

ECONOMICS EXTENDED ESSAY

Research question: To what extent do the level of educational attainment and experience impact the labor force participation of women aged 25-44 in Ankara between 2020-2024?

Session: May 2026
Subject: Economics
Word Count: 4000

Table of Contents

1. Introduction	3
2. Literature Review	4
3. Methodology	6
4. Theoretical Approach	8
4.1 The Basic Neoclassical Model of Labour Supply	8
4.2 Substitution and Income Effects of a Wage Change	11
4.3 Investment in Human Capital	13
5. Data Analyses and Evaluation	14
5.1 Labour Market Analysis Globally	14
5.1.2 Regression Analysis	15
5.2 Labour Market Analysis of Türkiye	18
5.3 Labour Market Analysis of Ankara	19
5.3.1 Evaluation of Non-Educational Constraints on Female Labour Force Participation	21
6. Conclusion	22
7. Bibliography	24
8. Appendix	26

1.Introduction

Long-run economic growth remains a central objective for countries as a critical factor to improve living standards and to maintain economic competitiveness and resilience. One of the key conditions for long-run economic growth is the efficient use of all factors of production, including labour. In this context, labour force participation is critical, as it directly shapes the effective supply of labor and the economy's productive capacity. As such, this essay delves into the important question of the interaction between education and labour force participation rate; specifically focusing on the female labour force participation within both a cross-country, national as well as local level.

Female labour force participation is fundamental for sustainable economic development, as it directly shapes a country's productive capacity and leads to more efficient allocation of resources. Therefore, keeping women out of the labour market has significant implications on the sustainable development and higher welfare levels of countries. According to World Bank (2025) data, the female labour force participation rate currently stands at 36.79% one of the lowest among comparable economies, making the study particularly significant for Türkiye's sustainable development objectives.¹

Although women's labour force participation is lower than men's in all other countries, the marginal economic contribution of increasing participation is much higher in countries where participation levels are especially low.² This appears from diminishing marginal returns to labour utilization. Bringing additional women into the workforce in Türkiye (36.79% LFPR) taps into a larger pool of underutilized human capital compared to countries like Sweden (61.7%), where remaining non-participants may face greater barriers. The IMF (2023) estimates that closing Türkiye's gender participation gap could increase GDP by 20-25%, substantially more than comparable gains in advanced economies.

¹ World Bank. (n.d.). *Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate) (SL.TLF.CACT.FE.ZS) [Data set]. World Development Indicators.*

² Cuberes, D.; Teignier, M. (2016). *Aggregate Effects of Gender Gaps in the Labor Market: A Quantitative Estimate, Journal of Human Capital*, volume 10(1). <https://doi.org/10.1086/683847>.

These data show the urgency to increase women's labour force participation for Türkiye. The focus of this study selected as Ankara because it is Türkiye's capital and most highly educated city. It offers an ideal setting to examine how educational attainment and experience shape women's labour force participation. This theoretical expectation is tested in Section 5, where the 18-percentage-point participation gap between tertiary and non-tertiary educated women in Ankara suggests substantial productivity gains from increasing participation among educated women.

The essay investigates the relationship between education level and women's labour force participation through the following research question: *To what extent do the level of educational attainment and experience impact the labour force participation of women 25-44 in Ankara between 2020- 2024?*

The essay initially provides a brief review of academic literature. This section is followed by the methodology, which outlines the framework the essay, and then an evaluation of the theoretical foundations underlying the analysis. While the focus of the essay is on women aged 25-44 in Ankara, the analysis begins by establishing the broader empirical context through a cross-country regression and an analysis of national trends in female labour force participation in Türkiye. The paper then proceeds with the section on data analysis and evaluation; finalized with concluding remarks in the Conclusion section.

2. Literature Review

Academic studies show that female labour participation rate is directly correlated with the educational attainment levels of females.³ Higher levels of education create several pathways that make it easier for women to enter the labour market. First, education builds knowledge and practical skills, which helps develop a more qualified labour supply. It also improves access to higher-quality jobs, and this tends to raise labour force participation.^{4,5} According to

³ Shuangshuang, Y., Zhu, W., Mughal, N. *et al.* (2023). *The impact of education and digitalization on female labour force participation in BRICS: an advanced panel data analysis.* *Humanities Social Sciences Communication*, 10, 598 (2023). <https://doi.org/10.1057/s41599-023-02020-2>

⁴ Blau, D. & Kahn, L. (2013). *Female labor supply: Why is the United States falling behind?* *American Economic Review Papers & Proceedings*.

⁵ Lari, N. (2022). *Determinants of female labor force participation.* *Cogent Economics & Finance*.

2024 data from the Turkish Household Labour Force Survey (HIA), the labour force participation rate for women with no formal education is 13.8%, while it rises to 68.8% for women with tertiary education in Türkiye.⁶

Education matters because it can influence how people view gender roles and this is particularly significant in determining women's decision to participate in the labour force. Researches suggest that the relationship between education and labour force participation is not uniform across genders, at lower levels of educational attainment, the participation gap between men and women widens considerably.⁷

In Ankara, traditional expectations about gender roles continue to limit women's participation in the labour force, but higher education can encourage women to overcome these expectations and consider a wider range of careers.⁸ Ankara's 2023 data reveal a narrower but persistent gap with 98.2% male literacy and 96.5% female literacy (TÜİK, 2024). This suggests Ankara follows the global pattern of gender disparity, though at higher absolute levels. Ankara's smaller literacy gap suggests educational barriers may be less severe than national averages, however, the existence of 1.7 pp (percent point) gap indicates structural factors still influence women's educational attainment and subsequent labor force participation. School participation and attendance of women also reflect that gender inequality exists. For example, boys often leave school to start working, while girls are more likely to leave due to marriage or family responsibilities. According to MoNE (Ministry of National Education) data, 0.4% of boys and 4.7% of girls in Türkiye drop out of school after completing the 5th grade.

For many years, women in Türkiye had relatively low levels of educational attainment and policy interventions aimed to increase women's human capital provided limited results. However, in recent years, longer compulsory schooling, more universities, technological progress, and rising social awareness have together sped up improvements in educational attainment across the country.

⁶ Türkiye İstatistik Kurumu. (2025, March 6). *İstatistiklerle Kadın, 2024 [Women in Statistics, 2024]* (Press Release No. 54076). Veri Portalı (TurkStat). <https://veriportalı.tuik.gov.tr/en/press/54076>

⁷ Galindo-Silva, H. and Herrera-Idárraga, P. (2023) *Culture, gender, and labor force participation: Evidence from Colombia*. Available at: <https://arxiv.org/abs/2307.08869>

⁸ Tatoğlu, T. (2022). *Drivers of Low Female Labor Force Participation in Türkiye*, BBVA Working Paper 22/13.

During this period, women's access to education increased significantly. This narrowed the gender gap and strengthened women's human capital, which is expected to improve their participation in the labour market and continue as employed.

3. Methodology

To evaluate existing patterns in women's educational attainment and work experience, academic research, government datasets, and newspaper reports on participation rates are examined. Even though these resources reflect labour force participation rates at the national scale, such as in Türkiye, they do not represent the interaction between FLFPR (Female Labour Force Participation Rate) and education and experience regionally. Focusing on Ankara is particularly relevant for examining the issue in Türkiye because it provides a more formal and higher quality labour market which makes it easier to evaluate the direct effect of education and experience. Formal employment is concentrated in major western economic centers of Türkiye and Ankara has the lowest informality rate (18%) and the second-highest share of public employment, which supports more regulated and contract-based work. This is also means among educated workers, only 7% of skilled workers are informal in Ankara, compared with around 30% in some eastern subregions. Additionally, it ranks highest in job quality (2017) and has remained stable since 2009, mainly because it has a high share of formal wage jobs and stronger compliance with minimum wage and contracts.⁹ These may effect women's employment decisions differently from national averages. Therefore, the data collected at the individual level in the research study makes it possible to obtain a more specific insight than an aggregate analysis.

The primary data were collected through an online survey via Google Forms, which included variables that may affect the labour force participation rate independent of education and work experience. A *quota sampling* method is chosen to represent various districts of Ankara for minimizing sampling bias and allowing more precise comparisons with spread data between districts. The "experience" factor is measured by asking respondents to indicate their total years of work experience. Additionally, women between the ages of 25 and 44 residing in Ankara

⁹ Acar Erdogan, A., & Del Carpio, X. V. (2019). *Turkey jobs diagnostic*. World Bank. <https://documents1.worldbank.org/curated/en/734661564064906614/pdf/Jobs-Diagnostic-Turkey.pdf>

were selected as the target population because they represent the main working-age population and therefore specifically affected by education and childcare responsibilities. Türkiye is in an early retirement period so the analysis is limited to individuals up to age 44.

The response rate of the survey calculated 9.3%, with 56 complete responses from 602 invitations distributed. This relatively low response rate introduces potential non-response bias, as evidenced by the 91% labor force participation rate in our sample compared to Ankara's official 53.7% rate. This sampling bias may overestimate the education-participation relationship for women aged 25-44 in Ankara.

In addition to secondary sources and primary data from surveys, interviews with representatives from non-governmental organizations supporting women's participation in the labour market, including Education Chair of Woman's Branch, ILO (International Labour Organization)¹⁰ and SES (Equity, Justice, Woman Platform)¹¹ provided extensive understanding of structural, institutional, and social barriers faced by women, which are often insufficiently represented in statistical data. The information gained was used to refine and improve survey questions and to add qualitative insight by highlighting institutional barriers that data cannot represent.

In the following sections, FLFPR is analyzed at three levels. First, a cross-country multivariable regression is used by adding control variables and running robustness tests. Second, for the Türkiye a mainly descriptive time-series regression is applied. Finally, Ankara is analyzed using primary survey data through descriptive statistics to compare how regional patterns consistent with Türkiye and the global results.

