

# Woman Work Participation in Yogyakarta Insights from a Comprehensive Study

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**General background:** Women's participation in the labor market has long been recognized as a critical driver of household welfare and national economic growth, yet disparities persist across regions. **Specific background:** In Indonesia, particularly the Special Region of Yogyakarta, women's labor force participation remains considerably lower than men's, reflecting enduring socio-cultural constraints. **Knowledge gap:** Despite growing research on gender and employment, limited attention has been given to how intersecting factors of household roles, education, and social norms shape women's labor choices in this region. **Aims:** This study investigates the determinants of women's labor market engagement using data from the National Socio-Economic Survey (Susenas), focusing on individual and household characteristics. **Results:** Findings reveal that only 38.5% of women participate in the labor force compared to 54.8% of men, with a gap of 16.3%. Marital status, childcare and eldercare responsibilities, educational attainment, and discriminatory practices substantially influence women's employment decisions. **Novelty:** Unlike prior studies, this research highlights the dual burden of childcare and eldercare as critical, often overlooked barriers limiting women's opportunities. **Implications:** The results underscore the need for targeted policies addressing structural and cultural obstacles, thereby fostering gender equality, enhancing household resilience, and supporting sustainable economic development.

## Highlights:

- Women's labor participation in Yogyakarta remains significantly lower than men's.
- Caregiving roles for children and elderly strongly limit women's employment.
- Policies are needed to address socio-cultural and structural barriers.

**Keywords:** Gender Equality, Labor Force Participation, Household Well-Being, Social Norms, Care Responsibilities

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## Introduction

### A. There exists a significant disparity between the percentages of female and male workers in Indonesia.

Indonesia's economy has made considerable progress since the global financial crisis 1998. In the last decade, Indonesia recorded the largest GDP among ASEAN countries, with 1.07 billion USD in

2021 [1]. One of Indonesia's economic development achievements is the shift in the business sector's dominance from agriculture to the manufacturing and service industries. [2]. It is recognized that volatility in the manufacturing and services sector is faster, which can boost the economy more effectively. In addition, employment in the industry consistently rises every year, and employment in the agricultural sector is projected to shift. [3].

Although Indonesia's economy has developed, gender-based labor absorption still needs attention. There is a high gap between the proportion of female and male workers in Indonesia (Figure 1). During 2017-2021, the female labor force participation rate in Indonesia stood at 38.5 percent, while that of men was 54.8 percent. In other words, there was a gap of 16.3 percent. This gap is the highest among other countries such as Brunei Darussalam, Thailand, and the Philippines. Meanwhile, the smallest labor participation rate gap is in Vietnam and Singapore. Furthermore, the trend of female labor participation in Indonesia has yet to make significant progress. In 2021, the female labor force participation rate in Indonesia was 52.03 percent., which is not much different from the 2000 figure of 51.6 percent. In other words, the number of women working in Indonesia has stagnated [4] [5]

**Figure1.** Average Percentage of Labor Force Participation by Gender during 2017-2021

The rate of female labor participation in Indonesia is suboptimal. In addition to the high gap between male and female labor, the development of female labor absorption also tends to remain unchanged. Disparities in labor participation also indicate a misallocation of the workforce's talents and capabilities, hindering maximum productivity and economic growth. Prior research has validated the advantages of female labor participation for the economy in emerging and developed nations. Ustabaş and Gülsoy (2017) identified a favorable correlation between female labor force participation and economic growth in their study done in Turkey, which examined economic growth by GDP per capita. Eliminating obstacles to women's participation in the labor market can enhance economic performance. Na-Chiangmai (2018) also found similar results in Thailand. The female labor force participation rate positively influences economic growth. However, equal qualifications and opportunities for female labor are still limited compared to men. The involvement rate of women in the labor force substantially enhances economic development across 127 nations [7] The International Labor Organisation estimates that a 25 percent reduction in the gender gap in labor participation may augment world GDP by USD 5.3 trillion. [8].

Women have more barriers to entering the labor market than men. These barriers are related to social and cultural norms. The existence of unwritten rules in society regarding gendered standards of behavior means that women are limited in their choice of jobs and where to work. Some findings from previous research support this. For example, in Pakistan, women spend five times more time doing household chores than men [9]. In Indonesia, marital status and the presence of young children significantly hinder women's labor market participation. This suggests that household chores and childcare have always been imposed on women [10] In Iran, the division between professional employment and household care significantly contributes to stagnation in the participation rate of women in the labor force [11]

Increasing labor participation can provide paid work for women and open up other opportunities for women. The ability to exercise decision-making authority within the family influences the well-being of its members, empowers women, diminishes domestic violence, and facilitates engagement in the political arena. [10]. Higher opportunities for women to work can increase household income and welfare, advancing the national economy. Consequently, examining and analyzing the facilitators and obstacles to women's participation in the labor market is essential. Obstacles to women's participation in the labor market may arise from both demand and supply factors. The supply side includes women's attributes, including educational attainment, marital status, age, presence of young children, talents, and additional factors. Simultaneously, the demand side is influenced by the labor market and environmental factors, such as the proximity of industries, accessibility of roads, and availability of healthcare facilities in women's residential areas, among

others.

