



JATSS, 2026; 8(1), 105-136

First Submission:25.01.2026

Revised Submission After Review:10.03.2026

Accepted For Publication:24.03.2026

Available Online Since:25.03.2026

Research Article

**Gender Differences and Regional Disparities in Youth NEET Status: Empirical
Evidence for Türkiye**

Hayriye Özgül Özkan Değirmenci^a

Abstract

Introduction: This study measures youth NEET (not in employment, education, or training) in Türkiye and identifies its main correlates, with emphasis on gender gaps and regional inequality. The objective is to describe how human capital, household constraints, and place-based conditions shape NEET risk in 2022.

Method: Nationally representative 2022 Household Labor Force Survey microdata for ages 15–29 (N=123,834) is analyzed using binary logit models estimated for the full sample and separately by gender. Covariates include age (and squared), education, marital status, household size, child-under-six indicator, and NUTS-1 regions; results are reported as average marginal effects with household-clustered standard errors.

Results or Findings: The NEET rate is 26.6% overall, with a large gender gap (36.5% for women; 16.8% for men). NEET probability declines strongly with higher education, but gender differences remain across education levels. Regional disparities are substantial, with higher NEET prevalence in disadvantaged regions. Marriage and young-child presence are strongly associated with higher NEET probability among women, while associations for men are weaker and often opposite in sign.

Discussion or Conclusion: NEET in Türkiye reflects regional inequality, education gradients, and gendered household constraints that raise women’s inactivity. Priorities include reducing early school leaving, improving school-to-work transitions, expanding childcare, and targeting activation and quality formal job creation in high-NEET regions. Future work should identify causal program impacts using longitudinal or policy-variation designs.

Keywords: NEET, youth, labor force survey, regional inequality, gender, education

JEL Codes: J13, J16, J21, R23, I26

^a Research Assistant Dr., Muğla Sıtkı Koçman University, Faculty of Economics and Administrative Sciences, Department of Economics, Muğla/Türkiye, ozguldegirmenci@mu.edu.tr, ORCID ID: <https://orcid.org/0000-0003-1728-7442> (Corresponding Author)





JATSS, 2026; 8(1), 105-136

İlk Başvuru: 25.01.2026

Düzeltilmiş Makalenin Alınış: 10.03.2026

Yayın İçin Kabul Tarihi: 24.03.2026

Online Yayın Tarihi: 25.03.2026

Araştırma Makalesi

**Gençlerin NEET Statüsünde Toplumsal Cinsiyet Farklılıkları ve Bölgesel Eşitsizlikler:
Türkiye İçin Ampirik Kanıtlar**

Hayriye Özgül Özkan Değirmenci^a

Öz

Giriş: Bu çalışma, Türkiye’de genç NEET (istihdamda olmayan, eğitimde veya öğretimde bulunmayan) düzeyini ölçmekte ve 2022’de toplumsal cinsiyet farkları ile bölgesel eşitsizliklere odaklanarak temel belirleyicileri incelemektedir. Amaç, insan sermayesi, hane halkı kısıtları ve mekânsal koşulların NEET riskini nasıl şekillendirdiğini göstermektir.

Yöntem: 15–29 yaş grubuna ait ulusal temsiliyete sahip 2022 Hane halkı İşgücü Anketi (N=123.834) mikro verileri ikili logit modelleriyle, toplam örnekleme ve cinsiyete göre ayrı ayrı analiz edilmiştir. Açıklayıcı değişkenler yaş (ve karesi), eğitim, medeni durum, hane halkı büyüklüğü, hanede 6 yaş altı çocuk varlığı ve Düzey-1 İBBS bölgeleridir; sonuçlar hane düzeyinde kümelenmiş standart hatalarla ortalama marjinal etkiler olarak raporlanmıştır.

Sonuçlar ya da Bulgular: NEET oranı toplamda %26,6 olup cinsiyet farkı büyüktür (kadın %36,5; erkek %16,8). Eğitim yükseldikçe NEET olasılığı belirgin biçimde azalır; ancak cinsiyet farkları eğitim düzeyleri boyunca sürer. Dezavantajlı bölgelerde NEET daha yüksektir. Evli olmak ve hanede küçük çocuk bulunması kadınlarda NEET olasılığıyla güçlü biçimde pozitif ilişkiliyken, erkeklerde ilişkiler daha zayıf ve çoğu zaman ters işaretlidir.

Tartışma ya da Yapılan Çıkarımlar: Türkiye’de genç NEET, bölgesel eşitsizlik, eğitim gradyanı ve kadınların hareketsizliğini artıran toplumsal cinsiyete dayalı hanehalkı kısıtlarının bileşimini yansıtır. Öncelikler erken okul terkinin azaltmak, eğitimden işe geçişi güçlendirmek, çocuk bakımını genişletmek ve yüksek-NEET bölgelerde etkinleştirmeyi nitelikli ve kayıtlı istihdam yaratımıyla birlikte hedeflemektir. Gelecek çalışmalar, uzunlamasına veriler veya politika varyasyonu tasarımlarıyla programların nedensel etkilerini belirlemelidir.

Anahtar Kelimeler: NEET, gençlik, işgücü araştırması, bölgesel eşitsizlik, toplumsal cinsiyet, eğitim

JEL Kodlar: J13, J16, J21, R23, I26

^a Araştırma Görevlisi Dr., Muğla Sıtkı Koçman Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, İktisat Bölümü, Muğla/Türkiye, ozguldegirmenci@mu.edu.tr, ORCID ID: <https://orcid.org/0000-0003-1728-7442> (Sorumlu Yazar)



Introduction

In many middle-income economies, the transition from school to stable work has become longer and more uncertain, as young people increasingly experience extended spells of job search, intermittent employment, or inactivity before achieving sustained labor-market attachment (Choudhry & Pastore, 2023). In this context, the NEET concept, youth not in employment, education, or training, has become a central indicator for assessing social inclusion and the efficiency of school-to-work transitions because it captures both open unemployment and a broader set of young people who are detached from formal work and human-capital accumulation (Bynner & Parsons, 2002; Karma, 2025; Organisation for Economic Co-operation and Development (OECD), 2025b). At the same time, the NEET category is inherently heterogeneous, and its policy relevance depends on whether NEET status reflects short transition spells, discouragement, care constraints, or more persistent detachment (Furlong, 2006; Yates & Payne, 2006). This heterogeneity is especially salient in settings where inactivity, rather than unemployment, dominates youth disconnection.

Türkiye is a particularly important case for revisiting NEET dynamics because youth disengagement intersects with persistently low female labor-force participation and marked regional inequality. Prior work on Türkiye has consistently emphasized that NEET status is strongly gendered and closely linked to household formation and care responsibilities, suggesting that women's inactivity pathways are central to understanding aggregate NEET outcomes (Lüküslü & Çelik, 2022). These patterns have direct implications for both growth and equality. High and persistent NEET shares imply underutilized human capital and weaker long-run productivity, while gendered inactivity reinforces labor-market segmentation and unequal access to income and social protection.

Comparative evidence underscores the scale of Türkiye's challenge. For ages 15–29, Eurostat reports that the NEET rate averaged 11.0% in the European Union (EU) in 2024, ranging from about 5% in the Netherlands to about 19% in Romania, and notes an EU-level target to reduce NEET below 9% by 2030 (Eurostat, 2025). In contrast, the 2022 Household Labor Force Survey (HLFS) indicates that 27.5% of youth in Türkiye are NEET, with a very large gender disparity (38.6% for women versus 16.2% for men; Table 1). This gap is substantially larger than the EU-wide gender gap in 2024 (12.1% for young women versus 10.0% for young men), reinforcing the view that mechanisms beyond standard job-search frictions, particularly inactivity-related constraints, are likely to be central for Türkiye (Eurostat, 2025).

A time-series benchmark further highlights the divergence. For the EU, Eurostat shows that the NEET share for ages 15–29 declined steadily from 2014 to 2019, rose with the onset of the COVID-19 shock in 2020, and then fell again, reaching 11.0% in 2024, below pre-pandemic levels, indicating a recovery in youth labor-market attachment (Eurostat, 2025). Türkiye's 2022 level is therefore not only above the contemporary EU average but also far above the EU's medium-term trajectory and its policy target for 2030 (Eurostat, 2025).

For additional cross-country context, the World Bank's World Development Indicators publishes a harmonized NEET series for ages 15–24 (indicator SL.UEM.NEET.ZS), sourced from the International Labour Organization (ILOSTAT) labor force statistics framework. This series is useful for comparisons beyond Europe and for longer-run benchmarking, but it can differ from national survey tabulations because it applies internationally harmonized definitions, uses a different age band than 15–29, and may incorporate modelled estimates for some country-years (World Bank, 2025; ILOSTAT, 2025). These differences underscore the

importance of being explicit about age coverage and measurement when comparing Türkiye's NEET outcomes across sources.

OECD benchmarks point to a similarly stark picture. OECD reporting highlights that NEET shares can be decomposed into unemployed NEET and inactive NEET, which is crucial for diagnosing whether disconnection reflects labor-demand shortfalls or barriers to participation (OECD, 2025a). In *Education at a Glance 2025*, the OECD reports that the average NEET rate among 18–24-year-olds was 14% in 2024 and notes that the share exceeds 25% in only a small number of countries, including Türkiye; it further indicates that Türkiye's NEET composition is heavily weighted toward inactivity rather than unemployment (OECD, 2025a). This composition aligns with Türkiye-focused research emphasizing that youth disconnection is not solely a labor-demand problem but is also shaped by constraints on participation, especially for women (Lüküslü & Çelik, 2022).

Against this background, this manuscript asks three questions. First, how large is the NEET gender gap once observable characteristics are accounted for? Second, how does educational attainment relate to NEET probability for women and men? Third, to what extent do regional disparities shape NEET outcomes in Türkiye? To answer these questions, we estimate logit models of NEET status using nationally representative microdata and a set of covariates that capture life-cycle transitions, human capital, household structure, and spatial heterogeneity (age and age-squared, education, marital status, household size, the presence of a child under age six, and NUTS-1 region indicators). We report average marginal effects to present magnitudes in probability units and estimate models for the full sample and separately by gender, allowing correlates to differ systematically between women and men.

The remainder of the paper is organized as follows. The next section provides a comparative context situating Türkiye's NEET outcomes relative to benchmarks in the EU and the OECD. The paper then reviews the related literature on NEET in Türkiye, highlighting established findings and remaining gaps that motivate the empirical contribution. The subsequent section describes the HLFS 2022 microdata, sample construction, and the main variables used to operationalize NEET status and covariates. The empirical strategy section outlines the logit framework, explanation of covariate effects in a cross-sectional setting, and the use of average marginal effects, including gender-stratified estimates. The results section presents the baseline estimates and key heterogeneity patterns by gender, education, and region. The discussion section interprets the findings and develops policy implications with attention to gender-responsive and regionally targeted interventions. The final section concludes by summarizing the main contributions and outlining priorities for future research.