Before proceeding with the empirical analysis, the next section provides a discussion of the theoretical underpinnings of this essay.

¹⁰ <https://www.ilo.org>

¹¹ <https://sesdernegi.org>

4.Theoretical Approach

4.1 The Basic Neoclassical Model of Labour Supply

The neoclassical model is used for illustrating how wages and constraints determine labour market outcomes. The starting point is where people respond to incentives and make choices by comparing benefits and costs. Individuals are modelled as choosing the option that maximizes their utility to constraints. Since time is limited, it must be allocated across different activities such as rest, studying or unpaid household responsibilities. In neoclassical theory, households also face a budget constraint. This means they can only choose a combination of earning income and non-work time that are affordable given their income and prices.

However, this model assumes all individuals have equal access to opportunities and make decisions entirely based on wages and preferences which is an assumption that doesn't hold for the context of female labour force participation in Ankara. In real life, women aged 25–44 in Ankara often experience additional constraints such as unfair childcare responsibilities, cultural expectations around domestic roles and the prevalence of informal employment that the standard neoclassical framework fails to account for. As a result, the model may overstate women's capacity to respond to wage incentives and its predictions on participation rates should be interpreted with caution when applied to women aged 25–44 in Ankara.

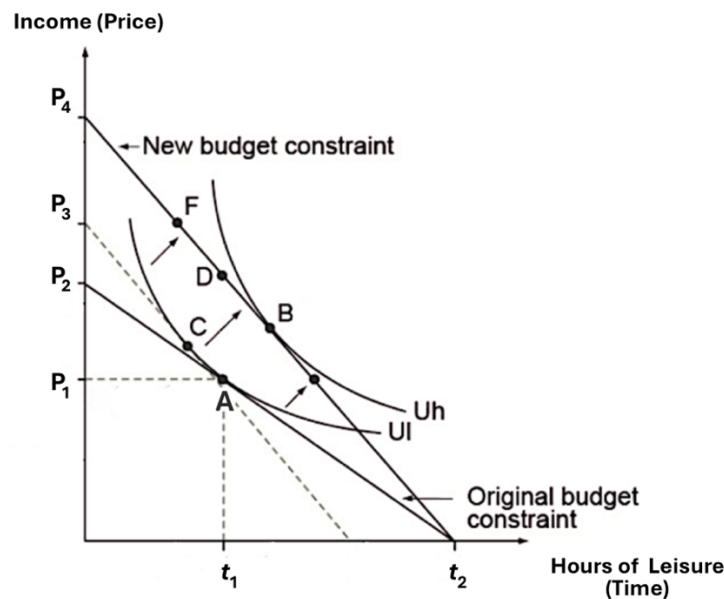


Figure 1: Labour leisure trade off diagram

In this diagram the budget constraint shows all possible combinations of leisure and income and its slope equals the wage rate. Indifference curves (UI and Uh) represent preferences, where UI is the initial utility level and Uh is a higher utility level. Initially, equilibrium occurs at point A, where the original budget constraint is tangent to UI. When the wage increases, the maximum leisure time remains fixed but the income that can be earned per hour of work increases. Therefore the budget constraint shifts upward around the leisure intercept making the line steeper.

To separate the effects of the wage change, a dashed line with the same slope as the new budget constraint but tangent to UI is used. The movement from A to C represents the substitution effect (s), where leisure becomes relatively more expensive, leading to less leisure and more income. The movement from C to B represents the income effect (i), reflecting higher purchasing power, which increases consumption of both leisure and income.

The final equilibrium occurs at point B on indifference curve Uh, showing the combined effect of both changes.

One of the most documented trends in the world literature on FLFP is the U-shaped curve¹², which describes how women's participation initially declines and later rises as economies develop, education expands, and social norms evolve. In low-income economies that are agricultural, the rate of participation by women is relatively high because they need to work, as countries evolve toward industrialization, the household income rises and the traditional family models where the man is supposed to earn the household income while the woman is expected to stay at home, generally become stronger.¹³ This norm often makes women exit the labour force, especially those with moderate levels of education,.

While Goldin's (1995) seminal work established the U-shaped pattern, its reliance on historical data from developed economies limits direct relevance to developing countries like Türkiye. Türkiye's current position on this curve is debated. with GDP per capita around \$10,600 (2023) and female tertiary education at 24% (2024), Turkey appears to be at or near

¹² Tunali, İ., Kırdar, M. G., & Dayıoğlu, M. (2021). Down and up the "U"-A synthetic cohort (panel) analysis of female labour force participation in Türkiye, 1988-2013. *World Development*, 146, 105609.

¹³ Goldin, C. (1995) "The U-Shaped Female Labour Force Function in Economic Development and Economic History". In: Schultz TP (Ed.) *Investment in Women's Human Capital and Economic Development*. University of Chicago Press, Chicago, 61-90.

the inflection point where FLFP should begin rising, though institutional barriers may delay this transition

This trend also appears throughout the life cycle of women. Participation usually decreases during the childbearing years (usually late 20s to mid-30s) and then rises again as children become older. This suggests how education, experience, and caregiving responsibilities interact. Studies in Türkiye show similar results, they indicate that women with low or medium education often withdraw from the labour market in early adulthood, while women with tertiary degrees face higher opportunity costs of non-participation and are therefore more likely to return to the labour market and remain employed in later years. (Tunali et al., 2021) A recent analysis by İlkkaracan (2019) focuses on how limited childcare provision contributes the mid-life decline in participation, especially mothers with young children.¹⁴ Overall, the U-shaped trend supports the idea that education and experience not only influence the entry of the labour force, but also long-term sustainability, particularly in situations where family responsibilities and institutional constraints are decisive.

This framework is crucial when applied to female labour supply decisions because it explains participation as a decision-based response for trade-off between income and time. When educational attainment is lower, expected wages tend to be lower as well, so the financial incentive to participate in the labour market decreases. In a neoclassical framework, individuals consider the benefits of paid work against the value of other uses of their time and choose the option that maximizes utility given their constraints. Alongside education, care requirements also influence this optimization. The social norms and household expectations around childcare can make caregiving time more valuable, which raises the minimum wage needed for paid work to feel worthwhile. As a result, when wage opportunities are relatively low, women are more likely to choose non-participation and allocate more time to childcare instead of entering paid employment. This contributes to lower FLFPR. In practice, the neoclassical model treats the wage as a central incentive because it expands feasible consumption possibilities and changes the “price” of time away from paid work.

When the productivity of workers increases, both average and marginal labour productivity shift upwards, because it becomes profitable for companies to hire more workers. This

¹⁴ Kim, K., İlkkaracan, İ., & Kaya, T. (2019). Public investment in care services in Turkey: Promoting employment & gender inclusive growth. *Journal of Policy Modeling*, 41(6), 1210-1229. <https://doi.org/10.1016/j.jpolmod.2019.05.002>

framework is illustrated in Figure 2. Initially, labour demand and labour supply are represented by D and S, respectively. Labour demand is downward sloping: the higher the wages, the lower the employers' demand for labour (for a given level of output prices and capital inputs).

By contrast labour supply is sloping upwards, the higher the wages, the more people want to work. Initially, the curves intersect at point A, yielding employment E and wages W. With a better human capital, the marginal productivity of workers increases. Therefore, the demand curve shifts upwards to D', employment increases to E' and employers, who have to compete for workers, are now ready to pay wages equal to W'. Both employment and wages have increased.

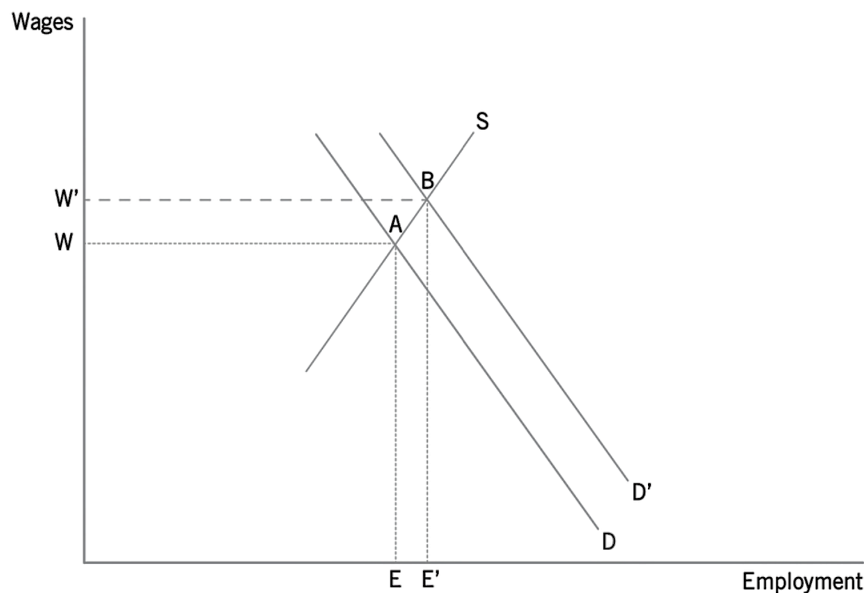


Figure 2: Labour market diagram for levels of education in Ankara

In Ankara, this theory support findings with 18-percentage-point gap in female labor force participation rates (FLPR) between tertiary-educated women (93-100% FLPR) and non-tertiary educated women (66-71% FLPR). Therefore, tertiary-educated women in Ankara face stronger financial incentives to participate in the labor market as their foregone earnings from non-participation are significantly higher than those of women with only secondary education

4.2 Substitution and Income Effects of a Wage Change

The substitution effect comes from the fact that a higher wage makes leisure relatively more expensive. If the wage increases, the individual gives up more consumption by choosing an

extra hour of leisure, because the foregone earnings are now larger. Holding the person's overall utility conceptually constant the individual tends to substitute away from leisure and toward work. In simple terms, when the return to working rises, time spent working becomes more attractive compared to time spent in leisure, so the individual is likely to work more hours or, in participation terms, be more willing to enter the labour force. This is the key "pure incentive" effect of a wage increase

The income effect, by contrast, comes from the fact that a higher wage also increases the individual's purchasing power. At the new wage, the person can achieve a higher level of consumption than before for any given number of hours worked, which effectively increases purchasing power. If leisure is a normal good, meaning that people want more of it when their income rises then this increase in real income encourages the person to consume more leisure, which implies working fewer hours. Higher wages can allow someone to maintain a comfortable level of consumption while taking more time off, so labour supply may fall. In this sense, a wage increase can reduce work effort not because working is less rewarding, but because the individual can now afford to prioritize leisure more.

