşehir	400	399	399	398	397	396	394	393	382
Niğde	515	515	515	514	512	510	508	505	485
Ordu	1.163	1.158	1.152	1.145	1.137	1.128	1.119	1.108	1.045
Rize	571	567	563	559	554	549	543	537	500
Sakarya	919	924	929	933	936	939	941	942	938

Source: Turkstat, 2023b

Table 14 (Part 3): Province population estimates 2 (in thousands)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	86.148	86.976	87.764	88.510	89.212	89.870	90.483	91.049	93.152
81 Provinces	81.359	81.721	82.001	82.197	82.308	82.333	82.272	82.125	80.113
Foreign-Born	4.789	5.255	5.763	6.313	6.904	7.537	8.211	8.924	13.039
Samsun	1.706	1.706	1.704	1.700	1.695	1.689	1.681	1.672	1.606
Siirt	607	609	611	612	613	613	613	613	604
Sinop	408	403	398	393	388	382	376	370	337
Sivas	1.235	1.229	1.222	1.214	1.206	1.198	1.188	1.178	1.118
Tekirdağ	615	622	628	634	639	643	647	650	655
Tokat	1.002	998	993	987	981	974	967	959	910
Trabzon	1.232	1.227	1.222	1.216	1.209	1.201	1.192	1.182	1.122
Tunceli	204	202	200	199	197	195	193	191	181
Şanlıurfa	2.577	2.618	2.657	2.694	2.729	2.762	2.794	2.823	2.934
Uşak	397	397	397	396	394	393	391	388	372
Van	1.489	1.503	1.516	1.527	1.536	1.543	1.549	1.553	1.545
Yozgat	837	834	830	826	821	817	812	807	779
Zonguldak	759	757	754	751	748	744	739	734	702
Aksaray	506	508	510	512	514	516	517	519	523
Bayburt	194	192	190	188	186	184	182	179	166
Karaman	283	284	284	285	285	284	284	283	275
Kırıkkale	402	401	399	397	395	393	390	387	368
Batman	769	781	793	805	816	827	838	848	895
Şırnak	597	606	614	622	629	637	643	650	676
Bartın	269	267	266	264	261	259	256	253	236
Ardahan	351	348	345	342	339	335	331	328	307
Iğdır	300	301	302	302	302	302	302	301	294
Yalova	129	132	134	136	138	139	141	142	147
Karabük	303	303	302	302	301	300	299	297	288
Kilis	208	207	207	207	206	205	205	204	197
Osmaniye	632	637	641	644	647	650	651	653	650
Düzce	380	380	380	379	379	378	376	375	363

Source: Turkstat, 2023b

Table 15 (Part 1): Province population growths 2014-2022 (in percent)