Comparative Context

EU monitoring indicates both progress over the past decade and substantial cross-country dispersion in NEET outcomes. In 2024, 11.0% of individuals aged 15–29 in the EU were neither in employment nor in education or training, but national rates varied widely, from around 5% in the Netherlands to about 19% in Romania, highlighting persistent structural heterogeneity in youth transitions across member states (Eurostat, 2025). Over the longer horizon, EU aggregates suggest improvement: the NEET share for ages 15–29 declined between 2014 and 2024, despite the temporary reversal associated with the COVID-19 shock, and the European Pillar of Social Rights sets an EU-level target of reducing the NEET rate below 9% by 2030 (Eurostat, 2025). This policy framing matters because it places NEET at the center of broader EU objectives on inclusion, labor-market integration, and the intergenerational transmission of disadvantage.

EU evidence also underscores that NEET is not gender-neutral and that age gradients remain pronounced. In 2024, the NEET rate among young women aged 15–29 was 12.1%, compared with 10.0% among young men, with women more likely to be outside the labor force rather than unemployed, an important compositional detail for interpreting policy needs (Eurostat, 2025). The age pattern is steep: NEET prevalence rises from the mid-single digits among those aged 15–19 to double-digit levels in the early and late twenties, reflecting the accumulation of transition risks as young people leave education and confront job-search and matching frictions, as well as potential household-formation constraints (Eurostat, 2025). These EU patterns provide a useful benchmark for Türkiye because they distinguish between unemployment-linked NEET and inactivity-linked NEET, which can imply very different policy levers.

OECD comparisons convey a similarly heterogeneous landscape and position Türkiye among the highest-NEET countries in the organization. In *Education at a Glance 2025*, the OECD reports that, on average, 14% of 18–24-year-olds across OECD countries were NEET in 2024, while the share exceeded 25% in only a small number of cases, including Colombia and Türkiye, as well as partner country South Africa (OECD, 2025a). Crucially, the OECD decomposition highlights that Türkiye’s NEET profile is heavily weighted toward inactivity: among 18–24-year-olds, roughly 8% are unemployed NEET while around 24% are inactive (outside the labor force) (OECD, 2025a). This composition is consistent with an interpretation of NEET in Türkiye that extends beyond labor-demand shortfalls and instead emphasizes barriers to participation, particularly those related to gendered constraints and household roles.

Cross-source comparisons require careful attention to definitional choices and statistical construction. This paper’s HLFS-based estimates focus on ages 15–29 to align with the EU’s headline NEET indicator and to capture the period in which late transitions into stable work and household formation are most consequential. In contrast, the World Bank’s World Development Indicators report a harmonized NEET series for ages 15–24 (SL.UEM.NEET.ZS), sourced from the ILOSTAT labor force statistics framework; the indicator is defined as the share of youth not in employment and not in education or formal training within the total youth population, and in some country-years it is reported as a modelled ILO estimate (World Bank, 2025; ILOSTAT, 2025). These differences in age coverage (15–24 versus 15–29), definitions, and estimation procedures can generate level differences relative to national tabulations, implying that benchmarking Türkiye internationally should be explicit about the underlying measurement framework.

Literature Review

Türkiye’s NEET profile is distinctive in comparative perspective because a large share of youth disconnection takes the form of economic inactivity rather than unemployment. The NEET indicator, youth not in employment, education, or training, was developed to complement unemployment statistics by capturing young people who are outside both paid work and formal human-capital accumulation, including discouraged workers and those constrained from job search (OECD, 2025b; International Labour Office, 2020). The concept was initially developed to capture forms of social exclusion associated with delayed or fragile school-to-work transitions, beyond what youth unemployment alone measures (Bynner & Parsons, 2002; Redmond & McFadden, 2023). In Türkiye, this broader lens is essential: Gürsel and Tanrıverdi (2025) emphasizes that, unlike many European contexts where the youth unemployment rate exceeds the NEET rate, Türkiye exhibits the opposite pattern, implying that

NEET is driven not only by joblessness but also by early educational disengagement, gendered roles, and structural barriers in school-to-work transitions .

Eurostat's cross-country evidence also provides a benchmark for how NEET correlates with age, education, and place. In the EU, NEET incidence rises sharply with age (5.4% at ages 15–19, 12.8% at 20–24, and 14.6% at 25–29 in 2024) and is strongly graded by education (12.6% among those with low education versus 7.9% among those with tertiary education). NEET is also higher outside cities (10.0% in cities, 11.4% in towns/suburbs, and 12.3% in rural areas), and women are more likely to be NEET than men (12.1% versus 10.0% in 2024) (Eurostat, 2025). These stylized facts motivate the present study's emphasis on age profiles, education gradients, and regional disparities, while also highlighting that Türkiye's exceptionally large gender gap implies a different underlying composition of NEET, one that is likely to be more strongly linked to inactivity and care constraints.

A second recurring theme is heterogeneity within the NEET category. Turkish scholarship stresses that NEET aggregates multiple pathways, unemployed job-seekers, discouraged workers, family-care constrained youth, and those temporarily outside institutions, so that one-size-fits-all interventions are unlikely to address the full problem. This point is consistent with European evidence showing that the NEET population contains distinct subgroups with different needs and policy levers. Accordingly, identifying whether NEET reflects unemployment, inactivity, or temporary transitions is essential for both interpretation and targeting (Maguire, 2015). This heterogeneity has encouraged empirical work that distinguishes compositional differences (unemployed versus inactive NEET) and identifies the mechanisms that keep youth disconnected from both education and the labor market. In policy terms, the implication is that reducing NEET requires coordinated actions that span education retention, active labor market support, and social policies that lower participation constraints (United Nations Development Programme (UNDP) Türkiye, 2025).

Evidence on determinants in Türkiye

Recent econometric studies using the Household Labor Force Survey (HLFS) consistently identify education, age, marital status, and place of residence as core correlates of NEET outcomes. Earlier HLFS-based evidence for Türkiye similarly documents strong associations of NEET status with education and gender, highlighting the role of inactivity among young women (Kılıç, 2014). In a regional analysis based on pooled HLFS microdata, (Özdemir et al., 2023) show that demographic characteristics, including gender and marital status, remain statistically important after controlling for education and other observables, and that regional differences are themselves significant determinants of NEET status. Their descriptive evidence also points to a sharp education gradient, with particularly high NEET incidence among low-educated youth, underscoring the importance of preventing early exit from school and strengthening pathways from education into formal employment. Recent work further extends this line of analysis by documenting a robust role for education, demographic characteristics, and spatial differences in shaping NEET risks in Türkiye, reinforcing the importance of estimating gender-heterogeneous models with regional controls (Özdemir et al., 2024).

Newer contributions extend this determinants framework by placing the family at the center of NEET risk. Using HLFS data spanning 2010–2023, Elitaş (2025) finds that parental education, parental employment, and household income are strongly associated with youth NEET probability. A nuanced pattern emerges that medium levels of parental education can be protective, maternal education may exhibit stronger associations than paternal education, and

parental “decent work” status reduces NEET risk, highlighting how household economic security shapes young people’s ability to remain attached to education and the labor market. Complementing this approach, Akgül (2025) emphasizes that family dynamics and socio-economic conditions intersect with gender, implying that the same household circumstances can translate into different NEET risks for women and men.

Gendered mechanisms and the composition of NEET

Perhaps the most robust finding across the Türkiye NEET literature is the magnitude and structure of the gender gap. Qualitative and mixed-method work argues that treating NEET as a gender-neutral category can obscure distinct mechanisms that generate disconnection for women. Lüküslü and Çelik (2022) document that young women are disproportionately represented among NEET and that women’s NEET status is more likely to consist of inactivity rather than active job search, whereas men’s NEET status more often reflects unemployment. This compositional distinction is analytically important because it suggests that women’s NEET outcomes cannot be addressed solely through job creation or job-search assistance; they also reflect constraints on labor-force participation. Earlier qualitative evidence similarly documents a gendered form of youth disconnection in Türkiye linked to domestic roles and constrained opportunity sets for young women, reinforcing that inactivity pathways are central to the NEET phenomenon (Çelik & Lüküslü, 2011).

Gender-sensitive accounts connect NEET status to job quality, safety, and social norms. Lüküslü and Çelik (2022) report that many young women define “good work” as formal employment with social security and safe working conditions, and that precarious and informal jobs can be seen as unacceptable or risky. In such settings, withdrawal from the labor market may be a rational response to low expected returns and high non-monetary costs, reinforced by norms that prioritize domestic roles. Quantitative work similarly treats education as protective but recognizes that education alone may be insufficient if local labor markets do not offer family-compatible, decent jobs (Özdemir et al., 2024; UNDP Türkiye, 2025).

Marriage, childcare, and household constraints

Household formation and care burdens are repeatedly identified as pivotal to women’s NEET risk in Türkiye (Yiğit et al., 2023). In the pooled HLFS regional analysis, Özdemir et al. (2023) show that marriage and the presence of young children are associated with higher NEET probabilities for women but lower probabilities for men, consistent with the breadwinner–caregiver division of labor and asymmetric assignment of unpaid work (see also Değirmenci, 2023). Akgül (2025) similarly frames women’s NEET vulnerability as rooted in traditional family roles and caregiving responsibilities, while also emphasizing how socio-economic circumstances shape the feasibility of combining employment with family responsibilities.

Policy-oriented evidence triangulates these mechanisms and emphasizes that constraints are multi-dimensional. UNDP Türkiye’s needs assessment on NEET young women documents barriers such as limited affordable childcare, weak school-to-work links, restricted mobility, and safety concerns in some contexts, factors that can discourage young women’s participation in employment even when education levels rise (UNDP Türkiye, 2025). Building on this diagnosis, the UNDP Türkiye White Paper advocates a bundle of gender-responsive interventions, including strengthened care infrastructure, targeted active labor market policies, and stronger coordination across education, employment, and social services (UNDP Türkiye, 2025).

Regional inequality and place-based opportunity structures

A further consensus in the Turkish literature concerns the spatial concentration of NEET disadvantage. Spatial econometric evidence finds that regional disparities are systematic and persistent, supporting a place-based interpretation of NEET disadvantage (Karahasan, 2025). Beyond individual characteristics, regional labor demand, sectoral composition, and access to education and training opportunities shape the probability that youth become and remain NEET. Özdemir et al. (2023) provide direct evidence that regional differences are significant determinants of NEET status in Türkiye. BETAM's recent profiling similarly emphasizes that Türkiye's NEET burden is exceptionally high in European comparisons and that it is geographically concentrated, with pronounced disadvantages in less developed regions and particularly high rates among young women (Gürsel & Tanrıverdi, 2025).