Prior research indicates that the supply side exerts a greater influence on women's labor force participation rate. Kiani (2013) found that higher education and lower household income are the dominant factors preventing women from participating in the labor market in Pakistan. Meanwhile, in OECD countries, education and female fertility rates are the main supporting factors in increasing labor force participation [13] Education also supports women's employment in Morocco, although the effect has decreased. Moreover, the existence of married women and other women with special requirements has diminished the likelihood of women's participation in the labor market [14]. Education and marital status were identified as significant factors influencing women's participation in the labor market in Qatar. [15] In Indonesia, the primary factors that motivate women to engage in employment are age, education, marital status, and the accessibility of infrastructure in their vicinity [16]. Sasongko et al. (2020) using macro data, we found that education and minimum wage drove women to work.

In Indonesia, 54% of working-age women participate in work participation, while 82% of working-age men do so. The fact that this rate has remained almost unchanged over the past 20 years is interesting. The COVID-19 pandemic has disproportionately affected women. Many women in Indonesia and around the world depend on income from industries hit hard by the pandemic, such as retail, hospitality, and the textile industry. Even more, women are in labor participation, but the effects of their labor are difficult to measure, and they have less access to social safety nets [4], [6].

According to Pratomo, (2015) underemployment is an essential indicator of labor market performance. The Central Bureau of Statistics characterizes underemployment as working fewer than 35 hours per week while being open to accepting more employment, inadvertently working less than standard hours. Underemployment signifies that an individual's labor potential is not being completely exploited. This does not pertain to part-time employees, including housewives and students, who work fewer than 35 hours weekly and are unwilling to undertake additional or supplementary labor (voluntarily working less than standard hours).

Indonesia's economy has progressed quite rapidly since the 1998 crisis. Indonesia has the highest GDP in ASEAN, one of which is due to the development of the manufacturing and service industry sectors. However, regarding labor absorption, the allocation in the labor market is still not optimal. The disparity between male and female labor is notably significant. Indonesia has the highest gender labor gap in the ASEAN. In addition, the female labor participation rate in Indonesia has stagnated since two decades ago. This misallocation of labor can hamper productivity, resulting in a slow economic growth increase. Previous studies in both rich and emerging nations corroborate this, revealing a favorable correlation between female labor participation and economic growth.

Numerous factors might affect women's engagement in the labor market, with the most significant impeding social and cultural norms. A stigma is attached to women being responsible for caring for the household or only working part-time and helping out. Findings from previous research confirm that when women work, it positively affects household welfare. Furthermore, women's engagement in employment not only offers financial incentives but also facilitates decision-making within the household, reduces domestic violence, and broadens political options.

This study aims to analyze and identify the supporting and inhibiting factors that inhibit women's participation in the labor market inside the Yogyakarta Special Region. The analysis employs one year of data from the National Socio-Economic Survey (Susenas). This is done so Indonesia's female labor participation level can be more comprehensively mapped. Determinants of labor demand and supply were included in the analysis, comprising individual attributes (age, education, marital status, etc.) and household attributes (number of household members, presence of young children, presence of handicap, residential location, etc.). This study's findings may offer recommendations for policy development aimed at enhancing women's labor participation to bolster the national

economy.

## Literature Review

### A. Labor Force and Economic Growth

Several prior empirical studies have examined the role of human capital investment and its correlation with economic productivity and growth. This is seen in nations' sustained growth and development, primarily driven by productivity enhancement. [19]. The viewpoint of labor participation and the industrial sector is essential to the domestic economy. The initial domain to examine gender in employment is the neoclassical framework. It is a straightforward model that does not challenge the theoretical underpinnings and solely necessitates accurately examining observable reality. The labor market, by supply and demand, indicates that economic activity is most stimulated and appealing when compensation is considered on its whole. Since the 1960s, the concept of job searching has transformed. This theory forecasts the actions of unemployed job seekers confronting increasing living expenses while they seek information regarding prospective earnings.

Economic Growth issues have fuelled discussions on the forces determining economic growth and development. If economic growth is dynamic, future forces can be forecasted with proportional components. According to classical economics, economic growth is determined by investment and expansion of productive capacity. Neoclassical economists identified three determinants of a nation's economic ascendance and decline in the 20th century: capital, labor, and growth. This adequately explains the economic growth performance of capitalist countries. The faster these components are utilized, the higher the economic expansion. [20], [21], [22].

### B. Women's Labor Force

The persistent low female labor participation is not exclusive to Indonesia, notwithstanding robust economic growth, declining fertility, and increasing female education levels. India has had swift economic progress; nonetheless, the female labor participation rate of 18 percent remains exceedingly low. Klasen and Pieters, 2015 determined that the stagnation of female labor participation in urban India since the 1980s is primarily attributable to the rise in men's education and income; alterations in the sectoral composition of the economy, characterized by a reduction in employment within agriculture and manufacturing—sectors that typically employ a greater number of unskilled women; and a diminishing impact of secondary and tertiary education over time [23].