	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	1.345	1.364	1.247	1.477	1.404	0.552	1.275	0.708
81 Provinces	1.334	1.197	1.144	1.114	0.990	0.897	0.702	0.652
Foreign-Born	1.613	5.514	3.725	9.932	10.267	-6.212	13.367	1.755
Adana	1.779	1.544	1.477	1.405	1.208	1.087	0.881	0.870
Adıyaman	0.984	0.838	0.873	0.859	0.747	0.617	0.470	0.509
Afyonkarahisar	0.470	0.367	0.315	0.309	0.196	0.245	0.119	0.010
Ağrı	1.268	1.083	1.062	0.904	0.775	0.631	0.468	0.307
Amasya	0.220	0.085	0.101	0.059	-0.028	-0.103	-0.297	-0.301
Ankara	2.100	1.958	1.818	1.724	1.571	1.573	1.229	1.122
Antalya	2.410	2.186	2.013	1.967	1.748	1.650	1.408	1.311
Artvin	-0.358	-0.563	-0.591	-0.627	-0.640	-0.751	-0.922	-0.946
Aydın	1.058	0.877	0.925	0.868	0.732	0.584	0.447	0.410
Balıkesir	0.509	0.341	0.295	0.333	0.232	0.164	-0.046	-0.008
Bilecik	-0.231	-0.347	-0.355	-0.371	-0.405	-0.563	-0.779	-0.708
Bingöl	0.632	0.696	0.683	0.711	0.661	0.681	0.382	0.249
Bitlis	1.179	0.982	0.995	1.054	0.883	0.761	0.667	0.614
Bolu	0.344	0.239	0.228	0.220	0.169	0.123	-0.170	-0.173
Burdur	0.113	-0.093	-0.135	-0.230	-0.298	-0.360	-0.560	-0.488
Bursa	1.968	1.774	1.717	1.732	1.549	1.410	1.193	1.101
Çanakkale	0.351	0.186	0.161	0.204	0.062	-0.022	-0.347	-0.243
Çankırı	-0.291	-0.380	-0.424	-0.464	-0.380	-0.615	-0.727	-0.657
Çorum	0.116	-0.014	-0.064	-0.040	-0.096	-0.135	-0.341	-0.364
Denizli	1.060	0.844	0.803	0.820	0.599	0.533	0.410	0.362
Diyarbakır	2.014	1.806	1.832	1.992	1.733	1.491	1.376	1.343
Edirne	0.402	0.204	0.091	0.142	-0.010	-0.104	-0.294	-0.289
Elazığ	0.874	0.869	0.837	0.821	0.706	0.684	0.483	0.413
Erzincan	-0.073	-0.016	-0.157	-0.211	-0.015	-0.048	-0.286	-0.417
Erzurum	0.562	0.433	0.440	0.376	0.298	0.131	-0.012	0.009
Eskişehir	1.118	0.964	0.931	0.896	0.750	0.796	0.569	0.478
Gaziantep	2.645	2.411	2.315	2.275	2.007	1.801	1.741	1.649

Source: Turkstat, 2023b

Table 15 (Part 2): Province population growths 2014-2022 (in percent)

	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	1.345	1.364	1.247	1.477	1.404	0.552	1.275	0.708
81 Provinces	1.334	1.197	1.144	1.114	0.990	0.897	0.702	0.652
Foreign-Born	1.613	5.514	3.725	9.932	10.267	-6.212	13.367	1.755
Giresun	-0.091	-0.252	-0.237	-0.232	-0.291	-0.356	-0.613	-0.605
Gümüşhane	-0.176	0.962	0.227	-2.372	0.728	-1.773	-0.206	-0.912
Hakkari	1.675	1.333	1.372	1.371	1.305	1.032	0.979	0.978
Hatay	1.666	1.462	1.416	1.522	1.265	1.208	0.976	0.928
Isparta	0.737	0.643	0.576	0.569	0.560	0.483	0.377	0.303
Mersin	1.594	1.422	1.382	1.376	1.159	1.102	0.876	0.862
İstanbul	3.101	2.913	2.682	2.551	2.300	2.177	1.838	1.652
İzmir	1.824	1.614	1.499	1.431	1.238	1.123	0.903	0.825
Kars	0.271	0.160	0.163	0.110	0.037	-0.030	-0.267	-0.232
Kastamonu	-0.142	-0.415	-0.386	-0.390	-0.463	-0.559	-0.763	-0.665
Kayseri	1.471	1.319	1.220	1.142	1.049	0.950	0.823	0.732
Kırklareli	0.196	-0.064	-0.035	-0.082	-0.147	-0.304	-0.553	-0.521
Kırşehir	0.148	0.047	-0.072	-0.096	-0.240	-0.015	-0.414	-0.425
Kocaeli	2.825	2.724	2.647	2.498	2.283	2.005	1.791	1.645
Konya	1.236	1.149	1.104	1.055	1.009	0.935	0.744	0.723
Kütahya	0.249	0.024	-0.045	-0.073	-0.132	-0.248	-0.410	-0.369
Malatya	0.681	0.552	0.525	0.585	0.447	0.296	0.166	0.203
Manisa	0.955	0.774	0.762	0.754	0.645	0.495	0.427	0.388
Kahramanmaraş	0.923	1.038	0.986	0.931	0.826	0.753	0.572	0.564
Mardin	1.332	1.241	1.300	1.413	1.120	1.064	0.959	0.917
Muğla	1.382	1.172	1.135	1.117	0.976	0.885	0.700	0.643
Muş	1.070	1.002	0.958	0.928	0.838	0.768	0.483	0.421
Nevşehir	0.400	0.310	0.197	0.238	0.168	0.339	0.043	0.022
Niğde	0.720	0.587	0.574	0.614	0.473	0.277	0.133	0.152
Ordu	0.314	0.143	0.084	0.100	0.058	0.011	-0.288	-0.262
Rize	0.216	0.014	-0.023	0.031	-0.066	-0.317	-0.497	-0.364
Sakarya	1.253	1.122	1.138	1.190	1.005	1.020	0.756	0.738