For many women, non-working time is valuable not only as "leisure," but also because it includes unpaid household production and caregiving, especially childcare. When caregiving demands are high, or when prevailing household norms allocate childcare responsibilities disproportionately to women, the marginal utility of non-market time increases; consequently, a higher wage is required for paid work to dominate the best alternative use of time, shifting the reservation wage upward. By contrast, institutional conditions that reduce the effective costs of working such as the availability and affordability of childcare services, flexibility in work schedules, and safer transportation, reduce the minimum wage required to make employment while shifting the reservation wage downward, increasing the potential of labour market entry at any given level of earnings.

Income and substitution effects help explain why participation differs by education in Ankara. Whether which of them will dominate depends on preferences and constraints which may differ by educational level. If the household already has enough income for example, from a spouse, women can "afford" to spend more time on childcare, so they may choose not to work even when jobs are available.

4.3 Investment in Human Capital

The relationship between the level of education and the level of earnings is explained using the human capital model. Human capital, in this model, can be thought of as a measure of an individual's productive capacity. Under the human capital model, it is assumed that the level of an individual's earnings is determined by the individual's stock of human capital. An individual can increase his or her human capital by investments in formal education or on-job-training.

Human capital posits that individuals' education and skills function as investment. Education represents an expenditure of resources at one time to raise productivity in the future that enhance productivity, employability, and ultimately labour-force participation.¹⁵ As education levels rise, individuals anticipate higher wages, which in turn raises the opportunity cost of staying out of work. Recent studies demonstrate that education remains a significant determinant of female labor force participation in emerging economies, with long-run elasticities suggesting persistent effects.¹⁶ While rising educational attainment generally increases FLFP, this relationship is not universal, in some regions like the Middle East and North Africa, educational gains have not translated into proportional participation increases due to institutional and social barriers¹⁷.

In Türkiye, education continues to facilitate increasing female labour force participation, though the magnitude varies by region and sector.¹⁸ These contemporary studies reinforce the human capital framework while highlighting the importance of complementary policies and institutional factors in realizing education's potential benefits for labor market participation.

Many economic models of education assume that people choose their schooling level by comparing the lifetime payoff of each option. In simple terms, someone decides to attend college only if the present value of the expected gains is greater than the present value of the costs of studying.

¹⁶ Yu, S., Zhu, W., Mughal, N., Vargas Aparcana, S. I., & Muda, I. (2023). The impact of education and digitalization on female labour force participation in BRICS: An advanced panel data analysis. *Humanities and Social Sciences Communications*, 10, Article 598. <https://doi.org/10.1057/s41599-023-02020-2>

¹⁷ Winkler, A. E. (2022, February). *Women's labor force participation*. *IZA World of Labor*, 289. <https://doi.org/10.15185/izawol.289.v2>

¹⁸ Beton Kalmaz, D. (2023). *Asymmetric link between economic well-being and labour market equity in Turkey*. *International Journal of Development Issues*, 22(2), 182–197. <https://doi.org/10.1108/IJDI-12-2022-0270>

The advantages of earning a degree go beyond pay. A college education is linked to higher expected earnings, a lower risk of unemployment, and a range of non-financial benefits. Compared with non-graduates, college graduates are more likely to have jobs that are more stable, less physically demanding, and less repetitive. These roles also tend to offer better working conditions, more comfortable work settings, and higher social status.

In Ankara the FLFPR for completed bachelor's degree is 95.45% while 71.43% for upper secondary graduates. This supports the theory that higher education raises the opportunity cost of non-participation

5. Data Analysis and Evaluation

5.1 Labour Market Analysis Globally

This section analyses the relationship between education levels and labour force participation rates of females using global data from the World Bank to establish a comparative baseline. This global trend is then compared with Türkiye to assess whether it follows or deviates from the worldwide pattern. Understanding where Türkiye stands relative to the global trend is important because it frames the Ankara-specific analysis, where the research question is directly examined through local data.

YEAR	World Female Labor Force Participation Percentage (15 +) Global Mean	Completed Lower Secondary Global Mean	Completed Post Secondary Global Mean
2010	55,66	65,22	22,89
2011	55,87	64,50	22,86
2012	56,06	65,22	25,02
2013	56,19	67,25	24,59
2014	56,30	63,66	23,58
2015	56,59	65,95	27,51
2016	56,76	67,86	26,84
2017	56,87	65,03	24,45
2018	57,04	65,74	28,43
2019	57,29	67,78	26,23
2020	56,11	75,77	31,04
2021	56,84	71,72	29,59
2022	57,56	68,93	30,59
2023	58,42	75,65	34,18
2024	58,73	70,19	35,61

Table1: World Bank Data representing average values globally for female labour force participation and completed level of educational attainment by percentage, between 2010-2024

$$\begin{aligned} \Delta \text{Education} &= 35.61 - 31.04 \\ &= 4.57 \text{ pp} \end{aligned} \quad \Rightarrow \quad \frac{4.57}{2.62} \approx 1.74$$

$$\begin{aligned} \Delta \text{Participation} &= 58.73 - 56.11 \\ &= 2.62 \text{ pp} \end{aligned}$$

Table 1 represents the global mean of FLFP (15+) alongside female educational attainment (completed lower secondary and post-secondary) from 2010–2024. The table begins from 2010 instead of 2020 because lower secondary attainment has followed a consistently increasing trend over decades, and starts to fall at 2020 after a big jump from 2019. Therefore, starting from 2010 ensures that the decline starting 2020 in lower secondary attainment is not interpreted as a general trend, since it only becomes meaningful when placed within the longer 2010–2024 context. While this data covers a broader age range and global scope than the research question's focus on women aged 25–44 in Ankara, it establishes whether a positive education-participation relationship holds at the global level offering a reference point against which Türkiye's and ultimately Ankara's patterns can be meaningfully compared. It is used to examine whether increases in female education align with higher participation over time, and to identify years that the relationship weakens. The data suggests that education and female labour force participation move in the same direction. Without formal statistical tests it is not possible to identify whether this move is suggestive of only a correlation or if there is a causal relationship between the two indicators. Although it can be said that, between 2020 and 2024 global female post-secondary attainment increased by 4.57 pp, while female labour force participation rose by only 2.62pp. This 2:1 ratio suggests that educational gains have not translated proportionally into participation increases, likely due to persistent institutional and social barriers. This suggests that education might be contributing to improvements in labour-market potential, but other barriers might limit this contribution. Lower secondary ranges from 63.66 to 75.77 and jumps sharply in some years may reflect changes in measurement or associated effects, so it may be less reliable than post-secondary. In 2020, there is a clear break in the pattern which is presumably because of the impact of the COVID-19 pandemic. In this period women's labour force participation dropped worldwide, even though education levels continued to improve. This shows the education and participation relation is not involuntary and strongly affected by external shocks such as pandemic, supporting that correlation doesn't always indicate causation

5.1.2 Regression Analysis

In table 2, the relationship between the FLFPR and education is examined using a multivariate regression analysis on a cross-country basis.¹⁹ The dataset is prepared by taking

¹⁹ Complete regression output with coefficients, standard errors, and t-statistics for all specifications is available in Appendix 1B. The "..." notation indicates no constant term was estimated in those specifications.

averages of each variable over the time period of 2020–24 for each country. This regression analysis indicates that educational attainment significantly influences female labor force participation rates, thereby directly addressing the research question by illustrating the extent of this impact. Alternative regressions are run to test the robustness of the findings. The coverage of countries is limited by data availability. In the first five columns, 143 countries are included in the analysis, whereas in the regressions that include social norm proxies, data availability reduces the sample to 45 countries²⁰

<i>Table 2: Dependent variable - Female Labour Participation Rate (percentage) - 2020-2024 averages, cross-country</i>								
	<i>Independent Variables</i>	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>
<i>Constant</i>								
<i>Coefficient</i>		...	50,19	...	44,26	43,83	...	53,30
<i>P-value</i>		...	0,00	...	0,00	0,00	...	0,00
<i>Education</i>								
<i>Coefficient</i>		1.76	0,33	0,50	0,19	0,07	0,31	-0,16
<i>P-value</i>		0.00	0,00	0,00	0,03	0,19	0,00	0,57
<i>Pre-K enrollment rate</i>								
<i>Coefficient</i>		...		0,59	0,15	0,16	0,74	-0,00
<i>P-value</i>		...		0,00	0,00	0,00	0,00	0,97
<i>Norms</i>								
<i>Coefficient</i>		...	...	...	...	...	0,85	0,10
<i>P-value</i>		...	...	...	...	...	0,00	0,50
<i>R-squared</i>		0,66	0,11	0,81	0,18	0,16	0,86	0,04
<i>No of observations</i>		143	143	143	143	143	45	45
Footnote: Columns (1), (2), (3), (4), (6), (7) measure "education" as the rate of attainment of at least completed post-secondary, population 25+. Columns (5) instead uses attainment of at least completed lower secondary. Columns (6) and (7) use "Women who believe a husband is justified in beating his wife (any of five reasons) (%)" as proxy for social norms. Significant variables are in bold.								