Importantly, regional inequality is likely to interact with gendered constraints. Where local labor markets offer fewer formal jobs, where transport is limited, or where social norms are more restrictive, women's "acceptable opportunity set" may shrink, increasing the likelihood of inactivity. This interaction is explicitly noted in Akgül (2025), who argues that regional disparities exacerbate NEET vulnerability for women by intensifying the joint constraints of limited opportunities and traditional expectations. Relatedly, UNDP's policy work frames NEET among young women as a place-sensitive problem in which the availability of local services (childcare, career guidance, employment intermediation) can materially influence transitions into employment (UNDP Türkiye, 2025).

Positioning and contribution of the present study

Taken together, the literature points to a multi-layered explanation of NEET in Türkiye. Education and individual characteristics are important, but household constraints and gendered norms shape women's inactivity pathways, and regional opportunity structures condition the feasibility of transitions into work and training. Three gaps remain salient for the contemporary policy debate and motivate the present study.

First, much of the quantitative evidence relies on pooled multi-year data, which is valuable for documenting long-run regularities but can mask how the configuration of risks and constraints looks in a specific, post-pandemic year. The 2022 HLFS captures the Turkish labor market after the COVID-19 disruptions to educational enrolment and female participation, providing a timely snapshot that updated knowledge requires.

Second, even when gender differences are emphasized, prior studies do not always present a unified empirical account that simultaneously (i) quantifies gender heterogeneity using fully comparable specifications, (ii) expresses magnitudes in probability units directly suitable for policy interpretation, and (iii) embeds these estimates within an explicit regional framework aligned with NUTS-1 benchmarking. Reporting logit coefficients alone, without conversion to average marginal effects and predictive margins, might limit the policy interpretability of findings. This present study addresses this gap by reporting all results in probability-scale terms alongside the structural coefficients.

Third, while regional disparities in NEET have been documented, prior work has not simultaneously combined gender-stratified modelling with a full set of NUTS-1 region fixed effects and household constraint variables in a single, harmonized specification. Doing so is important because household variables and region indicators are potentially correlated: women

in less-developed regions face both stronger care norms and weaker formal job availability, so failing to control for both simultaneously can confound the estimated gendered effects.

Using nationally representative HLFS 2022 microdata, this study addresses these gaps by estimating harmonized logit models for the pooled sample and separately for women and men, and by reporting average marginal effects and predictive margins that translate covariate differences into percentage-point changes in NEET probability. Substantively, it brings the most policy-relevant household constraints into the core specification, marital status, and the presence of a child under age six, while also controlling for regional fixed effects to isolate gendered and household mechanisms from persistent place-based differences. By combining gender-stratified modelling with regionally grounded interpretation and probability-scale reporting, the paper provides an empirically transparent and policy-oriented reassessment of NEET in Türkiye in 2022, directly informing the design of regionally targeted and gender-responsive youth inclusion strategies.

Four empirical expectations follow directly from the theoretical and substantive mechanisms reviewed above and guide the interpretation of the regression results:

H1: (Education gradient): Higher completed educational attainment is expected to reduce NEET probability for both women and men, with the strongest protective effects at tertiary levels, reflecting the role of human capital in improving employability and school-to-work transition quality.

H2: (Marriage asymmetry): Marriage is expected to be positively associated with NEET probability among women but negatively associated among men, reflecting gender-differentiated household specialization in which marriage corresponds to labor market withdrawal for women and stronger breadwinner attachment for men.

H3: (Care constraint asymmetry): The presence of a child under age six in the household is expected to increase NEET probability among women, reflecting time-intensive care responsibilities, while its association among men is expected to be weaker or of opposite sign, consistent with asymmetric allocation of unpaid work.

H4: (Regional opportunity gradient): NUTS-1 region indicators corresponding to structurally disadvantaged areas, particularly those in Eastern and Southeastern Anatolia, are expected to carry positive and significant marginal effects relative to Istanbul, reflecting place-based deficits in formal labor demand, institutional capacity, and access to education and care infrastructure.

The empirical specification translates the theoretical mechanisms directly into estimable quantities. Human capital theory and school-to-work transition research motivate the inclusion of categorical education indicators, which capture the extent to which completed schooling lowers NEET risk. In addition to that, gendered labor supply theory and the household-specialization literature motivate the inclusion of marital status and the presence of a child under age six as proxies for the care and domestic responsibilities. These proxies are hypothesized to constrain women's participation disproportionately. Spatial inequality perspectives motivate NUTS-1 region fixed effects, which absorb persistent place-based differences in labor demand, institutional capacity, and social norms that would otherwise confound individual-level associations. By specifying the model in this way, the empirical analysis tests whether the theoretical mechanisms identified in the literature operate as expected in the Turkish context, and whether their magnitudes differ between women and men.

Data and Variables

The analysis uses the Turkish Household Labor Force Survey (HLFS) 2022 microdata provided by the Turkish Statistical Institute (TurkStat, 2022). The HLFS provides harmonized information on labor-market attachment, job-search behaviour, educational enrolment, and household composition, which allows NEET status to be constructed consistently and linked to a set of individual and contextual correlates within a single cross-section. The analytical sample is restricted to youth aged 15–29 and includes only observations with non-missing values for the dependent variable and the core covariates, yielding $N = 123,834$ individuals (62,413 women and 61,421 men; see Table 1). The dependent variable which is an indicator of NEET status is constructed from three HLFS survey items. First, employment status is determined using the reference-week employment question. The respondents who performed any paid work of at least one hour, or who held a job from which they were temporarily absent, are classified as employed. Second, educational enrolment is assessed using the question on current registration in a formal education or training program (including apprenticeships and publicly recognized vocational courses). Third, a residual job-search activity variable is used descriptively to distinguish unemployed NEET (those seeking work but not employed and not enrolled) from inactive NEET (those neither employed nor enrolled nor seeking work). An individual is assigned $NEET = 1$ if and only if they satisfy neither the employment condition nor the education/training enrolment condition at the time of the survey interview. Descriptively, 27.5% of youth are NEET (72.5% non-NEET), but the distribution is sharply gendered: 38.6% of young women are NEET compared to 16.2% of young men (Table 1). This large raw gap motivates modelling gender differences explicitly and, in the econometric analysis, estimating specifications separately by women and men to allow determinants to differ in magnitude and sign.

The HLFS provides person-level survey weights constructed by TurkStat to ensure national representativeness through post-stratification to population benchmarks. Following Wooldridge (2001), when the regression model includes the full set of variables used in survey stratification and post-stratification, the unweighted maximum likelihood estimator is consistent and asymptotically efficient, and weighting is not required for valid inference. As a transparency check, the weighted and unweighted NEET rates differ by at most 0.6 percentage points in the overall sample and by at most 0.9 percentage points within each gender sub-group, confirming that the estimation sample closely mirrors the target population.

The first set of covariates capture demographic and life-course transitions. Gender enters as a binary indicator (the sample is approximately balanced by sex; Table 1), and marital status is measured with married versus not married indicators. Marriage is empirically salient in the Türkiye context because it often coincides with changes in educational continuation, labor supply, and household responsibilities. In the HLFS youth sample, 23.0% are married overall, but marriage is substantially more prevalent among women (30.9%) than men (14.9%), implying that marital transitions are a plausible contributor to observed gender differences in NEET status (Table 1). Age is included as a continuous variable (mean 21.667) together with age squared to permit non-linearity over the youth life-course (Table 1). This quadratic specification is theoretically justified because NEET risk may rise during schooling-to-work transitions in the late teens and early twenties and then decline as labor-market attachment increases, and the age-squared term allows the data to reflect such turning points rather than imposing a linear profile.

A second core block of covariates measures education as a categorical indicator of human capital and school-to-work transition capacity. Education is coded into mutually exclusive categories: no schooling, primary, middle school, high school, vocational high school, vocational college, university, and master's/PhD. The education distribution is concentrated in middle school (41.3%), followed by high school (18.3%) and vocational high school (13.9%), while tertiary attainment remains more limited (university 10.7%, master/PhD 1.1%; Table 1). Importantly, women are not uniformly less educated than men in this youth cohort; women have higher shares in university (12.6% vs 8.8%) and vocational college (9.8% vs 7.5%), whereas men are more concentrated in middle school (44.0% vs 38.6%) and vocational high school (15.8% vs 12.1%) (Table 1). This compositional fact matters for interpretation because it implies that the higher NEET prevalence among women cannot be attributed solely to lower educational attainment; instead, it points to additional constraints, potentially household roles, care burdens, or local labor-market conditions, that can keep women out of employment and education/training even at higher schooling levels.

Household composition and constraints are proxied through household size and the presence of young children. Household size (mean 4.295) captures living arrangements that may influence NEET through resource pooling, dependency burdens, and norms around youth economic participation (Table 1). The expected relationship is ambiguous a priori; larger households can reduce immediate labor-supply pressure via shared resources or increase it via dependency demands, so it is treated as an empirical control rather than a variable with a predetermined sign. The presence of a child under age six in the household is included as a binary indicator (23.7% overall), with substantial gender differences in exposure: 29.8% for women versus 17.5% for men (Table 1). This variable is central for the Türkiye context because it serves as a strong proxy for time-intensive care needs and household responsibilities, which are often disproportionately borne by young women and can directly limit feasible participation in work or education/training; the descriptive gender gap in exposure to young children therefore anticipates gender-asymmetric NEET determinants in the multivariate analysis.

Finally, regional opportunity structures are captured through NUTS-1 (IBBS-1) region indicators: Istanbul, Western Marmara, Aegean, Eastern Marmara, Western Anatolia, Mediterranean, Central Anatolia, Western Black Sea, Eastern Black Sea, Northeastern Anatolia, Central Eastern Anatolia, and Southeastern Anatolia. These controls are necessary because NEET risk is not determined solely by individual endowments; it is also shaped by spatially uneven labor demand, sectoral composition, informality, institutional capacity, and access to education and care infrastructure. The sample distribution reflects population concentration across regions (Table 1), and modest gender differences in regional composition reinforce the importance of conditioning on region when interpreting gender gaps. Taken together, this variable set operationalizes a compact, theoretically coherent framework for NEET status: age and age squared capture life-course transitions; education captures human capital and employability; marital status and young-child presence capture household constraints that may be gendered; household size proxies living arrangements and resource contexts; and regional indicators capture spatial inequality in opportunity. This structure is aligned with the paper's objective of explaining why NEET status in Türkiye is simultaneously gendered and geographically uneven, using nationally representative survey microdata.