Source: Turkstat, 2023b

Table 15 (Part 3): Province population growths 2014-2022 (in percent)

	2015	2016	2017	2018	2019	2020	2021	2022
Total Population	1.345	1.364	1.247	1.477	1.404	0.552	1.275	0.708
81 Provinces	1.334	1.197	1.144	1.114	0.990	0.897	0.702	0.652
Foreign-Born	1.613	5.514	3.725	9.932	10.267	-6.212	13.367	1.755
Samsun	0.726	0.595	0.599	0.559	0.459	0.391	0.145	0.155
Siirt	1.019	0.800	0.856	0.849	0.691	0.554	0.492	0.530
Sinop	-0.469	-0.609	-0.635	-0.609	-0.654	-0.876	-1.054	-0.964
Sivas	0.036	-0.006	-0.074	-0.056	-0.101	-0.111	-0.337	-0.399
Tekirdağ	2.017	1.845	1.922	1.934	1.676	1.491	1.353	1.303
Tokat	0.183	0.040	-0.012	0.039	-0.031	-0.154	-0.341	-0.253
Trabzon	0.329	0.182	0.155	0.151	0.093	0.008	-0.217	-0.189
Tunceli	-0.720	-0.584	-0.706	-0.529	-0.510	-0.277	-0.822	-0.897
Şanlıurfa	2.382	2.255	2.250	2.149	1.941	1.899	1.870	1.767
Uşak	0.798	0.557	0.603	0.523	0.354	0.405	0.218	0.134
Van	2.035	1.813	1.749	1.773	1.661	1.429	1.192	1.219
Yozgat	-0.354	-0.082	-0.221	-0.186	-0.208	-0.038	-0.351	-0.488
Zonguldak	0.431	0.328	0.231	0.193	0.204	0.161	-0.045	-0.123
Aksaray	0.737	0.790	0.678	0.730	0.629	1.217	0.622	0.470
Bayburt	-0.265	-0.270	-0.406	-0.449	-0.327	-0.434	-0.754	-0.769
Karaman	1.009	0.882	0.874	0.655	0.627	0.642	0.510	0.394
Kırıkkale	0.485	0.277	0.270	0.273	0.147	0.064	-0.099	-0.099
Batman	2.074	1.930	1.945	2.110	1.916	1.728	1.700	1.643
Şırnak	2.211	1.627	2.010	1.872	1.786	1.730	1.635	1.517
Bartın	0.308	0.075	-0.008	-0.109	-0.174	-0.204	-0.336	-0.361
Ardahan	-0.233	-0.527	-0.418	-0.427	-0.446	-0.605	-0.710	-0.699
Iğdır	1.119	1.010	0.941	0.824	0.798	0.891	0.601	0.474
Yalova	2.592	2.724	2.624	2.572	2.286	2.294	2.056	1.900
Karabük	0.533	0.376	0.365	0.378	0.338	0.306	0.078	0.028
Kilis	0.513	0.228	0.412	0.399	0.206	0.016	0.008	0.088
Osmaniye	1.540	1.374	1.352	1.281	1.214	1.014	0.895	0.955
Düzce	0.680	0.542	0.530	0.499	0.398	0.362	0.175	0.185