In columns (1) and (3), the analysis does not include a constant term, whereas columns (2) and (4) do. The constant term is robustly significant across specifications, and its inclusion does not reduce the significance of education as a factor influencing female labour force

²⁰ Countries are listed in the Appendix 2A

participation rates. This confirms that higher educational attainment is positively and significantly associated with increased female labour force participation regardless of model specification, which supports the central argument of this essay. However, the drop in the R-squared from 0.66 in column (1) to 0.11 in column (2) suggests that once the constant absorbs part of the variation, education alone explains considerably less of the differences in participation rates across countries, indicating the presence of several omitted variables in the analysis. As such, in columns (3) through (7), alternative equation specifications are tested to improve the explanatory power of the model.

As discussed above, the literature suggests that FLFPR has a strong relationship with the availability of kindergarten and care services in an economy, as well as with countries' social norms. To test whether the relationship between FLFPR and education remains significant, these additional factors are included in the analysis, as reported in columns (3) through (7). The availability of care services is proxied by the gross pre-primary education rate, while social norms are proxied by the percentage of women who believe a husband is justified in beating his wife. Both series are obtained from the World Bank. The availability of care services shows an even stronger relationship with FLFPR, and social norms is also a significant factor. Regardless of which additional control variables are added to the analysis, results suggest that education's significance prevails.

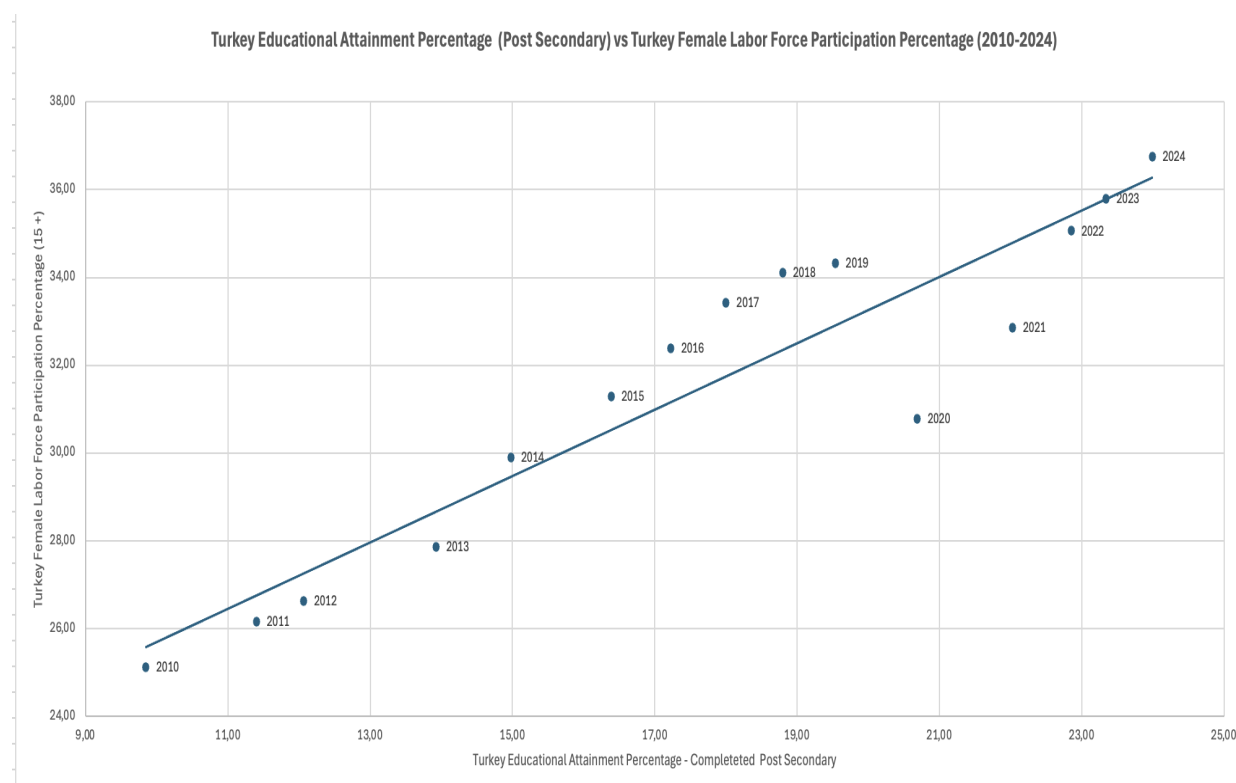
In column (5), the analysis is repeated using an alternative measure of education to test how sensitive the findings are. Educational attainment is measured as the ratio of the population that has attained at least lower-secondary education rather than post-secondary education. Results suggest that the level of education matters: completion of post-secondary education has a more significant relationship with FLFPR than completion of lower-secondary education. This outcome points to the importance of looking not only at the quantity of education but also at its level.

For the purposes of this paper's hypothesis, the overall results suggest that education and FLFP have a fairly robust correlation. The results, particularly the variation in R-square across regressions also point to the need for further diagnostic statistical tests. The variation in R-squared across specifications points to omitted variable concerns. While additional tests for possible reverse causality among the dependent and independent variables would strengthen claims made in the analyses these econometric diagnostics exceed this paper's scope

Next a time-series perspective is undertaken using the national level data for Türkiye.

5.2 Labour Market Analysis of Türkiye

Graph 1. Scatter plot showing a positive relationship between women's post-secondary educational attainment and female labor force participation in Türkiye, 2010–2024



The correlation coefficients for Türkiye between 2020–2024 are noticeably high, ranging from 0.899 for lower secondary education to 0.935 for bachelor-level attainment. This indicates a very strong positive relationship between female education levels and labour force participation. Although the correlation is strong, the magnitude of participation growth remains relatively slight compared to the increase in educational attainment. Therefore, the strong correlation may reflect a wider process of development such as structural economic change, urbanization and expanding job opportunities that raises both women's education levels and their labour force participation at the same time. It should be noted that while the correlation analysis above covers 2010–2024, the regression analysis extends beyond this period to obtain a more statistically meaningful and reliable trend, though the discussion remains focused on the 2010–2024 timeframe.

5.3 Labour Market Analysis of Ankara

Current labour market status (self-reported)

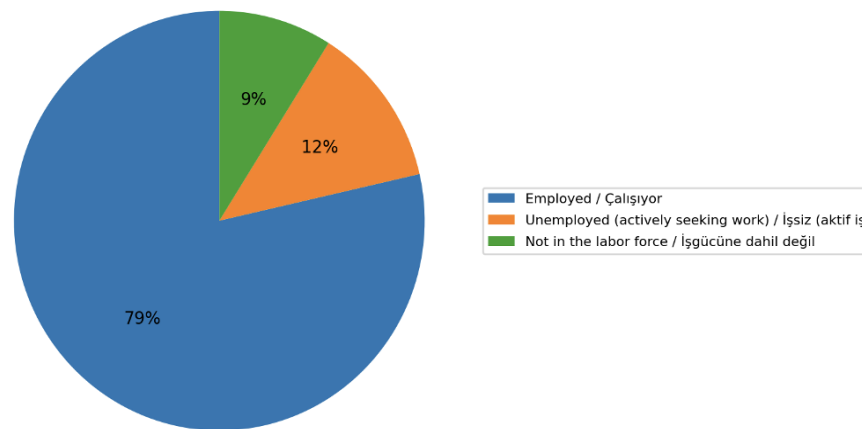


Figure 3. Self-reported labour market status distribution.

Figure 3 is simply a representation of the self-reported data of labour-market situation from the Ankara survey. It provides an outline of the number of respondents who are connected to the labour market before examining whether education plays a role.

Using the standard definition in labour statistics, respondents are counted as part of the labour force if they are either employed or unemployed but actively seeking work. However, since this data is a self-report, and the sample is not necessarily representative of all women in Ankara, the figure should be interpreted as describing the survey sample rather than the actual unemployment rate in Ankara.

To test whether higher education is related to higher participation in Ankara, participation rates can be calculated for each education group for example, tertiary and non-tertiary. Then, to understand why some women are still out of the labour force despite their education level, the survey questions including childcare responsibilities, who controls household earnings, and attitudes toward women's work can be examined.

The highest level of education you have completed	Employed	Not in the labor force	Unemployed (actively seeking work)	TOTAL	FLFPR (%)
Associate degree	13	1	1	15	93,33%
Bachelor's degree	20	1	1	22	95,45%
Lower secondary	2	0	0	2	100,00%
Master's degree	6	0	0	6	100,00%
Primary	0	0	1	1	100,00%
Upper secondary	3	2	2	7	71,43%
Vocational high school	0	1	2	3	66,67%
TOTAL	44	5	7	56	91,07%

Table 2: Ankara survey displaying respondents' current labour market status and labour force participation rate (FLFPR) by highest completed education level

Table 2 displays the survey response comparing highest completed education level with their current market status. The FLFPR is calculated by:

$$\left[\begin{array}{c} \text{Labour Force Participation Rate} \\ \text{(FLFPR)} \end{array} \right] = \frac{\text{Female Labour Force}}{\text{Female Working - age Population}} \times 100$$

Participation in the sample is very high with 91.07% meaning that most respondents are already attached to the labour market. FLPR among tertiary educated respondents is consistently above 93%, supporting human capital theory that higher education increases expected wages and the opportunity cost of staying out of the labour market, making participation more attractive. It may also increase access to formal-sector jobs with better conditions, which supports continued participation.