Table 1*Descriptive Statistics of Variables*

	Overall	Women	Men
Labor Market Status			
Neet	0.275	0.386	0.162
Non-Neet	0.725	0.614	0.838
Gender			
Women	0.504	1.000	0.000
Men	0.496	0.000	1.000
Marital Status			
Married	0.230	0.309	0.149
Not Married	0.770	0.691	0.851
Age	21.667	21.804	21.528
Age Squared	489.432	495.407	483.361
Household Size	4.295	4.350	4.238
Child under the age of 6	0.237	0.298	0.175
Education Level			
No Schooling	0.043	0.057	0.028
Primary	0.018	0.020	0.016
Middle School	0.413	0.386	0.440
High School	0.183	0.181	0.185
Voc. High School	0.139	0.121	0.158
Voc. College	0.087	0.098	0.075
University	0.107	0.126	0.088
Master's and PhD	0.011	0.011	0.010
Region			
Istanbul	0.079	0.077	0.082
Western Marmara	0.048	0.046	0.050
Aegean	0.105	0.101	0.109
Eastern Marmara	0.091	0.090	0.093
Western Anatolia	0.098	0.099	0.098
Mediterranean	0.111	0.113	0.109
Central Anatolia	0.069	0.070	0.069
Western Black Sea	0.070	0.070	0.071
Eastern Black Sea	0.040	0.039	0.040
Northeastern Anatolia	0.076	0.079	0.074
Centraleastern Anatolia	0.086	0.087	0.085
Southeastern Anatolia	0.125	0.130	0.120
Sample Size	123834	62413	61421

Note. Values are proportions. Calculated using HLFS 2022 Household Labor Force Survey microdata. Created by the author using STATA 19 statistical software.

Empirical Strategy

This study examines correlates of NEET status using cross-sectional microdata from the Turkish Household Labor Force Survey (HLFS) for 2022. The empirical approach treats NEET as a binary outcome and estimates how its likelihood varies with individual, household, and regional characteristics in a multivariate setting. Let $NEET_i \in \{0,1\}$ indicates whether individual i is classified as NEET (equal to 1 if not in employment, education, or training, and 0 otherwise).

To model this outcome, the paper estimates binary logit specifications of the form $\Pr(NEET_i = 1 | X_i) = \Lambda(X_i'\beta) = \exp(X_i'\beta)/[1 + \exp(X_i'\beta)]$, where X_i denotes the covariate vector and β is estimated by maximum likelihood. The logit functional form ensures predicted probabilities lie between zero and one and allows covariates to affect the outcome probability nonlinearly through the logistic index. To assess the sensitivity of the results to the choice of binary model functional form, the pooled and gender-stratified models are re-estimated using a probit specification; the results are reported in Appendix A and are so similar to the logit estimates in both sign and magnitude.

Models are estimated for the pooled sample and separately for women and men to examine gender heterogeneity. In the pooled model, gender enters directly as a regressor; in gender-stratified estimations, the gender indicator is omitted because it is constant within each subsample. Estimating separate models avoids imposing that the relationship between covariates and NEET status is identical for women and men, which is particularly relevant in Türkiye, where household roles and labor market attachment differ sharply by gender.

The covariate set is chosen to capture human capital, demographic constraints, household context, and spatial heterogeneity. Age is included in levels and squared to flexibly model the life-cycle profile of NEET risk, which may be non-monotonic over youth ages due to schooling completion, job search, and delayed transitions into stable employment. Educational attainment is incorporated through a set of categorical indicators based on completed education levels (with one category serving as the reference group), so coefficients capture differences in NEET propensity relative to that baseline.

Marital status is controlled by being married, motivated by the role of household formation and within-household specialization in shaping labor supply and training participation. Household characteristics include an indicator for the presence of at least one child under age six in the household and a measure of household size. The child-under-six indicator proxies early-childhood care responsibilities that can constrain participation in paid work and training, while household size captures broader household composition and potential support or care burdens that may correlate with disengagement.

To account for systematic geographic differences in opportunities and norms, the specification includes NUTS-1 (IBBS-1) region fixed effects (implemented as region indicators). These fixed effects absorb time-invariant regional heterogeneity in labor market conditions, education and training access, and social norms, thereby reducing confounding from omitted region-level factors correlated with individual and household characteristics. All regressors are entered jointly, so estimated associations are conditional on the full set of controls and region fixed effects.

For statistical inference, standard errors are clustered at the household level to allow for arbitrary within-household correlation in unobserved determinants of NEET status. This adjustment is important in household surveys because multiple individuals can face shared constraints and shocks, and ignoring within-household dependence can understate uncertainty.

Results are reported both as logit coefficients with clustered standard errors and as average marginal effects (AMEs) to facilitate interpretation in probability units. For continuous covariates, the marginal effect is $\partial \Pr(NEET_i = 1 | X_i) / \partial x_{ik} = \Lambda(X_i'\beta)[1 - \Lambda(X_i'\beta)]\beta_k$, and AMEs average these individual-level effects over the estimation sample; for indicator variables and categorical covariates such as education groups and regions, AMEs are computed as discrete changes in predicted probabilities relative to the reference category. Presenting AMEs

alongside coefficients makes the magnitude of associations directly interpretable as percentage-point differences in the probability of being NEET.

The average adjusted predictions (predictive margins) by education level are estimated separately for women and men. For each education category, the predicted NEET probability is computed for every individual in the relevant sub-sample by setting the education variable to that category while retaining all other covariates at their observed values; the displayed value is the mean of these individual-specific predictions across the sub-sample. The margins at representative values approach ensures that the plotted probabilities reflect the actual covariate composition of the estimation sample rather than an artificial reference profile. It is therefore interpretable as the average NEET probability that would be observed if all individuals in the sub-sample have the specified education level.

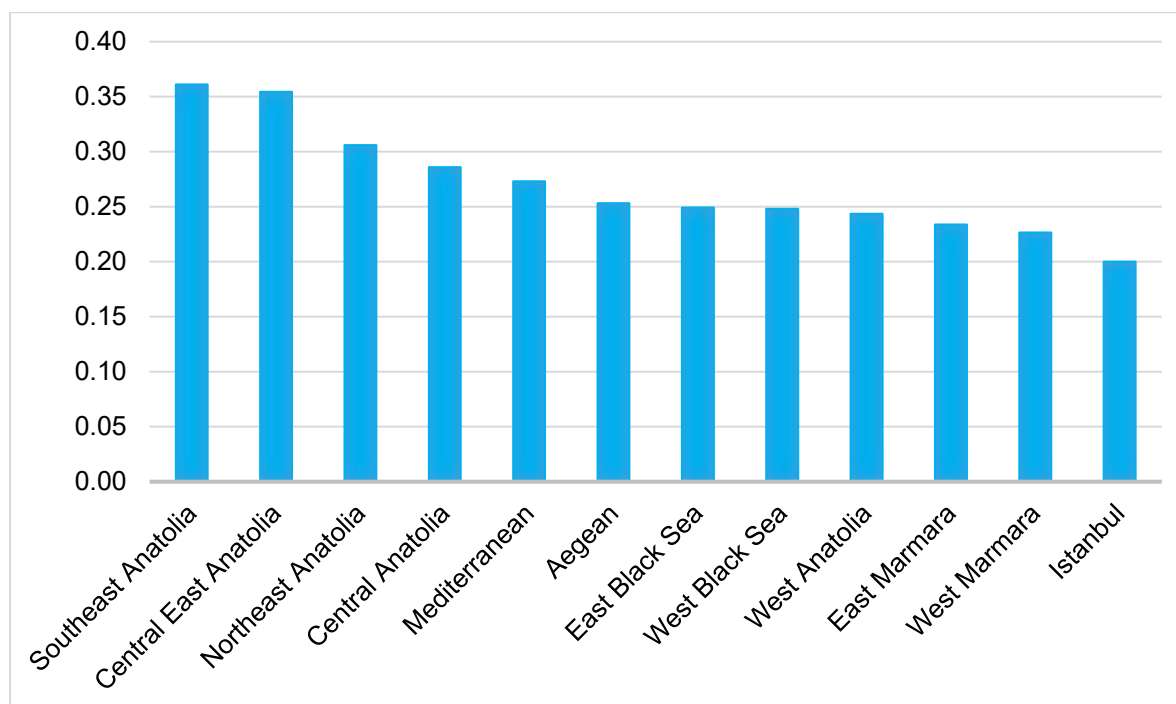
Because the analysis is cross-sectional, all estimates are interpreted as conditional correlations rather than causal effects, and it is important to be explicit about the boundaries of causal inference. Three sources of potential endogeneity are worth noting. First, marital status is likely jointly determined with labor market attachment: women with weaker expected earnings or lower attachment may both marry earlier and have lower employment rates, so the positive association between marriage and female NEET could reflect selection rather than a causal constraint imposed by marriage itself. Second, the presence of a child under age six may similarly be endogenous: households where a young woman is already out of employment or training may face weaker financial disincentives to having a child at an earlier stage of the life course. Third, educational attainment, while predetermined for most of the sample, may remain endogenous for younger individuals who have not yet exited school. In the absence of credible instruments, the estimated associations should not be read as causal impacts. The empirical strategy nonetheless provides a systematic and policy-relevant description of how NEET status is patterned across key characteristics in Türkiye, and whether these patterns differ between women and men. While this cannot substitute for casual evidence, it offers a descriptive foundation on which future causal research using longitudinal panels or quasi-experimental policy variation can build.

Results

The descriptive evidence indicates substantial heterogeneity in NEET status across Türkiye, both geographically and across demographic and socioeconomic groups. At the regional level, Figure 1 documents a clear dispersion in NEET prevalence across NUTS-1 (IBBS-1) regions: Istanbul stands out with the lowest NEET rate (roughly around one-fifth), whereas Southeast Anatolia and Central East Anatolia record the highest rates (in the mid-0.30 range), with the remaining regions typically lying in between. Figure 1, therefore, motivates the inclusion of NUTS-1 region fixed effects in the multivariate specifications to account for persistent spatial differences in labor market opportunities, institutional capacity, and local norms that may correlate with individual characteristics.

Figure 1

NEET rates by NUTS-1 region



Note. Calculated using HLFS 2022 Household Labor Force Survey microdata using STATA 19 statistical software.

Table 2 reports logit estimates for the pooled sample, presenting both coefficients with household-clustered standard errors and average marginal effects (AMEs) expressed in probability units. In the pooled model, the gender gap is large, precisely estimated, and economically meaningful. Women display a substantially higher probability of being NEET relative to men, even after conditioning on age, education, marital status, household characteristics, and region fixed effects. The corresponding AME implies a sizable percentage-point difference in NEET probability attributable to gender conditional on observables, which indicates that the observed gender gap cannot be explained solely by compositional differences in education, age structure, or region of residence.

The age profile is nonlinear and statistically significant, consistent with a youth transition process that is not monotonic. In Table 2, age enters positively while age-squared enters negatively, implying an inverted-U relationship between age and NEET probability. NEET risk rises over early youth ages and then flattens or declines at later ages. This pattern is present in the pooled model and persists in the gender-stratified models, but the curvature is steeper for women than for men. Substantively, the stronger age profile for women is consistent with the timing of school exit and labor market entry coinciding with household formation, which can interact with norms and constraints around women's market participation.