Source: Turkstat, 2023b

Table 16 (Part 1): Province population growth estimates 1 (in percent)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	0.793	0.709	0.625	0.541	0.457	0.372	0.288	0.204	-0.637
81 Provinces	0.563	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.181
Foreign-Born	5.065	5.089	5.101	5.098	5.082	5.052	5.008	4.950	3.767
Adana	0.690	0.558	0.427	0.295	0.164	0.032	-0.099	-0.231	-1.546
Adıyaman	0.413	0.342	0.270	0.198	0.126	0.054	-0.018	-0.090	-0.809
Afyonkarahisar	-0.002	-0.059	-0.116	-0.173	-0.230	-0.287	-0.344	-0.401	-0.970
Ağrı	0.210	0.077	-0.057	-0.191	-0.325	-0.458	-0.592	-0.726	-2.063
Amasya	-0.368	-0.443	-0.517	-0.592	-0.666	-0.741	-0.815	-0.890	-1.635
Ankara	1.027	0.891	0.756	0.620	0.485	0.349	0.214	0.078	-1.277
Antalya	1.146	0.992	0.839	0.686	0.532	0.379	0.225	0.072	-1.463
Artvin	-1.018	-1.094	-1.171	-1.247	-1.323	-1.400	-1.476	-1.552	-2.315
Aydın	0.317	0.224	0.130	0.037	-0.057	-0.150	-0.243	-0.337	-1.271
Balıkesir	-0.096	-0.168	-0.240	-0.312	-0.384	-0.456	-0.528	-0.600	-1.320
Bilecik	-0.800	-0.873	-0.946	-1.019	-1.093	-1.166	-1.239	-1.313	-2.046
Bingöl	0.357	0.305	0.254	0.203	0.152	0.100	0.049	-0.002	-0.514
Bitlis	0.549	0.473	0.397	0.321	0.245	0.169	0.092	0.016	-0.745
Bolu	-0.201	-0.273	-0.345	-0.416	-0.488	-0.560	-0.632	-0.704	-1.422
Burdur	-0.647	-0.733	-0.820	-0.907	-0.993	-1.080	-1.167	-1.254	-2.121
Bursa	1.015	0.895	0.775	0.655	0.535	0.415	0.295	0.175	-1.026
Çanakkale	-0.358	-0.448	-0.537	-0.627	-0.716	-0.805	-0.895	-0.984	-1.879
Çankırı	-0.749	-0.806	-0.863	-0.920	-0.977	-1.034	-1.091	-1.147	-1.717
Çorum	-0.399	-0.462	-0.525	-0.588	-0.650	-0.713	-0.776	-0.838	-1.465
Denizli	0.246	0.150	0.053	-0.043	-0.139	-0.235	-0.332	-0.428	-1.390
Diyarbakır	1.263	1.166	1.069	0.973	0.876	0.779	0.682	0.586	-0.382
Edirne	-0.414	-0.510	-0.606	-0.702	-0.798	-0.894	-0.990	-1.086	-2.046
Elazığ	0.404	0.336	0.267	0.199	0.131	0.063	-0.005	-0.074	-0.756
Erzincan	-0.326	-0.365	-0.403	-0.441	-0.480	-0.518	-0.557	-0.595	-0.980
Erzurum	-0.101	-0.185	-0.270	-0.354	-0.439	-0.523	-0.608	-0.692	-1.537
Eskişehir	0.437	0.354	0.270	0.187	0.103	0.020	-0.063	-0.147	-0.981
Gaziantep	1.456	1.311	1.167	1.022	0.878	0.734	0.589	0.445	-0.999