The participation rates decline significantly among upper secondary and vocational groups, which implies that education can be a significant turning point as tertiary education completion seems to be associated stronger with participation than high school or vocational education only. The participation rate of tertiary educated women in this sample is approximately 18 percentage points more than the non-tertiary respondents, which implies that higher education is closely related to labour force attachment in Ankara. However, several education categories are represented by very small sample sizes for example, primary ($n = 1$), lower secondary ($n = 2$), and vocational ($n = 3$), so their FLPR values are not exact indicators of broader Ankara patterns. The overall participation rate is extremely high

compared with official Ankara-level female LFPR²¹ 53.7%, implying the survey sample is not completely representative and likely women in the sample already connected to work or job-search networks. To evaluate how this selection bias affects the estimated education gap, I compared weighted and unweighted participation rates. The 18 pp gap between tertiary and non-tertiary educated women in Ankara aligns with interview findings that “Education level affects not only whether women participate but also their earnings, working hours, and social security rights.” (ILO representative, 2025) This suggests tertiary-educated respondents showed higher participation because they access formal-sector jobs with better conditions that support sustained employment.

The next section discusses why participation remains lower among non-tertiary respondents by examining survey evidence on childcare responsibilities, household income control and attitudes toward women’s work.

5.3.1 Evaluation of Non-Educational Constraints on Female Labour Force Participation Using Survey Data

The educational gap in participation may be caused by constraints that raise the cost of working, reduce bargaining power, or discourage work.

	Currently not in labor force	Unemployed	Employed
Education level			
At most upper secondary	3	5	5
At least post-secondary	2	2	39
Experience			
Less than 5	0	0	9
Between 5-14	2	3	11
More than 15	3	4	24
Child in household			
Yes	3	7	25
No	2	0	19
Completion of certificate courses in last year			
No	3	4	13
Yes	2	3	31

Table 3: Ankara survey results, in education levels with their experience child status and completion of certificate

²¹ Türkiye İş Kurumu. (2024). 2023 yılı işgücü piyasası araştırması: Ankara ili sonuç raporu. <https://www.iskur.gov.tr/medya/hy0pxhof/ankara.pdf>

Table 3 supports the main pattern in which education is related to stronger labour force participation in Ankara. The difference becomes clearer when education is grouped into “at most upper secondary” versus “at least post-secondary.” Among women with at most upper secondary education, labour market outcomes are more mixed, with a noticeable share not working or actively looking for work. In contrast, among women with at least post-secondary education, the large majority are in the labour force. This supports the idea that education is closely related to participation. However, work experience does not show a similar consistent pattern with participation in the same way. This implies that education is the more determinant factor in explaining who remains in the labour market in this sample. Many respondents with children are still in the labour force, therefore having children does not seem to lower participation significantly. Instead, they mainly create barriers that make working more difficult. Finally, completing certificate courses is more common among respondents who are already in the labour market, which may suggest that employers are more motivated to improve their skills and increase their education levels. This can be interpreted that education also continues while working.

This table indicates that many respondents with children remain in the labour force, suggesting childcare alone doesn't determine participation. However, qualitative interview evidence reveals that “Even highly educated women face childcare constraints that raise their reservation wage” (SES representative, 2025). This helps explain why some tertiary educated respondents in the survey reported non-participation despite high expected wages. It can be concluded that childcare responsibilities effectively increase their minimum acceptable wage, potentially pushing it above available job offers.

Overall, these results support the previous conclusion that education is associated with higher FLFP in Ankara and household responsibilities help explain why this relationship is not entirely the same for all respondents.

6. Conclusion

This analysis confirms that education functions as a key determinant of female labour force participation in Ankara, with tertiary education increasing FLFPR by approximately 18–24

percentage points compared to non-tertiary levels. The survey indicates that childcare constraints act as a barrier which inequality reduces participation among non-tertiary educated women, raising their reservation wage above available job offers. These findings suggest that while education is the strongest factor of participation in this sample, its effect changes with structural constraints that vary by households.

These findings points clear policy implications. First, expanding access to tertiary education through scholarships and improved infrastructure remains essential. Second, addressing childcare barriers through subsidised services and extended school hours is equally important, particularly for women without tertiary qualifications who face the highest participation costs. Third, sector-specific policies targeting educated women such as formal employment incentives, mentoring programmes and anti-discrimination enforcement could turn educational gains into actual participation. Without these complementary measures, improvements in educational attainment alone are unlikely to close Ankara's gender participation gap.

This study's cross-sectional survey design focuses association not causation, meaning it is not possible to confirm that education directly causes higher participation rather than reflecting broader selection processes. The quota sampling method ensures geographic representation across Ankara's districts. However, it may limit how far the findings can be generalized beyond urban Ankara and could overrepresent women who are already connected to employment or job-search networks. This is visible in the sample's 91% participation rate, which is considerably higher than Ankara's official rate of 53.7%."

Future research could address these limitations in several ways. Longitudinal studies tracking individual women's participation over time would allow for causal inference and better capture how life events such as marriage, childbirth, and career progression interact with education. Wage elasticity analysis would also be valuable in quantifying the relative strength of income and substitution effects across education groups, while comparative studies across Turkish regions could clarify whether the education-participation relationship observed in Ankara holds in less formal or more rural labour markets.

7. Bibliography

- Acar Erdoğan, A., & Del Carpio, X. V. (2019). *Turkey jobs diagnostic*. World Bank. <https://documents1.worldbank.org/curated/en/734661564064906614/pdf/Jobs-Diagnostic-Turkey.pdf>
- Akkan, B., Buğra, A., & Knijn, T. (2023). Gendered familism in a Mediterranean context: Women's labor market participation and early childhood education and care in Turkey. *New Perspectives on Turkey*, 69, 111–127. <https://doi.org/10.1017/npt.2023.18>
- Aldan, A. (2021). Rising female labor force participation and gender wage gap: Evidence from Turkey. *Social Indicators Research*, 155, 865–884. <https://doi.org/10.1007/s11205-021-02631-9>
- Atasoy, B. S. (2017). Female labour force participation in Turkey: The role of traditionalism. *The European Journal of Development Research*, 29, 675–706. <https://doi.org/10.1057/s41287-016-0013-z>
- Baerlocher, D., Parente, S. L., & Rios-Neto, E. (2021). Female labor force participation and economic growth: Accounting for the gender bonus. *Economics Letters*, 200, Article 109740. <https://doi.org/10.1016/j.econlet.2021.109740>
- Baloğlu, Z., & Dilek, S. (2023). Environmental and productivity perceptions affecting the female labour force participation rate. *Bartın Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 14(28), 268–283. <https://doi.org/10.47129/bartiniibf.1374492>
- Başar, D. (2024, September 9). Women's participation in labour force in Türkiye: An assessment of the current situation. *Toplum*. <https://www.toplum.org.tr/en/womens-participation-in-labour-force-in-turkiye-an-assessment-of-the-current-situation/>
- Beton Kalmaz, D. (2023). Asymmetric link between economic well-being and labour market equity in Turkey. *International Journal of Development Issues*, 22(2), 182–197. <https://doi.org/10.1108/IJDI-12-2022-0270>
- Blau, F. D., & Kahn, L. M. (2013). Female labor supply: Why is the United States falling behind? *American Economic Review: Papers and Proceedings*, 103(3), 251–256.
- Caner, A., Guven, C., Okten, C., & Sakalli, S. O. (2016). Gender roles and the education gender gap in Turkey. *Social Indicators Research*, 129, 1231–1254. <https://doi.org/10.1007/s11205-015-1163-7>
- CEİD İzler. (2020, July). *Ankara'da toplumsal cinsiyet eşitliği*. <https://ceidizler.ceid.org.tr/dosya/ankarafinalpdf.pdf>
- Cuberes, D., & Teignier, M. (2016). Aggregate effects of gender gaps in the labor market: A quantitative estimate. *Journal of Human Capital*, 10(1). <https://doi.org/10.1086/683847>
- Çalışma ve Sosyal Güvenlik Bakanlığı. (2025). *Ulusal istihdam stratejisi (2025–2028)*. <https://www.esgb.gov.tr/Media/t0bomvck/ulusal-istihdam-stratejisi-2025-2028.pdf>

- Durceylan Kaygusuz, E., Filiztekin, A., & Göker, Z. G. (2023). *Türkiye’de kadınların işgücüne katılımı: Genel eğilimler, bölgesel ve demografik farklar, tutumlar*. <https://kadingirisimci.gov.tr/media/ffvjlczc/8-türkiye-de-kadınların-işgücüne-katılımı.pdf>
- Durmaz-Aslan, M. (2020). *Female labor force participation in Turkey: The role of the intergenerational links* (Working Paper No. 2020.13). Maison des Sciences Économiques. <https://shs.hal.science/halshs-02900982/document>
- Fernandez, R. (2007, September). *Culture as learning: The evolution of female labor force participation over a century*(NBER Working Paper No. 13373). National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w13373/w13373.pdf
- Galindo-Silva, H., & Herrera-Idárraga, P. (2023). *Culture, gender, and labor force participation: Evidence from Colombia*. arXiv. <https://arxiv.org/abs/2307.08869>
- Goldin, C. (1995). The U-shaped female labour force function in economic development and economic history. In T. P. Schultz (Ed.), *Investment in women’s human capital and economic development* (pp. 61–90). University of Chicago Press.
- Harvard Business Review. (2018, January 31). When more women join the workforce, wages rise—including for men. <https://hbr.org/2018/01/when-more-women-join-the-workforce-wages-rise-including-for-men>
- Kim, K., İlkcaracan, İ., & Kaya, T. (2019). Public investment in care services in Turkey: Promoting employment and gender-inclusive growth. *Journal of Policy Modeling*, 41(6), 1210–1229. <https://doi.org/10.1016/j.jpolmod.2019.05.002>
- Lari, N. (2022). Determinants of female labor force participation. *Cogent Economics & Finance*.
- Nawarathna, C. L. (2025). Female labor force participation and sustainable development: A global study. *International Journal of Research and Innovation in Social Science*. <https://dx.doi.org/10.47772/IJRISS.2025.905000188>
- Tatoğlu, T. (2022). *Drivers of low female labor force participation in Türkiye* (BBVA Working Paper 22/13). BBVA Research.
- Tovar-Restrepo, M., & Blomstrom, E. (2013). Green economies, job opportunities and women. In U. Roehr (Ed.), *Sustainable economy and green growth*. Genanet & German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety.
- Tragakes, E. (2020). *Economics for the IB Diploma* (3rd ed.). Cambridge University Press.
- Tunaı, İ., Kırdar, M. G., & Dayıoğlu, M. (2021). Down and up the “U”: A synthetic cohort (panel) analysis of female labour force participation in Türkiye, 1988–2013. *World Development*, 146, Article 105609. <https://doi.org/10.1016/j.worlddev.2021.105609>
- Turkish Statistical Institute. (2025, March 20). *İşgücü istatistikleri, 2024* (No. 54059). <https://data.tuik.gov.tr/Bulten/Index?p=İsgucu-Istatistikleri-2024-54059>