Education exhibits a strong gradient in Table 2, with higher completed schooling associated with markedly lower NEET probabilities relative to the omitted base category. Across most education levels, the estimated AMEs imply large reductions in the likelihood of NEET status, underscoring that educational attainment remains one of the most powerful correlates of youth engagement. However, the pattern is not purely monotonic when interpreted

alongside the predicted probabilities. Some intermediate education levels are associated with elevated risk relative to the highest education group, consistent with a difficult school-to-work transition segment in the distribution where youths have completed schooling but have not yet achieved stable labor market attachment.

Table 2

Determinants of NEET Status, Logit Model Estimates (Overall)

Variable	Coefficient (Std. Error)	Marginal Effect (Std. Error)
gender	1.0978*** (0.0158)	0.1754*** (0.0023)
age	1.2528*** (0.0223)	0.2002*** (0.0035)
age2	-0.0264*** (0.0005)	-0.0042*** (0.0001)
primary school	-0.3791*** (0.0680)	-0.0766*** (0.0137)
middle school	-1.7076*** (0.0430)	-0.3237*** (0.0086)
high school	-1.4672*** (0.0442)	-0.2845*** (0.0087)
vocational high school	-1.4560*** (0.0452)	-0.2826*** (0.0088)
vocational collage	-1.6874*** (0.0467)	-0.3205*** (0.0089)
university	-1.7353*** (0.0466)	-0.3280*** (0.0088)
master's and PhD	-2.0808*** (0.0859)	-0.3777*** (0.0130)
married	0.6344*** (0.0226)	0.1014*** (0.0036)
western marmara	0.2147*** (0.0443)	0.0343*** (0.0071)
aegean	0.4052*** (0.0360)	0.0647*** (0.0057)
eastern marmara	0.2675*** (0.0372)	0.0427*** (0.0059)
western anatolia	0.2851*** (0.0362)	0.0456*** (0.0058)
mediterranean	0.5023*** (0.0357)	0.0803*** (0.0057)
central anatolia	0.5541*** (0.0385)	0.0885*** (0.0061)
western black sea	0.3851*** (0.0395)	0.0615*** (0.0063)
eastern black sea	0.4586*** (0.0468)	0.0733*** (0.0075)
northeastern anatolia	0.5294*** (0.0392)	0.0846*** (0.0062)
centraleastern anatolia	0.7719*** (0.0383)	0.1233*** (0.0061)
southeastern anatolia	0.7384*** (0.0357)	0.1180*** (0.0057)
HH has at least one child (<6)	0.2850*** (0.0212)	0.0455*** (0.0034)
HH size	0.0565***	0.0090***

	(0.0051)	(0.0008)
Constant	-15.3641***	
	(0.2517)	

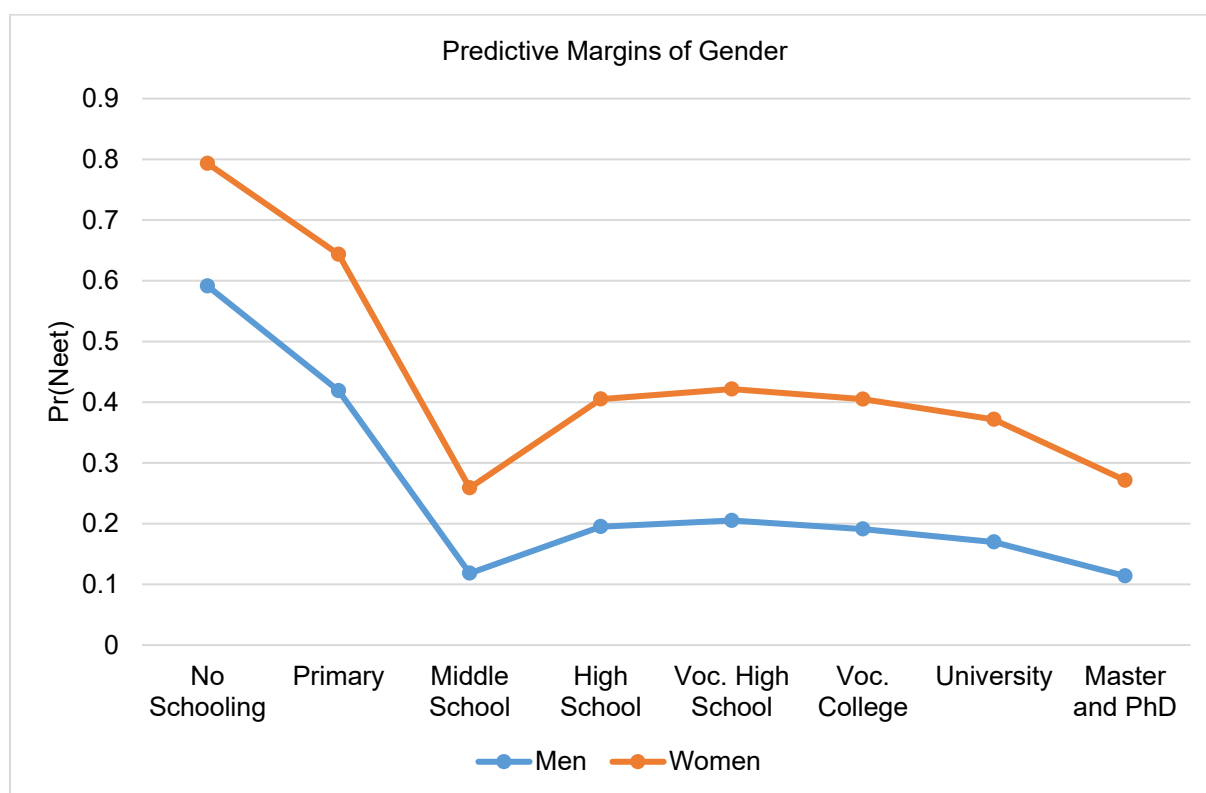
Significance levels *, ** and *** denote .10, .05, .01 respectively. N=123,834

Note. Created by the author using STATA 19 statistical software.

Figure 2 visualizes predicted probabilities of NEET status by education level separately for men and women and complements the regression evidence in two keyways. First, the plot shows that women have higher predicted NEET probabilities at every education level, reinforcing the finding from Table 2 that the gender gap persists conditional on covariates. Second, the predicted education profile suggests that NEET risk is especially high at the very bottom of the education distribution, falls sharply at middle schooling, rises through certain upper-secondary and vocational tracks, and then is lower again at tertiary levels. This nonlinearity is consistent with the coexistence of structural disadvantages at low schooling and transition-related frictions at intermediate schooling levels.

Figure 2

NEET and the gender–education gap



Note. Calculated using HLFS 2022 Household Labor Force Survey microdata using STATA 19 statistical software. Predicted probabilities are average adjusted predictions (predictive margins) from the gender-stratified logit models. For each education category, the NEET probability is computed for every individual in the sub-sample at that education level, holding all other covariates at their observed values; the displayed value is the sub-sample mean.

Marital status is strongly associated with NEET status, but the direction of the relationship differs sharply by gender. Table 3 shows that, conditional on controls, marriage is associated with a higher probability of NEET among women, while Table 4 indicates that

marriage is associated with a lower probability of NEET among men. This asymmetry is consistent with household specialization and gendered labor market attachment. Marriage is correlated with women's withdrawal from employment and training or reduced likelihood of entering them, whereas it is correlated with stronger labor force attachment among men. The gender-stratified results are therefore important because the pooled estimate alone would mask these opposite-signed relationships.

Household constraints, proxied by the presence of a child under age six and household size, further reinforce the gendered structure of NEET status. In Table 3, living in a household with a young child is associated with a significantly higher probability of being NEET for women, while in Table 4, the association is small and negative for men. This pattern aligns with a care-constraint channel in which childcare responsibilities reduce women's ability to participate in employment and training, while men's labor market attachment remains comparatively stable. Household size also carries information about household composition and potential care burdens or support networks, and its estimated association provides additional evidence that NEET status is shaped not only by individual characteristics but also by the household context in which youths make schooling and labor market decisions.

Regional fixed effects remain substantively important even after controlling for a rich set of individual and household covariates. Table 2 indicates that, relative to the omitted base region, many regions exhibit higher predicted probabilities of NEET status, and the largest regional differences remain meaningful in probability units. This pattern is consistent with the descriptive dispersion observed in Figure 1 and suggests that place-based factors, such as local labor demand, sectoral composition, and access to education and training opportunities, continue to shape NEET risk beyond individual education and household characteristics.

Taken together, the combined evidence from Table 2 and Figures 1–2 points to three core empirical messages about youth disconnection in Türkiye in 2022, each of which carries distinct implications for how NEET should be interpreted and what kinds of policy levers are likely to be effective. First, NEET status is characterized by a large and persistent gender gap that survives extensive controls for human capital, demographics, household structure, and NUTS-1 region fixed effects. The fact that the female–male difference remains sizeable in the fully specified model implies that Türkiye's NEET disadvantage for women cannot be reduced to compositional differences in observable characteristics such as education or regional residence. Instead, the persistence of the gap is consistent with a structural interpretation in which women face systematically tighter constraints on labor-market participation and training access, constraints that operate through norms, the organization of unpaid work, and the availability of “acceptable” jobs. Importantly, Figure 2 reinforces this point visually by showing that women's predicted NEET probabilities exceed men's across the entire education distribution. That pattern suggests that the gender gap is not confined to the lowest-skilled segment; it also extends into tertiary-educated groups, where one would otherwise expect education to translate more reliably into labor-market attachment. In substantive terms, this means that even if educational attainment rises, aggregate NEET outcomes will remain high unless the institutional and labor-market conditions mediate women's transitions, such as childcare availability, flexible but protected work, safe transport, and the availability of formal entry-level jobs, also improve. In this sense, the results are consistent with the broader framing in the paper's introduction and comparative context: Türkiye's NEET problem is not simply a youth unemployment issue but a gendered disengagement challenge in which inactivity pathways play a central role.

Second, education is strongly protective overall, yet the education–NEET relationship is shaped by transition dynamics in ways that caution against a purely linear “more schooling always and everywhere reduces NEET” narrative. The regression estimates show large probability reductions associated with higher completed education relative to the base category, indicating that human capital accumulation remains one of the most consequential correlates of NEET status. However, Figure 2 suggests that predicted NEET risk does not decline smoothly at every step of the education ladder. Instead, the profile is consistent with non-monotonicity at intermediate schooling levels, an empirical pattern that aligns with the idea that NEET status is partly a function of where individuals sit in the school-to-work transition process. Intermediate levels of schooling may coincide with a phase where young people have exited education but have not yet secured stable employment, making them especially exposed to matching frictions, limited work experience, or constrained local opportunities. This is particularly plausible in a context where entry-level formal jobs are scarce, where vocational and general tracks differ in their signaling value and labor-market relevance, and where transitions may depend heavily on local employer networks. The key implication is that policies focused only on raising attainment, while important, are not sufficient unless they are complemented by measures that improve the transition architecture, career guidance, work-based learning, employer engagement, and credible pathways from schooling into formal employment. Moreover, because Figure 2 shows that women remain at higher predicted NEET risk even at higher education levels, improving transitions is also inseparable from addressing gendered constraints that limit the conversion of education into employment for women.