Source: Turkstat, 2023b

Table 16 (Part 2): Province population growth estimates 1 (in percent)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	0.793	0.709	0.625	0.541	0.457	0.372	0.288	0.204	-0.637
81 Provinces	0.563	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.181
Foreign-Born	5.065	5.089	5.101	5.098	5.082	5.052	5.008	4.950	3.767
Giresun	-0.646	-0.716	-0.785	-0.854	-0.924	-0.993	-1.062	-1.131	-1.824
Gümüşhane	-1.184	-1.350	-1.515	-1.680	-1.846	-2.011	-2.176	-2.342	-3.995
Hakkari	0.841	0.749	0.657	0.565	0.473	0.381	0.289	0.197	-0.725
Hatay	0.851	0.751	0.650	0.549	0.448	0.347	0.246	0.145	-0.863
Isparta	0.282	0.226	0.171	0.115	0.060	0.005	-0.051	-0.106	-0.660
Mersin	0.744	0.638	0.532	0.426	0.319	0.213	0.107	0.001	-1.060
İstanbul	1.476	1.270	1.064	0.859	0.653	0.447	0.241	0.036	-2.022
İzmir	0.671	0.530	0.389	0.247	0.106	-0.035	-0.176	-0.318	-1.731
Kars	-0.311	-0.387	-0.462	-0.537	-0.612	-0.687	-0.762	-0.837	-1.588
Kastamonu	-0.794	-0.866	-0.937	-1.008	-1.080	-1.151	-1.222	-1.294	-2.008
Kayseri	0.630	0.528	0.426	0.324	0.223	0.121	0.019	-0.083	-1.101
Kırklareli	-0.636	-0.735	-0.835	-0.934	-1.033	-1.133	-1.232	-1.331	-2.325
Kırşehir	-0.470	-0.545	-0.620	-0.695	-0.770	-0.845	-0.920	-0.995	-1.743
Kocaeli	1.495	1.316	1.137	0.958	0.778	0.599	0.420	0.240	-1.552
Konya	0.664	0.591	0.517	0.444	0.370	0.297	0.224	0.150	-0.584
Kütahya	-0.509	-0.594	-0.680	-0.765	-0.850	-0.936	-1.021	-1.106	-1.959
Malatya	0.105	0.033	-0.040	-0.113	-0.185	-0.258	-0.330	-0.403	-1.129
Manisa	0.295	0.217	0.138	0.059	-0.020	-0.098	-0.177	-0.256	-1.043
Kahramanmaraş	0.522	0.455	0.387	0.320	0.253	0.186	0.119	0.051	-0.621
Mardin	0.883	0.820	0.757	0.693	0.630	0.567	0.504	0.440	-0.193
Muğla	0.550	0.450	0.350	0.249	0.149	0.049	-0.051	-0.152	-1.154
Muş	0.391	0.298	0.205	0.112	0.019	-0.073	-0.166	-0.259	-1.188
Nevşehir	0.020	-0.023	-0.066	-0.109	-0.153	-0.196	-0.239	-0.282	-0.714
Niğde	0.051	-0.035	-0.122	-0.208	-0.295	-0.382	-0.468	-0.555	-1.421
Ordu	-0.325	-0.402	-0.479	-0.556	-0.633	-0.709	-0.786	-0.863	-1.631
Rize	-0.533	-0.623	-0.714	-0.804	-0.895	-0.985	-1.076	-1.166	-2.071
Sakarya	0.708	0.636	0.565	0.494	0.423	0.352	0.281	0.210	-0.502

Source: Turkstat, 2023b

Table 16 (Part 3): Province population growth estimates 1 (in percent)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	0.793	0.709	0.625	0.541	0.457	0.372	0.288	0.204	-0.637
81 Provinces	0.563	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.181
Foreign-Born	5.065	5.089	5.101	5.098	5.082	5.052	5.008	4.950	3.767
Samsun	0.080	-0.003	-0.086	-0.169	-0.252	-0.335	-0.418	-0.501	-1.332
Siirt	0.401	0.329	0.257	0.186	0.114	0.042	-0.029	-0.101	-0.819
Sinop	-1.080	-1.157	-1.234	-1.311	-1.388	-1.465	-1.541	-1.618	-2.388
Sivas	-0.391	-0.449	-0.507	-0.565	-0.623	-0.681	-0.738	-0.796	-1.375
Tekirdağ	1.211	1.103	0.996	0.889	0.782	0.675	0.568	0.460	-0.611
Tokat	-0.358	-0.423	-0.488	-0.553	-0.618	-0.683	-0.748	-0.813	-1.462
Trabzon	-0.264	-0.337	-0.410	-0.483	-0.555	-0.628	-0.701	-0.774	-1.503
Tunceli	-0.690	-0.704	-0.717	-0.730	-0.743	-0.757	-0.770	-0.783	-0.916
Şanlıurfa	1.663	1.573	1.484	1.395	1.306	1.216	1.127	1.038	0.145
Uşak	0.068	-0.016	-0.101	-0.186	-0.270	-0.355	-0.439	-0.524	-1.370
Van	1.079	0.962	0.844	0.726	0.608	0.491	0.373	0.255	-0.922
Yozgat	-0.335	-0.356	-0.377	-0.398	-0.419	-0.440	-0.461	-0.482	-0.692
Zonguldak	-0.146	-0.217	-0.287	-0.358	-0.429	-0.500	-0.570	-0.641	-1.349
Aksaray	0.670	0.656	0.641	0.627	0.613	0.599	0.584	0.570	0.428
Bayburt	-0.776	-0.846	-0.917	-0.987	-1.057	-1.128	-1.198	-1.269	-1.972
Karaman	0.330	0.248	0.166	0.084	0.002	-0.080	-0.162	-0.244	-1.064
Kırıkkale	-0.195	-0.275	-0.355	-0.435	-0.515	-0.595	-0.675	-0.755	-1.555
Batman	1.612	1.553	1.493	1.433	1.374	1.314	1.255	1.195	0.598
Şırnak	1.491	1.423	1.355	1.286	1.218	1.149	1.081	1.013	0.329
Bartın	-0.497	-0.585	-0.673	-0.761	-0.849	-0.937	-1.025	-1.113	-1.993
Ardahan	-0.763	-0.819	-0.876	-0.933	-0.989	-1.046	-1.103	-1.159	-1.725
Iğdır	0.471	0.391	0.311	0.230	0.150	0.070	-0.010	-0.091	-0.893
Yalova	1.874	1.761	1.649	1.536	1.424	1.311	1.198	1.086	-0.040
Karabük	0.020	-0.043	-0.105	-0.167	-0.230	-0.292	-0.355	-0.417	-1.041
Kilis	-0.059	-0.124	-0.189	-0.254	-0.319	-0.384	-0.449	-0.514	-1.163
Osmaniye	0.798	0.708	0.618	0.528	0.438	0.347	0.257	0.167	-0.733
Düzce	0.105	0.035	-0.036	-0.106	-0.176	-0.247	-0.317	-0.387	-1.091