Türkiye İstatistik Kurumu. (2025, March 6). *İstatistiklerle kadın, 2024* (Press Release No. 54076). <https://veriportali.tuik.gov.tr/en/press/54076>

Türkiye İş Kurumu. (2024). *2023 yılı işgücü piyasası araştırması: Ankara ili sonuç raporu*. <https://www.iskur.gov.tr/medya/hy0pxhof/ankara.pdf>

Uraz, A., Aran, M. A., Hüsamoglu, M., Okkalı Şanalmiş, D., & Capar, S. (2010). *Recent trends in female labor force participation in Turkey* (State Planning Organization of the Republic of Turkey and World Bank Welfare and Social Policy Analytical Work Program Working Paper No. 2). SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2283112

Uysal, G. (2013, July 4). *Incentives increase formal female employment* (Research Brief 13/151). Bahçeşehir University Center for Economic and Social Research. <https://betam.bahcesehir.edu.tr/wp-content/uploads/2015/06/ResearchBrief151.pdf>

Winkler, A. E. (2022). Women's labor force participation. *IZA World of Labor*, 289. <https://doi.org/10.15185/izawol.289.v2>

World Bank. (n.d.). *Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate) (SL.TLF.CACT.FE.ZS)* [Data set]. *World Development Indicators*.

Yu, S., Zhu, W., Mughal, N., Vargas Aparcana, S. I., & Muda, I. (2023). The impact of education and digitalization on female labour force participation in BRICS: An advanced panel data analysis. *Humanities and Social Sciences Communications*, 10, Article 598. <https://doi.org/10.1057/s41599-023-02020-2>

8. Appendix

1A

Text Summary of Interviews

When evaluating the relationship between women's education and employment, it is important to first state the following: Although not all statistics are always collected separately for women and men globally and in Türkiye, this distinction is always taken into account in data on education and employment. That is, the participation rate of women in each educational level, and the number of female graduates, are tracked separately; similarly, the participation rate and graduation rate of men in each educational level are monitored separately.

From an ILO perspective, education is one of the most important factors influencing women's participation in employment. However, this influence is not limited to labor force participation alone. Education also determines women's ability to work in better conditions and remain in employment longer. Recent statistics clearly demonstrate this. For example, the ILO's annual global employment reports show that the labor force participation rates of women with low levels of education remain quite limited, while this rate is much higher for women with university degrees. In other words, as the level of education increases, the likelihood of women participating in the labor force and finding employment increases significantly.

However, the issue is not simply about participating in the workforce; the conditions under which they participate are just as important. As education levels rise, women have the chance to work in more secure, higher-paying jobs with social security and career advancement opportunities. Women who have received vocational and technical training, in particular, can find better job opportunities in sectors requiring technical skills. In contrast, women with primary school education or less are more likely to be concentrated in temporary, low-paying, and informal jobs. Informal work means being deprived of social security, pension rights, and protective rights in cases of illness and childbirth.

Hence, education level influences not only the participation of women in workforce, but also their earning level, working hours, right to social security and their career potential when they work. University educated women have increased rates of participation in the labor force and have a greater likelihood of holding jobs that need expertise or management. On the contrary, less educated women tend to be employed in non-regular, insecure and poorly paid jobs. This directly impacts on their level of income and their working conditions.

The third important point in the relationship between education and employment is the duration of women's employment. As the level of education increases, the continuity of women's working lives also increases. Women with low levels of education often leave their jobs after working for a few years, then return to work, and this situation does not show continuity. However, women with higher education levels can remain employed for longer periods, and may even have the opportunity to work continuously until they become eligible for retirement. Therefore, education plays a decisive role not only in entering the workforce but also in terms of retention in working life.

However, even with increased education levels, a significant gap remains between women and men. While labor force participation also increases for men as their education level rises, the labor force participation rate for men remains higher than for women at every education level. For example, at lower education levels, the participation rate for women remains quite low, while for men at the same level it is much higher. The same image is created among university graduates: despite the rise in the labor force participation of women, male ones are still higher. This demonstrates to us that education does not ensure equality and women experience different social and structural challenges irrespective of their level of education.

First in these barriers are gender roles. Although in most cases, men are the breadwinners in the household, women are supposed to do housework, take care of children, and play a complementary role in the family. Thus, boys are taught since childhood to go to work, to earn money, and to become independent personalities; and women are usually mostly guided to make a family, household duties as well as taking care of children. This disparate socialization has an impact on the place of women and men in the labor force at its inception.

This is the case that presents in the form of occupational segregation of genders within the labor market. Girls are more frequently given those areas that are deemed to be appropriate, which include teaching, nursing, and office work, whereas boys are perceived to be more appropriate in technical, engineering, travel-related, and decision-making jobs. Therefore, despite the role of women in the workforce, they are less prone to holding managerial roles and be included in the decision making processes. This not only brings disparity in employment, but also in career progression.

The lack of proper care services is another major challenge and the burden of care is mostly expected to be taken by women. In Türkiye, women are significantly burdened by the maternity and childcare leave policies. The involvement of men in the role of care is rather minimal, both in legal terms and in the social norms. But in those countries where the working rate of women is more significant, the parental leave is controlled more equally and the work of childcare is distributed between a mother and a father. The reality that the burden of care is mostly left to the women is one of the primary causes that render it challenging to women to engage and stay in the labor market in Türkiye.

Another important issue that restricts the employment of women is discrimination at the workplace. This is one of the indicators of the insufficiency of the representation of women, especially in the technical areas, decision-making processes and top management. Among the most apparent effects of such inequality is the wage gap. It exists both in Türkiye and the world as a whole, with women receiving lower wages compared to men. In Türkiye, women receive lower incomes compared to men when performing similar tasks. One of the major causes of this is the overt or covert obstacles women experience on their career progression. Although the starting salaries might be equal, the disparity in the promotion and advancement opportunities increases the income disparity in the long run.

The same issue can be said about the future jobs. Although artificial intelligence, digitalization, and high-technology expertise is gaining more relevance in the workforce, female students continue to be steered towards social sciences, even as their counterparts in male students are being pushed towards engineering, technology, and technical professions. This bias leaves women disadvantaged in the high paying and highly skilled careers of the future. This is also experienced at the secondary education level. At vocational schools, female students are oriented more towards care and service industries, whereas male students are oriented towards technical industries. This has a direct impact on the industries and the terms and at what level women will be employed in the labor market.

At this stage it is not only a matter of getting a job but also the job itself. Such factors as the existence of a registered job, the level of wages, the duration of work, the right to social security, the possibility of annual and weekly leave, etc. are the basic signs of the decent work. Moreover, the period of employment is also important. There is a need to consider the duration of time women remain in the job, whether they are compelled to quit or whether they can sustain their working lives.

Informal employment is one of the areas that particularly negatively affects women. In Türkiye and worldwide, the rate of informal employment among women is higher than among men in many sectors. Agriculture and domestic services are particularly noteworthy in this respect. A very large proportion of women working in agriculture are employed informally. Similarly, most of the workers in domestic services such as cleaning, childcare, and elder care are women, and informality is quite high in this sector as well. In sectors

where women are concentrated, low wages, weak social security, and limited access to basic labor rights further deepen gender inequality in the labor market.

The ILO has important conventions and recommendations addressing these issues. For example, ILO Convention No. 100 regulates the principle of equal pay for equal work and aims to eliminate the pay gap between women and men. Convention No. 111 aims to prevent discrimination in the world of work. Regulations concerning the prevention of discrimination due to care responsibilities also hold an important place within ILO standards. Furthermore, Convention No. 190 aims to prevent violence and harassment in the world of work. Such international standards require not only legislation but also effective monitoring, active labor market policies, the expansion of care services, mentoring mechanisms, and practices that support the empowerment of women in the world of work.

A key element that distinguishes the ILO's working methods is that its decision-making processes are not comprised solely of government representatives. In addition to government representatives, employer organizations and trade unions also participate in the decision-making process at the ILO. Furthermore, cooperation with civil society organizations is crucial. This is because the most accurate and lasting solutions to problems related to working life can only be developed through the participation of those directly affected by the issue. Therefore, for the ILO, creating an inclusive negotiating platform where all parties can have their voices heard is more important than making quick decisions.

When measuring women's participation in the workforce, we don't just look at employment, unemployment, and labor force participation rates. We also monitor the gender-based wage gap, gender disparities in employment, the distribution of women and men across sectors, violence and harassment in the workplace, gender discrimination in educational settings, and the situation of young people who are neither in education nor employment (NEET). This allows us to understand not only the quantitative aspects of participation but also the areas where inequality is most concentrated.