Third, household formation variables, marriage, and the presence of a child under age six, emerge as central correlates that operate in sharply different ways for women and men, as documented in Table 3 and Table 4. This gender asymmetry is more than a technical detail; it provides direct evidence that the mechanisms behind NEET status differ by gender and that pooling women and men can conceal fundamentally different pathways into disconnection. Among women, marriage and young-child presence are associated with substantially higher NEET probabilities, consistent with a care-constraint channel in which unpaid domestic and childcare responsibilities reduce the feasibility of job search, training participation, and sustained employment, thereby pushing women toward inactivity within the NEET category. Among men, by contrast, the associations are weaker and often opposite in sign, consistent with a breadwinner-oriented pattern in which household formation correlates with stronger labor-market attachment. This asymmetry helps explain why the overall NEET problem in Türkiye is so strongly gendered and why conventional labor-market interventions targeted at unemployed youth will not necessarily reach the larger inactivity-driven component among women. It also reinforces the paper’s policy logic: reducing NEET among women requires interventions that relax participation constraints, especially childcare and care support, alongside improvements in job availability and job quality.

A final cross-cutting message concerns geography. Figure 1 documents pronounced regional dispersion in NEET prevalence, and the regression results indicate that substantial geographic heterogeneity persists even after conditioning on education, demographics, and household characteristics. This persistence suggests that place-based opportunity structures, local labor demand, sectoral composition, the density of formal employment, and the accessibility of education and training services remain salient determinants of NEET risk rather than mere reflections of population composition. The coexistence of strong regional differences with the household and gender patterns highlighted above implies that spatial inequality and gendered constraints likely interact in regions where formal jobs are scarce and services are

thin, the effective opportunity set, particularly for young women, may be even narrower, raising the likelihood of inactivity. In sum, the combined evidence supports an interpretation of NEET in Türkiye as a multi-layered outcome produced by the interaction of (i) persistent gender disparities in participation, (ii) education-linked differences in transition vulnerability, and (iii) place-based inequality in opportunities and services. This integrated reading aligns with the comparative benchmarks discussed earlier and provides a coherent empirical foundation for the discussion section's emphasis on gender-responsive and regionally targeted policy packages that link transition support and activation to childcare provision and quality job creation.

Table 3

Determinants of NEET Status, Logit Model Estimates (Women)

Variable	Coefficient (Std. Error)	Marginal Effect (Std. Error)
age	1.3490*** (0.0299)	0.2387*** (0.0051)
age2	-0.0281*** (0.0007)	-0.0050*** (0.0001)
primary school	0.1397 (0.1114)	0.0243 (0.0193)
middle school	-1.5890*** (0.0629)	-0.3010*** (0.0113)
high school	-1.3868*** (0.0643)	-0.2634*** (0.0115)
vocational high school	-1.3606*** (0.0662)	-0.2585*** (0.0118)
vocational collage	-1.6848*** (0.0668)	-0.3183*** (0.0118)
university	-1.8813*** (0.0662)	-0.3528*** (0.0116)
master's and PhD	-2.2301*** (0.1133)	-0.4099*** (0.0183)
married	1.1650*** (0.0306)	0.2062*** (0.0052)
western marmara	0.2788*** (0.0584)	0.0493*** (0.0103)
aegean	0.4043*** (0.0472)	0.0715*** (0.0083)
eastern marmara	0.3058*** (0.0487)	0.0541*** (0.0086)
western anatolia	0.4216*** (0.0470)	0.0746*** (0.0083)
mediterranean	0.5463*** (0.0465)	0.0967*** (0.0082)
central anatolia	0.7115*** (0.0510)	0.1259*** (0.0090)
western black sea	0.4537*** (0.0520)	0.0803*** (0.0092)
eastern black sea	0.3596*** (0.0613)	0.0636*** (0.0108)
northeastern anatolia	0.5771*** (0.0519)	0.1021*** (0.0092)
centraleastern anatolia	0.7991*** (0.0501)	0.1414*** (0.0088)

southeastern anatolia	0.8297*** (0.0466)	0.1468*** (0.0082)
HH has at least one child (<6)	0.4215*** (0.0278)	0.0746*** (0.0049)
HH size	0.0697*** (0.0073)	0.0123*** (0.0013)
Constant	-15.8974*** (0.3357)	
Observations	62413	

Significance levels *, ** and *** denote .10, .05, .01 respectively.

Note. Created by the author using STATA 19 statistical software.

Table 4

Determinants of NEET Status, Logit Model Estimates (Men)

Variable	Coefficient (Std. Error)	Marginal Effect (Std. Error)
age	0.9801*** (0.0381)	0.1230*** (0.0048)
age2	-0.0209*** (0.0009)	-0.0026*** (0.0001)
primary school	-0.8568*** (0.0952)	-0.1845*** (0.0195)
middle school	-1.9608*** (0.0610)	-0.3461*** (0.0132)
high school	-1.5433*** (0.0615)	-0.2966*** (0.0133)
vocational high school	-1.5823*** (0.0626)	-0.3018*** (0.0134)
vocational collage	-1.6459*** (0.0685)	-0.3101*** (0.0137)
university	-1.3348*** (0.0662)	-0.2667*** (0.0139)
master's and PhD	-1.6006*** (0.1287)	-0.3042*** (0.0198)
married	-0.7141*** (0.0482)	-0.0896*** (0.0060)
western marmara	0.1115 (0.0745)	0.0140 (0.0093)
aegean	0.4236*** (0.0581)	0.0532*** (0.0073)
eastern marmara	0.2248*** (0.0612)	0.0282*** (0.0077)
western anatolia	0.1022* (0.0618)	0.0128* (0.0078)
mediterranean	0.4736*** (0.0580)	0.0594*** (0.0073)
central anatolia	0.3723*** (0.0644)	0.0467*** (0.0081)
western black sea	0.3123*** (0.0650)	0.0392*** (0.0081)
eastern black sea	0.6055*** (0.0721)	0.0760*** (0.0090)
northeastern anatolia	0.5213*** (0.0629)	0.0654*** (0.0079)
centraleastern anatolia	0.8262*** (0.0596)	0.1037*** (0.0075)

southeastern anatolia	0.7489*** (0.0571)	0.0940*** (0.0072)
HH has at least one child (<6)	-0.1360*** (0.0424)	-0.0171*** (0.0053)
HH size	0.0654*** (0.0076)	0.0082*** (0.0010)
Constant	-11.6845*** (0.4194)	
Observations	61421	

Significance levels *, ** and *** denote .10, .05, .01 respectively.

Note. Created by the author using STATA 19 statistical software.

Discussion and Policy Implications

The empirical results portray NEET status in Türkiye as a multidimensional form of youth exclusion shaped jointly by individual endowments, household constraints, and spatially differentiated opportunity structures. Three findings are particularly salient. First, a large gender gap persists even after conditioning on education, age, marital status, household size, the presence of young children, and region fixed effects. This indicates that the observed female disadvantage is not simply compositional; instead, it is consistent with gendered constraints and norms that limit women’s participation in paid work and training. Second, household formation variables operate in strongly asymmetric ways by gender: marriage and the presence of a child under age six are associated with higher NEET probabilities among women but lower or near-zero associations among men. This pattern is consistent with specialization within households and unequal distribution of unpaid care, which in turn translates into labor market detachment for women rather than unemployment in the narrow sense. Third, substantial regional heterogeneity remains even after extensive controls, implying that local labor demand conditions, sectoral structures, and the availability or quality of education and training opportunities meaningfully shape NEET risk. Together, these findings suggest that NEET in Türkiye is not reducible to a single “youth unemployment” problem; it reflects a combination of demand-side constraints, uneven human capital accumulation and utilization, and gendered barriers to sustained attachment to the labor market and training systems.

A central implication of the results is that policy packages focused narrowly on job-search assistance, while potentially useful for unemployed NEET, will have limited reach for the segment of NEET youth whose disengagement is driven by inactivity. The gender-stratified estimates provide strong evidence that women’s NEET status is closely linked to household roles and care responsibilities, particularly in households with young children (Danner et al., 2021). In such settings, activation policies that assume immediate job readiness may fail because the binding constraints are time availability, caregiving, mobility, and the ability to access reliable, affordable childcare. Accordingly, policies aimed at reducing inactivity NEET among young women should place childcare and early-childhood services at the center rather than at the periphery (Ilkkaracan et al., 2021). Expansion of affordable childcare, especially for children under age three, where care needs are most intensive, can directly relax constraints that prevent job search, training participation, and sustained employment (Ekiz Gökmen, 2022; Gultekin et al., 2025). Importantly, childcare expansion is most effective when paired with working conditions that make labor market re-entry feasible, including predictable schedules, part-time options with social protection, and access to formal employment rather than informal or unstable work arrangements that may not justify the fixed costs of childcare and commuting.

The divergence in the association of marriage with NEET status across genders also has policy relevance. The estimates are consistent with marriage being correlated with higher

female NEET probability and lower male NEET probability, which aligns with household specialization and traditional gender roles. In this setting, interventions that only improve employability without addressing intra-household allocation of time and expectations may produce limited gains. Gender-responsive activation should therefore include components that reduce “secondary earner penalties” and increase incentives for female employment, such as subsidies for childcare and commuting, targeted training stipends, and formal employment incentives designed to offset the opportunity cost of market work relative to home production (Ernst et al., 2025). Parallel efforts to encourage more equal sharing of care responsibilities, through public awareness, employer practices, and potentially parental leave designs that do not reinforce gender specialization, can complement labor-market tools (Kang & Youn, 2024). While these measures extend beyond conventional labor policy, the results underscore that NEET status for young women is often rooted in the organization of care and household responsibilities rather than in job-search intensity alone (Odoardi et al., 2023).

The education gradient is strong in the pooled model, but the predicted probabilities by education reveal a more nuanced pattern than a simple monotonic decline in NEET risk with schooling. Very low education is associated with extremely high NEET probabilities, consistent with cumulative disadvantage, early school leaving, and weak attachment to the formal labor market. This group calls for preventative strategies: reducing early school leaving, strengthening second-chance education, and providing modular, stackable training that can generate labor market value quickly. However, the predicted profiles also suggest that some intermediate education levels coincide with elevated NEET probabilities, consistent with frictions in the school-to-work transition. This implies that policies should not only raise attainment but also improve the transition architecture: high-quality vocational guidance, structured work-based learning, employer engagement in curriculum design, and placement services that actively broker entry into formal jobs (Kebede et al, 2024; Farran & Nunez, 2025). In practice, this points toward strengthening apprenticeships and dual-training style mechanisms, but with careful attention to quality and to avoiding the channeling of young women into low-wage, low-mobility occupations. Good transition systems do not simply place youths into any job; they should facilitate matches that build skills and generate progression paths.