Source: Turkstat, 2023b

Table 17 (Part 1): Province population growth estimates 2 (in percent)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	1.018	0.962	0.906	0.850	0.794	0.738	0.682	0.626	0.066
81 Provinces	0.548	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.228
Foreign-Born	9.731	9.734	9.666	9.541	9.371	9.167	8.938	8.689	5.976
Adana	0.677	0.544	0.411	0.278	0.145	0.012	-0.121	-0.254	-1.584
Adıyaman	0.411	0.339	0.267	0.194	0.122	0.050	-0.022	-0.094	-0.817
Afyonkarahisar	-0.027	-0.087	-0.147	-0.207	-0.267	-0.327	-0.387	-0.447	-1.048
Ağrı	0.208	0.074	-0.060	-0.195	-0.329	-0.463	-0.597	-0.731	-2.071
Amasya	-0.386	-0.462	-0.539	-0.616	-0.692	-0.769	-0.845	-0.922	-1.689
Ankara	0.978	0.836	0.694	0.553	0.411	0.269	0.127	-0.014	-1.431
Antalya	1.125	0.969	0.813	0.657	0.501	0.345	0.189	0.033	-1.527
Artvin	-1.027	-1.104	-1.181	-1.259	-1.336	-1.414	-1.491	-1.568	-2.342
Aydın	0.319	0.225	0.132	0.039	-0.054	-0.148	-0.241	-0.334	-1.266
Balıkesir	-0.117	-0.191	-0.266	-0.340	-0.415	-0.489	-0.564	-0.638	-1.383
Bilecik	-0.808	-0.882	-0.957	-1.031	-1.105	-1.180	-1.254	-1.328	-2.072
Bingöl	0.311	0.254	0.197	0.140	0.083	0.026	-0.031	-0.088	-0.657
Bitlis	0.553	0.478	0.402	0.326	0.251	0.175	0.099	0.024	-0.733
Bolu	-0.236	-0.312	-0.389	-0.465	-0.541	-0.617	-0.694	-0.770	-1.533
Burdur	-0.666	-0.755	-0.844	-0.934	-1.023	-1.112	-1.201	-1.290	-2.182
Bursa	1.004	0.882	0.761	0.640	0.518	0.397	0.275	0.154	-1.061
Çanakkale	-0.393	-0.486	-0.580	-0.674	-0.767	-0.861	-0.955	-1.049	-1.986
Çankırı	-0.731	-0.786	-0.841	-0.895	-0.950	-1.005	-1.060	-1.115	-1.663
Çorum	-0.423	-0.489	-0.555	-0.621	-0.686	-0.752	-0.818	-0.883	-1.540
Denizli	0.238	0.141	0.043	-0.054	-0.151	-0.248	-0.346	-0.443	-1.415
Diyarbakır	1.281	1.187	1.092	0.998	0.903	0.809	0.714	0.620	-0.325
Edirne	-0.428	-0.526	-0.623	-0.721	-0.819	-0.917	-1.014	-1.112	-2.090
Elazığ	0.378	0.307	0.236	0.164	0.093	0.021	-0.050	-0.121	-0.835
Erzincan	-0.355	-0.397	-0.440	-0.482	-0.524	-0.566	-0.608	-0.650	-1.072
Erzurum	-0.097	-0.181	-0.265	-0.349	-0.434	-0.518	-0.602	-0.686	-1.527
Eskişehir	0.398	0.310	0.221	0.133	0.045	-0.044	-0.132	-0.220	-1.103
Gaziantep	1.477	1.335	1.193	1.051	0.909	0.768	0.626	0.484	-0.934