One of the most inadequately measured aspects in this field is time use, specifically how care work and unpaid domestic labor are distributed between women and men. While Time Use Surveys are invaluable in this regard, they are not conducted frequently enough. Yet, women's time poverty directly impacts not only their participation in the workforce but also their participation in education, skills development, politics, and social life. Therefore, generating more regular and comprehensive data in areas such as care work, time use, violence, and harassment is of paramount importance.

Ankara Survey Questions

1. What is your age group?

- 25–29
- 30–34
- 35–39
- 40–44

2. Which district do you currently live in?

(Open response)

3. How long have you lived in this district?

- Less than 1 year
- 1–3 years
- 4–7 years
- 8–10 years
- More than 10 years

4. How many people live in your household (including you)?

(Open numeric response)

5. What is the highest level of education you have completed?

- No formal education
- Primary school
- Lower secondary school
- Upper secondary school
- Vocational high school
- Associate degree
- Bachelor's degree
- Master's degree
- Doctorate

6. Have you completed any certificates or courses in the last 5 years?

- Yes
- No

If yes:

Please specify.

7. Have you ever worked for pay (including family business)?

- Yes
- No

8. Total years of paid work experience

(Numeric response)

9. Which of the following best describes your job?

- Employee (full-time)
- Self-employed
- Part-time employee
- Temporary or seasonal worker

10. Which of the following best describes your current situation?

- Employed
- Unemployed (actively seeking work)
- Not in the labor force

11. What is your approximate net monthly income?

- Less than 15,000 TRY
- 15,000–19,999 TRY
- 20,000–24,999 TRY
- 25,000–29,999 TRY
- 30,000–39,999 TRY
- 40,000 TRY or more
- Prefer not to say

12. Please select all benefits provided by your job.

- Social security (SGK)
- Paid leave
- Maternity protection
- Flexible working hours
- Remote work option
- Childcare support
- None of the above
- Other: _____

13. How well do your working hours fit your personal and family life?

Scale:

1 = Very unsuitable

5 = Very suitable

14. Do you have children living in your household?

- Yes
- No

If yes:

Children's age groups

- 0–2
- 3–5
- 6–11
- 12–17

Main childcare arrangement

- Parent or relative
- Preschool
- Private daycare

- Nanny
- Other

Monthly childcare cost (TRY)
(Open numeric response)

If affordable childcare were available, would this change your work situation?

- I would start working
- I would increase my working hours
- No change

15. Do you provide care for an elderly or disabled adult?

- Yes
- No

16. What is your main mode of transportation?

- Walking
- Bus
- Metro
- Dolmuş
- Private car
- Taxi

17. Do you feel safe traveling after dark?

Scale:

1 = Not safe at all

5 = Very safe

18. Net monthly household income (TRY)

- Less than 25,000
- 25,000–49,999
- 50,000–74,999
- 75,000–99,999
- 100,000 or more
- Prefer not to say

19. How much control do you have over household income?

- 0%
- 1–24%
- 25–49%

- 50–74%
- 75% or more

20. Would you accept part-time or shift work if conditions were suitable?

- Yes
- No
- Maybe

21. Marital status

- Single
- Married
- Divorced
- Widowed

22. Which of the following statements do you agree with?

- A woman should prioritize family and home over paid work.
- Mothers of young children should not work full-time.
- A man's main responsibility is to earn money for the household.
- Household and childcare responsibilities should be shared equally.
- Women face social pressure when they choose to work.
- Cultural norms in my environment limit women's participation in paid work.
- None of the above.

1B Tables

World Development Indicator 2025 Data Set

YE AR	World Female Labor Force Participa tion Percenta ge (15 +) Global Mean	Educatio nal Attainme nt Percenta ge - Comple ted Lower Seconda ry Global Mean	Educatio nal Attainme nt Percenta ge - Comple ted Post Seconda ry Global Mean	Educatio nal Attainme nt Percenta ge - Comple ted Bachelor Global Mean	World Female Labor Force Participa tion Percenta ge (15 +) (n)	Educatio nal Attainme nt Percenta ge - Comple ted Lower Seconda ry (n)	Educatio nal Attainme nt Percenta ge - Comple ted Post Seconda ry (n)	Educatio nal Attainme nt Percenta ge - Comple ted Bachelor (n)
2010	55,66	65,22	22,89	13,77	186,00	83,00	65,00	43,00

201 1	55,87	64,50	22,86	12,82	186,00	81,00	63,00	39,00
201 2	56,06	65,22	25,02	13,08	186,00	78,00	58,00	45,00
201 3	56,19	67,25	24,59	15,42	186,00	76,00	55,00	61,00
201 4	56,30	63,66	23,58	16,73	186,00	87,00	57,00	78,00
201 5	56,59	65,95	27,51	17,02	186,00	89,00	54,00	83,00
201 6	56,76	67,86	26,84	18,07	186,00	85,00	58,00	83,00
201 7	56,87	65,03	24,45	16,56	186,00	96,00	74,00	95,00
201 8	57,04	65,74	28,43	17,96	186,00	97,00	60,00	95,00
201 9	57,29	67,78	26,23	18,07	186,00	100,00	74,00	109,00
202 0	56,11	75,77	31,04	21,72	186,00	77,00	61,00	81,00
202 1	56,84	71,72	29,59	21,77	186,00	78,00	59,00	78,00
202 2	57,56	68,93	30,59	20,07	549,00	100,00	70,00	100,00
202 3	58,42	75,65	34,18	22,91	183,00	77,00	59,00	78,00
202 4	58,73	70,19	35,61	23,69	181,00	26,00	17,00	27,00

TUİK 2025 Data Set

YEAR	Turkey Female Labor Force Participation Percentage (15 +)	Turkey Educational Attainment Percentage – Completed Lower Secondary	Turkey Educational Attainment Percentage – Completed Post Secondary	Turkey Educational Attainment Percentage – Completed Bachelor
2010	25,13	38,46	9,85	8,94
2011	26,15	39,30	11,40	10,45
2012	26,63	39,72	12,07	11,10
2013	27,87	40,77	13,92	12,71
2014	29,89	45,70	14,98	13,72
2015	31,28	49,45	16,39	15,03
2016	32,38	53,51	17,23	15,84
2017	33,42	54,44	18,00	16,20
2018	34,12	57,24	18,80	16,88
2019	34,32	64,06	19,54	17,49
2020	30,78	65,53	20,69	18,57

2021	32,85	66,64	22,03	19,45
2022	35,06	67,63	22,85	20,15
2023	35,79	68,48	23,34	20,51
2024	36,75	69,21	23,99	21,02

Correlation Results Of The TÜİK Data

CORRELATION	Turkey Female Labor Force Participation Percentage (15 +)	Turkey Educational Attainment Percentage – Completed Lower Secondary	Turkey Educational Attainment Percentage – Completed Post Secondary	Turkey Educational Attainment Percentage – Completed Bachelor
Turkey Female Labor Force Participation Percentage (15 +)	1	0,899337127	0,931793601	0,934984409
Turkey Educational Attainment Percentage – Completed Lower Secondary	0,899337127	1	0,979733926	0,976916451
Turkey Educational Attainment Percentage – Completed Post Secondary	0,931793601	0,979733926	1	0,998967434
Turkey Educational Attainment Percentage – Completed Bachelor	0,934984409	0,976916451	0,998967434	1

Regression Statistics of the World Bank Data

Regression Statistics	
Multiple R	0,88788186
R Square	0,7883342
Adjusted R Square	0,75444536
Standard Error	27,5781785
Observations	45

Significance				
<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>F</i>

Regression	3	118970,73	39656,9106	52,1420044	4,7261E-14
Residual	42	31943,349	760,555931		
Total	45	150914,08			

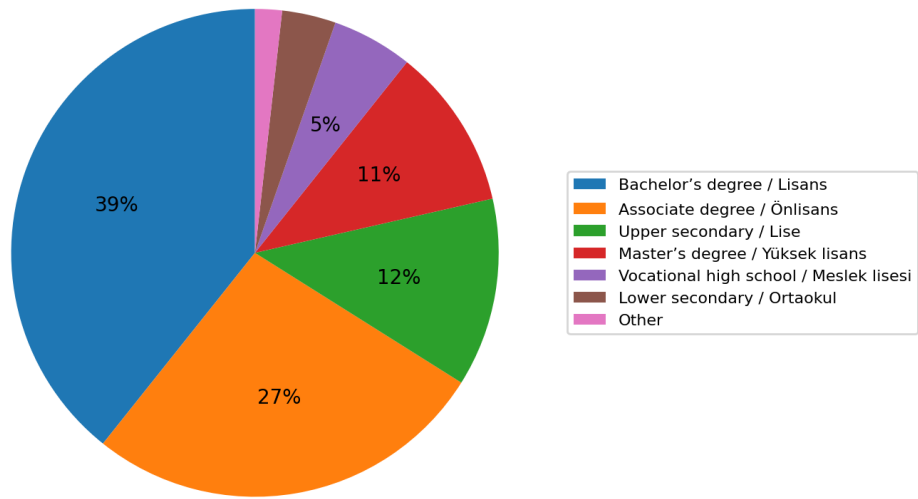
<i>Regression Statistics</i>	
Multiple R	0,20215142
R Square	0,04086519
Adjusted R Square	-0,0293154
Standard Error	16,4478031
Observations	45

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	472,578084	157,526028	0,58228624	0,63000885
Residual	41	11091,7393	270,530227		
Total	44	11564,3174			

Ankara Survey Results

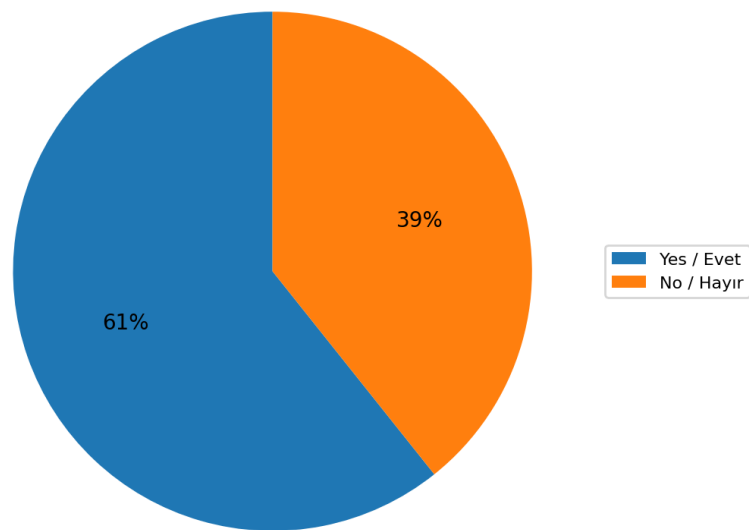
Highest education completed (proxy for human capital).