A particularly important and policy-relevant implication is that the gender gap persists across all education levels, including among tertiary-educated groups. Persistent NEET risk among highly educated women indicates that raising education alone is insufficient if labor demand does not translate credentials into stable employment or if workplaces fail to accommodate constraints that disproportionately affect women (Lu & Li, 2025). This finding supports policies that improve school-to-work matching and early-career job quality: strengthened career services in universities and vocational colleges, expanded internship pipelines with enforceable standards, employer partnerships that provide credible pathways from study to formal employment, and active monitoring of discriminatory hiring or workplace practices. It also highlights the importance of labor market institutions that raise the returns to formal employment for young women, such as enforcement of equal treatment, expansion of formal-sector opportunities, and social protection arrangements that make part-time or flexible employment compatible with long-term earnings and career progression.

The regional stratification documented in the descriptive evidence and reinforced by the regression results implies that national one-size-fits-all policies are unlikely to be efficient. The magnitude and ordering of the NUTS-1 region coefficients in Tables 2-4 provide a direct empirical basis for regional differentiation, consistent with broader evidence on the role of

territorial opportunity structures in shaping youth labor market outcomes (Cefalo & Scandurra, 2021; Lindblad et al., 2025). The two highest-burden regions, Central Eastern Anatolia and Southeastern Anatolia, exhibit the largest positive marginal effects relative to Istanbul and share structural characteristics: below-average formal employment density, high informality rates, weaker transport and childcare infrastructure, and, in the case of Southeastern Anatolia, particularly high female NEET shares. In these regions, the binding constraint is not principally a skills deficit but rather a shortage of formal entry-level jobs and a near-absence of care infrastructure; accordingly, the policy priority is demand-side: time-limited wage subsidies contingent on formal registration and retention, employer incentives to create apprenticeships and entry-level positions, and co-investment in local childcare and transport facilities that lower the fixed cost of participating in the labor market. Regions with intermediate coefficients, including the Mediterranean, Central Anatolia, and the two Black Sea regions, typically combine moderate formal job scarcity with stronger educational enrolment; here, transition-support measures take precedence: career guidance, structured work-based learning, employer engagement in curriculum design, and placement services that broker entry into formal employment. Finally, regions with relatively lower NEET margins, Western Anatolia, Eastern Marmara, and Western Marmara, may benefit most from targeted refinements to existing active labor market program, focusing on job-search quality, credential recognition, and reducing barriers for young women specifically. Effective place-based policy ultimately requires coordination across agencies. Training ministries, employment services, municipalities, and employers need to operate within a shared regional strategy rather than in parallel silos, with outcomes monitored separately by gender and region to track whether gaps are actually narrowing.

Across all these policy domains, the results also suggest that evaluation and targeting matter. Because NEET is heterogeneous, mixing unemployed jobseekers and inactive youths, interventions should be tailored to the underlying constraint. A practical approach is to segment NEET youth into groups using the same microdata logic as the paper: inactive NEET (often care-constrained), unemployed NEET (job-search active), and potentially “discouraged” or “long-term detached” subgroups where mental health, discouragement, or low perceived returns might be binding. The gender-specific estimates in the study provide a clear basis for such segmentation: women with young children and married women represent high-priority groups for childcare-centered activation; men in high-NEET regions may benefit more from demand-side and matching interventions; and low-educated youths require early interventions that prevent prolonged detachment. In addition, the strong regional variation implies that targeting should combine individual eligibility with geographic prioritization, especially where local labor markets are structurally weak.

Finally, the empirical findings should be interpreted with appropriate caution. The analysis is cross-sectional and therefore describes conditional associations rather than causal effects; marriage and fertility decisions are likely jointly determined with labor market attachment, and some household variables may capture both constraints and preferences. Nevertheless, the systematic patterns, especially the gender asymmetries in the correlates of NEET and the persistence of regional differences after controls, provide credible guidance for policy design. The evidence supports a policy agenda that shifts from a narrow unemployment-centered approach toward an integrated strategy combining childcare and care infrastructure, gender-responsive activation, improved transition systems from education to work, and regionally tailored demand-side measures that increase the availability of formal entry-level jobs.

Conclusion

Using nationally representative HLFS 2022 microdata, this paper provides an updated empirical account of the magnitude and correlates of youth NEET status in Türkiye and highlights that NEET is best understood as a layered form of disengagement rather than a simple proxy for youth unemployment. The results show that NEET risk is structured simultaneously by spatial opportunity gaps and by gendered pathways into inactivity. Regional stratification is pronounced in the descriptive evidence and remains meaningful even after conditioning on a rich set of individual and household characteristics, underscoring that place-based factors, local labor demand, institutional capacity, and access to education and training, shape the probability of youth disengagement beyond personal endowments. At the same time, the analysis documents a large and persistent gender gap that survives controls for age, education, marital status, household composition, and region fixed effects, indicating that women's higher NEET probabilities are not reducible to observable compositional differences.

Education emerges as a powerful protective correlate, with higher educational attainment associated with substantially lower NEET probabilities, yet the education gradient does not eliminate gender disparities. Predicted probability patterns by education indicate that women face elevated NEET risks at every schooling level, including among tertiary-educated groups, suggesting that improvements in educational attainment alone are insufficient if school-to-work transitions remain weak and if labor markets do not convert credentials into stable, formal employment for young women. Moreover, the gender-stratified estimates highlight the importance of household formation and care constraints: marriage and the presence of a child under age six are associated with higher NEET probabilities among women but not among men, pointing to the central role of unpaid care responsibilities and gendered norms in shaping labor market detachment. In this sense, Türkiye's NEET challenge reflects the intersection of human capital formation, labor demand conditions, and household-level constraints that operate differently for women and men.

These findings imply that effective policy responses must move beyond generic employability interventions toward an integrated strategy that differentiates between NEET subgroups and targets the binding constraints they face. Regionally, the persistence of large differences suggests the need for geographically tailored packages that link skills development to local job creation and employer engagement, rather than expanding training supply in isolation from demand. For young women, particularly those in households with young children, the results support gender-responsive activation centered on childcare availability and affordability, flexible and protected work arrangements, and measures that reduce mobility and safety barriers that limit access to jobs and training. The persistence of elevated NEET probabilities among highly educated women further emphasizes the importance of improving matching and early-career job quality through stronger career guidance, work-based learning pipelines, and credible pathways into formal entry-level employment.

The paper's contribution is therefore twofold. Substantively, it clarifies that NEET in Türkiye is shaped by a combination of spatial inequality and gendered inactivity mechanisms, and that these dimensions remain central even after controlling for education and demographics. Empirically, it provides evidence in both coefficient and probability terms, allowing the magnitude of associations to be interpreted as meaningful changes in predicted NEET risk. While the analysis is cross-sectional and thus does not identify causal effects, particularly for variables intertwined with household decisions such as marriage and child presence, the patterns are sufficiently systematic to guide policy prioritization. Overall, reducing NEET in

Türkiye will likely require coordinated policies that jointly expand opportunity in lagging regions, strengthen education-to-work transitions, and remove structural barriers that keep young women outside employment and training, with childcare and the quality of entry-level jobs occupying a central role in any credible strategy.

Three directions stand out for future research. First, on causal identification, the conditional correlations documented here establish a credible descriptive foundation, but moving to causal estimates requires either longitudinal panel data that track individuals across NEET transitions or quasi-experimental designs that exploit policy variation. For example, geographic or cohort-based rollouts of childcare subsidies, regional employment incentive schemes, or compulsory schooling reforms can be the sources of exogenous variation in the key household and education variables. Second, on NEET heterogeneity, subsequent studies could apply latent class or finite mixture models to disaggregate the NEET population into subgroups such as care-constrained inactive youth, discouraged workers, and those in short-term transitional spells, and examine whether the correlates identified in the present analysis differ across these groups, thereby enabling more precisely targeted policy segmentation. Third, on dynamic analysis, panel data tracking individuals over multiple years would allow examination of NEET duration, and the long-run scarring effects of disconnection on earnings and employment quality. These are dimensions that are central to the long-run case for early intervention but simply cannot be addressed with cross-sectional survey microdata.

References

- Akgül, S. (2025). Family matters: Exploring gendered pathways into NEET status in Türkiye. *Anadolu University Journal of Economics and Administrative Sciences*, 26(3), 575-603. <https://doi.org/10.53443/anadoluibfd.1676154>
- Bynner, J., & Parsons, S. (2002). Social exclusion and the transition from school to work: The case of young people not in education, employment, or training (NEET). *Journal of Vocational Behavior*, 60(2), 289-309. <https://doi.org/10.1006/jvbe.2001.1868>
- Cefalo, R., & Scandurra, R. (2021). Territorial disparities in youth labour market chances in Europe. *Regional Studies, Regional Science*, 8(1), 228-238, <https://doi.org/10.1080/21681376.2021.1925580>
- Choudhry, M. T., & Pastore, F. (2023). Determinants of school-to-work transition: Global outlook. *International Journal of Manpower*, 44(6), 989-999. <https://doi.org/10.1108/IJM-07-2023-0365>
- Çelik, K., & Lüküslü, D. (2011). Spotlighting a silent category of young females: The life experiences of “house girls” in Turkey. *Youth & Society*, 44(1), 28-48. <https://doi.org/10.1177/0044118X10391636>
- Danner, M., Guegnard, C., & Maguire, S. (2021). Understanding economic inactivity and NEET status among young women in the UK and France. *Journal of Education and Work*, 34(7-8), 839-854. <https://doi.org/10.1080/13639080.2021.1997017>
- Değirmenci, S. (2023). Female labor force participation in Türkiye: Revisiting the 1988-2008 period. *İktisat Politikası Araştırmaları Dergisi/Journal of Economic Policy Researches*, 10(1), 213-244. <https://doi.org/10.26650/JEPR1201276>
- Ekiz Gökmen, Ç. (2022). A new perspective on women’s care burden and employment in Turkey. *New Perspectives on Turkey*, 66, 11-34. <https://doi.org/10.1017/npt.2021.21>
- Elitaş, T. (2025). Individual and family related determinants of NEET probability: An empirical study for Türkiye. *Anadolu University Journal of Economics and Administrative Sciences*, 26(1), 538-567. <https://doi.org/10.53443/anadoluibfd.1619992>
- Ernst, E., Merola, R., & Reljic, J. (2025). Fiscal policy instruments for inclusive labor markets: A review. *Journal of Economic Surveys*, 39(5), 2020-2041. <https://doi.org/10.1111/joes.12685>
- Eurostat. (2025). *Statistics on young people neither in employment nor in education or training*. Retrieved October 24, 2025, from https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Statistics_on_young_people_neither_in_employment_nor_in_education_or_training
- Farran, I., & Nunez, I. (2025). Converging pathways: New approaches to integrate vocational education training and higher education. *Journal of Vocational Education & Training*, 77(4), 1147-1165. <https://doi.org/10.1080/13636820.2024.2428769>
- Furlong, A. (2006). Not a very NEET solution: Representing problematic labour market transitions among early school-leavers. *Work, Employment and Society*, 20(3), 553-569. <https://doi.org/10.1177/0950017006067001>