Source: Turkstat, 2023b

Table 17 (Part 2): Province population growth estimates 2 (in percent)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	1.018	0.962	0.906	0.850	0.794	0.738	0.682	0.626	0.066
81 Provinces	0.548	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.228
Foreign-Born	9.731	9.734	9.666	9.541	9.371	9.167	8.938	8.689	5.976
Giresun	-0.674	-0.747	-0.819	-0.892	-0.965	-1.037	-1.110	-1.183	-1.910
Gümüşhane	-0.603	-0.696	-0.789	-0.881	-0.974	-1.067	-1.159	-1.252	-2.179
Hakkari	0.873	0.785	0.697	0.608	0.520	0.432	0.344	0.256	-0.626
Hatay	0.826	0.722	0.618	0.514	0.410	0.306	0.202	0.098	-0.942
Isparta	0.277	0.221	0.165	0.109	0.054	-0.002	-0.058	-0.114	-0.674
Mersin	0.720	0.611	0.502	0.393	0.283	0.174	0.065	-0.044	-1.135
İstanbul	1.445	1.236	1.026	0.816	0.607	0.397	0.187	-0.022	-2.118
İzmir	0.656	0.513	0.370	0.227	0.084	-0.059	-0.203	-0.346	-1.777
Kars	-0.336	-0.414	-0.492	-0.570	-0.648	-0.726	-0.804	-0.882	-1.663
Kastamonu	-0.810	-0.883	-0.956	-1.030	-1.103	-1.176	-1.250	-1.323	-2.056
Kayseri	0.626	0.524	0.421	0.319	0.217	0.114	0.012	-0.090	-1.114
Kırklareli	-0.649	-0.750	-0.851	-0.952	-1.053	-1.154	-1.255	-1.356	-2.366
Kırşehir	-0.559	-0.645	-0.731	-0.817	-0.903	-0.989	-1.075	-1.161	-2.021
Kocaeli	1.505	1.326	1.148	0.970	0.792	0.614	0.436	0.258	-1.524
Konya	0.647	0.572	0.496	0.421	0.346	0.270	0.195	0.119	-0.636
Kütahya	-0.516	-0.602	-0.688	-0.774	-0.860	-0.946	-1.032	-1.118	-1.979
Malatya	0.108	0.036	-0.036	-0.109	-0.181	-0.253	-0.325	-0.397	-1.120
Manisa	0.307	0.230	0.153	0.076	-0.002	-0.079	-0.156	-0.234	-1.006
Kahramanmaraş	0.506	0.437	0.368	0.299	0.230	0.161	0.092	0.023	-0.668
Mardin	0.876	0.812	0.748	0.684	0.620	0.555	0.491	0.427	-0.215
Muğla	0.537	0.435	0.333	0.231	0.129	0.027	-0.075	-0.177	-1.196
Muş	0.360	0.263	0.167	0.070	-0.027	-0.123	-0.220	-0.317	-1.283
Nevşehir	-0.046	-0.098	-0.149	-0.201	-0.252	-0.304	-0.356	-0.407	-0.922
Niğde	0.059	-0.027	-0.112	-0.198	-0.284	-0.369	-0.455	-0.541	-1.397
Ordu	-0.361	-0.443	-0.524	-0.605	-0.687	-0.768	-0.849	-0.930	-1.743
Rize	-0.523	-0.612	-0.701	-0.790	-0.880	-0.969	-1.058	-1.147	-2.039
Sakarya	0.668	0.592	0.515	0.439	0.363	0.287	0.211	0.135	-0.626