Highest education completed

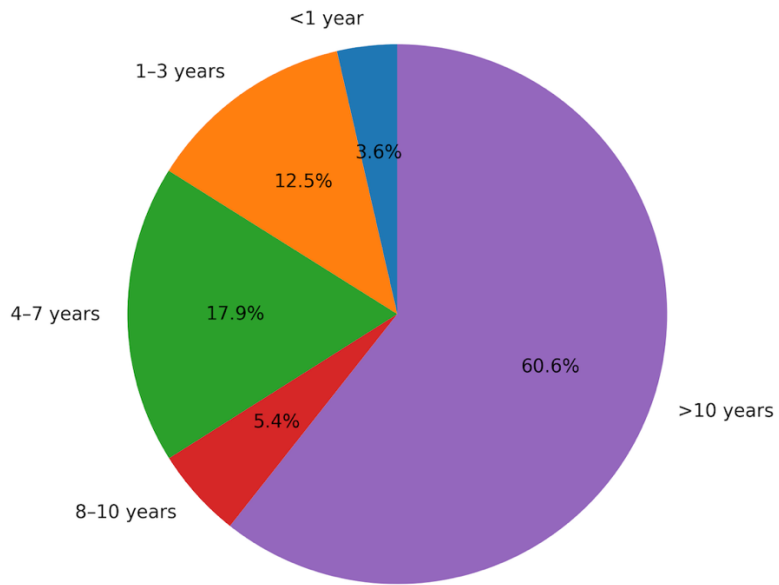


Children in household (household constraint indicator).

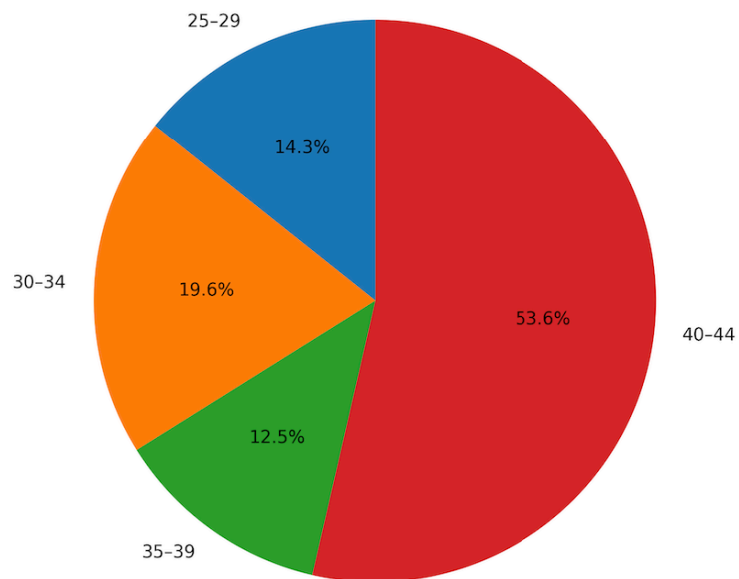
Children in household



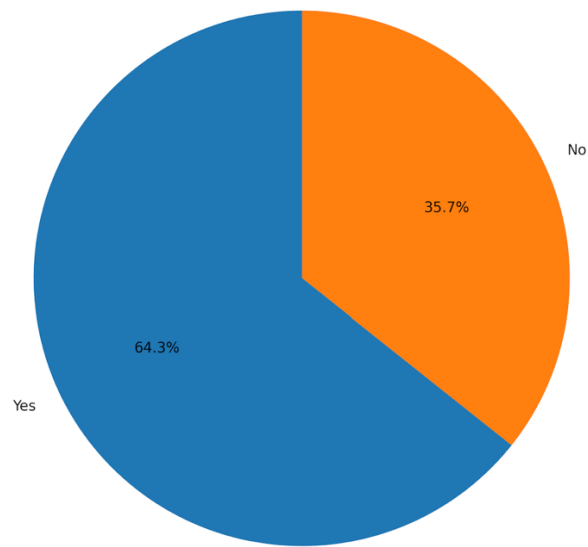
Length of Residence in District



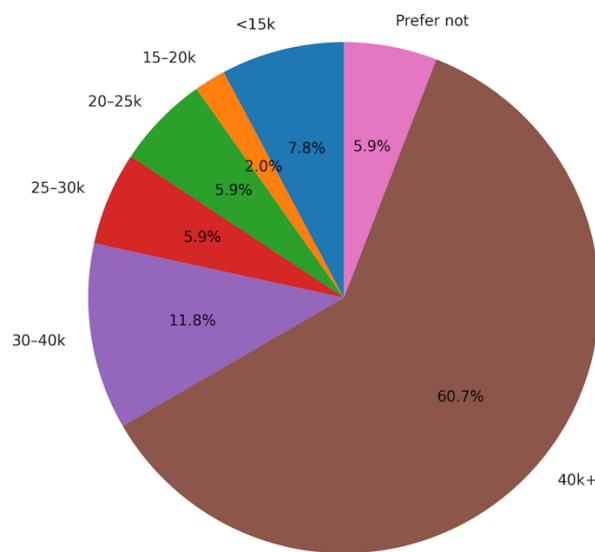
Age Group of Respondents



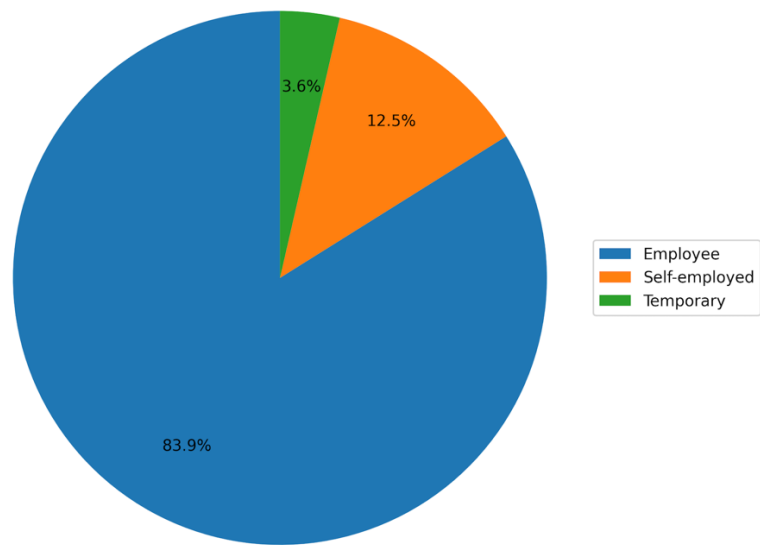
Certificates or Courses Completed in the Last 5 Years



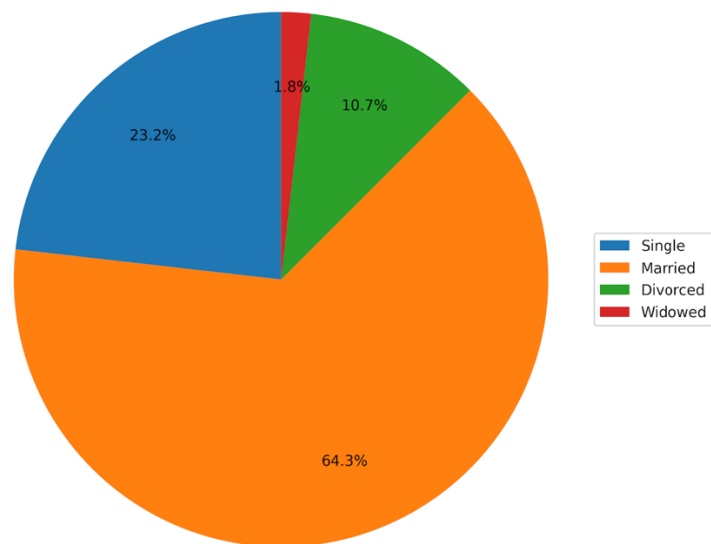
Monthly Net Personal Income



Current Job Type



Marial Status



Country List (mentioned in footnote 22)

South Africa

Albania

Armenia

Philippines

Guatemala

Honduras

Malawi

Jordan

Nepal

Maldives

Ghana

Benin

Angola

Bangladesh

Mauritania

Namibia

Togo

Nigeria

Lesotho

Cote d'Ivoire

Kenya

Cameroon

Comoros

Liberia

Madagascar

Pakistan

Burkina Faso

Cambodia

India

Zambia

Rwanda

Myanmar

Senegal

Tanzania

Uganda

Gambia, The

Sierra Leone

Niger

Ethiopia

Papua New Guinea

Chad

Congo, Dem.Rep.

Mali

Guinea

Timor-Leste