- Gultekin, D., Ilkcaracan, I., Bayar, A. A., & Ozcanlı-Baran, P. (2025). Investing in the care services sectors for employment generation and gender-inclusive growth: The case of Turkey. *New Perspectives on Turkey*, 72, 90-114. <https://doi.org/10.1017/npt.2024.32>
- Gürsel, S., & Tanrıverdi, S. (2025, Ekim 9). *Genç kuşakta ne eğitimde ne istihdamda olanların çok boyutlu analizi* (Araştırma Notu, No.25/282). Bahçeşehir Üniversitesi Ekonomik ve Toplumsal Araştırmalar Merkezi
- Ilkcaracan, I., Kim, K., Masterson, T., Memiş, E., & Zacharias, A. (2021). The impact of investing in social care on employment generation, time-, income-poverty by gender: A macro-micro policy simulation for Turkey. *World Development*, 144, 105476. <https://doi.org/10.1016/j.worlddev.2021.105476>
- International Labour Office. (2020, March 9). *Global employment trends for youth 2020: Technology and the future of jobs*. <https://www.ilo.org/publications/major-publications/global-employment-trends-youth-2020-technology-and-future-jobs>
- International Labour Organization. (2025). *Youth not in employment, education or training (NEET)* [Indicator]. ILOSTAT. Retrieved September 24, 2025, from <https://ilostat.ilo.org/data/snapshots/youth-neet-rate/>
- Kang, C., & Youn, M. (2024). Bridging the gender gap in NEET risk: Institutional influences on NEET status in different age groups. *Sage Open*, 14(4), 1-15. <https://doi.org/10.1177/21582440241294126>
- Karahasan, B. C. (2025). Unemployment polarization and club convergence in Türkiye. *Growth and Change*, 56(1), e70027. <https://doi.org/10.1111/grow.70027>
- Karma, E. (2025). NEET youth in central and eastern European countries: A panel model approach. *Journal of Youth Studies*, 28(9), 1458-1475. <https://doi.org/10.1080/13676261.2024.2392189>
- Kebede, A., Asgedom, A., & Asfaw, A. (2024) Is linking technical and vocational training with industry a bridge to employability? Lessons from a literature review for Ethiopia. *Cogent Education*, 11(1), 2406721. <https://doi.org/10.1080/2331186X.2024.2406721>
- Kılıç, Y. (2014). Young people in Turkey who are not in education, employment or training (NEET). *Education and Science*, 39(175), 121-135. <https://doi.org/10.15390/EB.2014.3094>
- Lindblad, V., Lund, R. L., Gaardsted, P. S., Hansen, L. E. M., Lauritzen, F. F., & Melgaard, D. (2025). Place matters: Understanding geographic influences on youth not in education, employment, or training-A scoping review. *Journal of Adolescence*, 97(3), 620-633. <https://doi.org/10.1002/jad.12461>
- Lu, Y., & Li, X. (2025). Lost in translation: Gender gap in education–occupation mismatch among highly educated workers. *Work and Occupations*, 0(0). <https://doi.org/10.1177/07308884251380099>
- Lüküslü, D., & Çelik, T. (2022). Gendering the NEET category: Young NEET women in Turkey. *Turkish Studies*, 23(2), 200-222. <https://doi.org/10.1080/14683849.2021.1882861>

- Maguire, S. (2015). NEET, unemployed, inactive or unknown – why does it matter? *Educational Research*, 57(2), 121-132. <https://doi.org/10.1080/00131881.2015.1030850>
- Odoardi, I., D’Ingiullo, D., & Quaglione, D. (2023) Gender disparities between young and adult NEETs: do we need a more refined policy approach? *Applied Economics*, 55(56), 6685-6699. <https://doi.org/10.1080/00036846.2022.2161991>
- Organisation for Economic Co-operation and Development. (2025a, September 9). *Education at a glance 2025: OECD indicators*. OECD Publishing, <https://doi.org/10.1787/1c0d9c79-en>
- Organisation for Economic Co-operation and Development. (2025b). *Youth not in employment, education or training (NEET)*. [Indicator]. Retrieved November 12, 2025, from <https://doi.org/10.1787/72d1033a-en>
- Özdemir, D., Metin Özcan, K., & Üçdoğruk Birecikli, Ş. (2023). Youth not in employment, education, or training (NEET) in Turkey: A regional analysis. *Ege Academic Review*, 23(3), 409-426. <https://doi.org/10.21121/eab.1178984>
- Özdemir, D., Metin Özcan, K., & Üçdoğruk Birecikli, Ş. (2024). What makes Turkish youth NEET? *Journal of Youth Studies*, 1-19. <https://doi.org/10.1080/13676261.2024.2446967>
- Redmond, P., & McFadden, C. (2023). Young people not in employment, education or training (NEET): Concepts, consequences and policy approaches. *The Economic and Social Review*, 54(4), 285-327.
- Turkish Statistical Institute. (2022). *Household labor force survey 2022* [Data set]. https://www.tuik.gov.tr/Kurumsal/Mikro_Veri
- United Nations Development Programme (UNDP), Türkiye. (2025, May 30). *White paper – policy recommendations for NEET young women in Türkiye* [White paper]. <https://www.undp.org/turkiye/publications/white-paper-policy-recommendations-neet-young-women-turkiye>
- Wooldridge, J. M. (2001). Asymptotic properties of weighted M-estimators for standard stratified samples. *Econometric Theory*, 17(2), 451-470. <https://doi.org/10.1017/S0266466601172045>
- World Bank. (2025). *Share of youth not in education, employment or training, total (% of youth population) (SL.UEM.NEET.ZS)* [Data set]. World Development Indicators (WDI). Retrieved October 13, 2025, from <https://databank.worldbank.org/metadataglossary/world-development-indicators/series/SL.UEM.NEET.ZS>
- Yates, S., & Payne, M. (2006). Not so NEET? A critique of the use of ‘NEET’ in setting targets for interventions with young people. *Journal of Youth Studies*, 9(3), 329-344. <https://doi.org/10.1080/13676260600805671>
- Yiğit, B., Çakmak, B. Y., & Çakmak, E. E. (2023). NEET in Turkey: A typology including jobless youths, parental education and employment status as determinants. *Education and Training*, 65(5), 731–748. <https://doi.org/10.1108/ET-01-2023-0005>

Appendix

Appendix 1: Robustness Check: Probit Specification

The baseline logit models are re-estimated using a probit link function as a check on the sensitivity of the results to the choice of binary outcome model. Average marginal effects from the probit are reported alongside the logit AMEs in Table A for the overall sample, women-only and men-only sub-samples respectively. The two sets of estimates are virtually identical in sign and magnitude across all covariates. The education gradient, the gender gap in the pooled model, the asymmetric associations of marriage and child-under-six presence across genders, and the ordering of the regional fixed effects are all fully preserved under the probit specification. These results confirm that the findings reported in the main text are not an artifact of the logistic functional form assumption.

Table A*Average Marginal Effects (AMEs) – Obtained from Probit Model Results*

Variable	Overall (Std. Error)	Women (Std. Error)	Men (Std. Error)
gender	0.1697*** (0.0023)		
age	0.1983*** (0.0034)	0.2365*** (0.0050)	0.1239*** (0.0050)
age2	-0.0042*** (0.0001)	-0.0049*** (0.0001)	-0.0026*** (0.0001)
primary school	-0.0726*** (0.0130)	0.0286 (0.0179)	-0.1816*** (0.0192)
middle school	-0.3237*** (0.0082)	-0.2798*** (0.0104)	-0.3462*** (0.0129)
high school	-0.2794*** (0.0082)	-0.2375*** (0.0106)	-0.2958*** (0.0131)
vocational high school	-0.2783*** (0.0083)	-0.2318*** (0.0011)	-0.3022*** (0.0132)
vocational collage	-0.3168*** (0.0085)	-0.2944*** (0.0110)	-0.3127*** (0.0136)
university	-0.3225*** (0.0084)	-0.3303*** (0.0108)	-0.2704*** (0.0137)
master's and PhD	-0.3917*** (0.0127)	-0.3864*** (0.0175)	-0.3070*** (0.0195)
married	0.1039*** (0.0037)	0.2117*** (0.0052)	-0.0855*** (0.0057)
western marmara	0.0325*** (0.0070)	0.0501*** (0.0103)	0.0134 (0.0090)
aegean	0.0639*** (0.0057)	0.0720*** (0.0083)	0.0507*** (0.0071)
eastern marmara	0.0412*** (0.0059)	0.0546*** (0.0086)	0.0261*** (0.0074)
western anatolia	0.0430*** (0.0058)	0.0747*** (0.0083)	0.0116 (0.0074)
mediterranean	0.0782*** (0.0057)	0.0969*** (0.0082)	0.0562*** (0.0071)
central anatolia	0.0856*** (0.0061)	0.1258*** (0.0090)	0.0436*** (0.0078)
western black sea	0.0592*** (0.0063)	0.0796*** (0.0092)	0.0363*** (0.0079)
eastern black sea	0.0709*** (0.0074)	0.0619*** (0.0108)	0.0716*** (0.0089)
northeastern anatolia	0.0824*** (0.0062)	0.1013*** (0.0091)	0.0627*** (0.0078)
centraleastern anatolia	0.1216*** (0.0061)	0.1402*** (0.0088)	0.1009*** (0.0074)
southeastern anatolia	0.1176*** (0.0057)	0.1487*** (0.0082)	0.0925*** (0.0070)
HH has at least one child (<6)	0.0458*** (0.0035)	0.0741*** (0.0050)	-0.0167*** (0.0051)
HH size	0.0092*** (0.0008)	0.0122*** (0.0013)	0.0087*** (0.0009)

Information About the Article/Makale Hakkında Bilgiler

The Ethical Rules for Research and Publication / Araştırma ve Yayın Etiği

The author declared that the ethical rules for research and publication followed while preparing the article.

Yazar makale hazırlanırken araştırma ve yayın etiğine uyulduğunu beyan etmiştir.

Conflict of Interests/ Çıkar Çatışması

The author have no conflict of interest to declare.

Yazar çıkar çatışması bildirmemiştir.

Grant Support/ Finansal Destek

The author declared that this study has received no financial support.

Yazar bu çalışma için finansal destek almadığını beyan etmiştir.

Author Contributions/ Yazar Katkıları

The draft process of the manuscript/ Taslağın Hazırlanma Süreci H.Ö.Ö.D, Data Collection/Verilerin Toplanması H.Ö.Ö.D, Writing the Manuscript/ Makalenin Yazılması H.Ö.Ö.D, Submit, Revision and Resubmit Process/ Başvuru, Düzeltme ve Yeniden Başvuru Süreci H.Ö.Ö.D.