Source: Turkstat, 2023b

Table 17 (Part 3): Province population growth estimates 2 (in percent)

	2023	2024	2025	2026	2027	2028	2029	2030	2040
Total Population	1.018	0.962	0.906	0.850	0.794	0.738	0.682	0.626	0.066
81 Provinces	0.548	0.462	0.361	0.259	0.157	0.055	-0.048	-0.151	-1.228
Foreign-Born	9.731	9.734	9.666	9.541	9.371	9.167	8.938	8.689	5.976
Samsun	0.055	-0.032	-0.118	-0.204	-0.290	-0.376	-0.463	-0.549	-1.411
Siirt	0.412	0.341	0.271	0.200	0.130	0.060	-0.011	-0.081	-0.785
Sinop	-1.073	-1.150	-1.226	-1.302	-1.378	-1.454	-1.530	-1.606	-2.368
Sivas	-0.422	-0.484	-0.546	-0.607	-0.669	-0.731	-0.792	-0.854	-1.471
Tekirdağ	1.217	1.111	1.005	0.898	0.792	0.685	0.579	0.473	-0.591
Tokat	-0.368	-0.434	-0.500	-0.566	-0.632	-0.698	-0.764	-0.830	-1.491
Trabzon	-0.284	-0.359	-0.435	-0.510	-0.586	-0.661	-0.736	-0.812	-1.566
Tunceli	-0.801	-0.829	-0.856	-0.883	-0.910	-0.937	-0.964	-0.992	-1.263
Şanlıurfa	1.664	1.575	1.486	1.397	1.308	1.219	1.130	1.041	0.151
Uşak	0.034	-0.055	-0.143	-0.232	-0.321	-0.410	-0.499	-0.588	-1.476
Van	1.079	0.961	0.843	0.725	0.607	0.490	0.372	0.254	-0.924
Yozgat	-0.404	-0.434	-0.464	-0.493	-0.523	-0.553	-0.582	-0.612	-0.908
Zonguldak	-0.169	-0.243	-0.317	-0.390	-0.464	-0.538	-0.611	-0.685	-1.422
Aksaray	0.501	0.466	0.431	0.395	0.360	0.324	0.289	0.254	-0.100
Bayburt	-0.806	-0.880	-0.955	-1.029	-1.103	-1.177	-1.251	-1.326	-2.068
Karaman	0.309	0.224	0.140	0.055	-0.029	-0.114	-0.199	-0.283	-1.130
Kırıkkale	-0.207	-0.288	-0.370	-0.451	-0.533	-0.614	-0.695	-0.777	-1.591
Batman	1.635	1.579	1.522	1.465	1.408	1.352	1.295	1.238	0.670
Şırnak	1.486	1.417	1.348	1.279	1.210	1.140	1.071	1.002	0.312
Bartın	-0.512	-0.601	-0.691	-0.781	-0.871	-0.961	-1.051	-1.140	-2.039
Ardahan	-0.755	-0.811	-0.867	-0.922	-0.978	-1.034	-1.089	-1.145	-1.702
Iğdır	0.416	0.329	0.242	0.155	0.068	-0.019	-0.106	-0.194	-1.065
Yalova	1.839	1.722	1.605	1.488	1.371	1.254	1.137	1.020	-0.150
Karabük	-0.009	-0.074	-0.140	-0.206	-0.272	-0.338	-0.404	-0.470	-1.128
Kilis	-0.033	-0.094	-0.156	-0.218	-0.280	-0.341	-0.403	-0.465	-1.082
Osmaniye	0.809	0.721	0.632	0.543	0.455	0.366	0.277	0.189	-0.698
Düzce	0.083	0.010	-0.063	-0.136	-0.209	-0.282	-0.355	-0.428	-1.158

Source: Turkstat, 2023b