In addition, both Afridi et al.(2018) and Andres et al. (2017) examined the reduction in female labor force participation in rural regions of India [24], [25]. Through several methodological approaches, they determined that elevated education levels among married individuals and steady family income were the primary factors contributing to the reduction. Notwithstanding the rise in women's educational attainment, the Middle East and North Africa sustained a low and consistent female labor force participation rate. Gaddis and Klasen (2014) suggest that conservative social attitudes regarding women's employment may somewhat elucidate this trend. Conversely, Latin American nations had swift economic growth in the latter half of the 20th century, accompanied by a significant rise in female labor force participation [26]. Gasparini and Marchionni (2017) ascribe the increase in female labor participation to enhanced educational attainment among women and lower fertility rates. Alterations in the economy's sectoral composition exert negligible effects on women's involvement. In Latin America, the increase in female labor participation has decelerated over the last twenty years [27].

Comola and Mello, (2009) analyzed the factors influencing employment and income within the Indonesian labor market. They apply a multinomial logit model to assess labor market status (e.g., jobless, employed in the formal sector, or engaged in the informal sector) using Sakernas data from

1996 and 2004 [28]. Their emphasis is not explicitly on gender; rather, they observe that women residing in high-dependency ratio homes are less likely to engage in formal sector jobs and more prone to inactivity compared to those in low-dependency households. Alisjahbana and Manning, (2006) demonstrate that both marital and socioeconomic status influences women's labor participation choices. Married women from impoverished households are likelier to engage than those from affluent households [29].

## Method

### A. Data

This study utilizes secondary data sourced from the National Socio-Economic Survey (Susenas) provided by the Indonesian Central Bureau of Statistics. Susenas is an annual survey that can represent the entire area of the Yogyakarta Special Region, with a sample of around 3,996 households and almost 13,092 individuals. Susenas collects information and data in each survey, which consists of two modules: the KOR module and the expenditure/consumption module. The KOR module of Susenas provides data on household members, encompassing age, gender, marital status, and educational attainment. This module also contains information on employment, health issues, fertility, and other household variables.

In the labor section of Susenas, it is possible to know whether adult women are working and the status of the work done by women. In addition, one of the advantages of Susenas data is that all household members are also interviewed so that it can be known precisely whether young children need care and whether there are older adults in the household. This information is necessary as prior research indicates that the presence of young children and the lack of a carer significantly affect a woman's employment decisions. Additional information, like the number of household members, individual attributes, and household factors, can influence women's engagement in the labor market. The data pertinent to this study, believed to affect women's employment decisions, is encapsulated in Table 1. This study utilizes Susenas data from the year 2022.

No.	Variable	Operational Definition
<b>Dependent Variable</b>		
1.	<i>Labor Participation</i>	The household head labor participation dummy variable is 1 if they have participated and 0 otherwise.
<b>Independent Variable</b>		
<b>Household Demographic</b>		
2.	<i>HH Elder</i>	The total number of elderly individuals in the home
3.	<i>HH Child Under 5</i>	The total number of households among members
4.	<i>HH Parent Educ</i>	The years of Parent Education
<b>Household Head Demographic Factors</b>		
5.	<i>HH Age</i>	Age of the household head as of 31 December 2022 (in years)
6.	<i>HH Education</i>	The household head's educational attainment is classified as follows: 1 for primary education, 2 for lower secondary education, 3 for upper secondary education, and 4 for tertiary education.
7.	<i>HH Married</i>	The binary variable representing household marital status is assigned a value of 1 for married and 0 for all other statuses.
<b>Household Head Socioeconomic Status</b>		

8.	<i>HH Housing</i>	Household housing status, equal to 1 if unhabitable housing and 0 if habitable
9.	<i>HH Media Accessibility</i>	The dummy variable representing household media access is assigned a value of 1 for "Accessed" and 0 otherwise.
10.	<i>HH Social Media Activity</i>	The dummy variable of household social media activity equals 1 for Accessed and 0 otherwise.
11.	<i>HH MSME Ownership</i>	The household MSME ownership dummy variable is assigned a value of 1 for ownership and 0 for non-ownership.
12.	<i>HH Working Sectoral</i>	The labor sector's categorical variables are the primary sector, the secondary sector, and the tertiary sector.

**Table 1.** Variables used as predictors of women's decision to work

### B. Estimation strategy

The determinants of women's labor force participation are estimated by regressing independent factors against the binary dependent variable of women's participation status, where 1 indicates employment, and 0 indicates non-employment. The estimation analysis is conducted using a probit model with the following equation:

(1)

where  $\Omega$  represents the set of individual, household, and village attributes previously delineated. The analysis will be differentiated by gender to determine the difference between male and female labor force participation, by region in rural and urban areas, and by age and cohort to examine whether age-cohort differences influence labor participation outcomes.

Panel data estimation enables projections of female labor participation for the forthcoming decade. Furthermore, the province within the Yogyakarta special zone can delineate the status of female labor participation to acquire a more thorough understanding of employment dynamics. All analyses were conducted using Stata 17.0 data analysis software.

Multinomial logistic regression is a development of binary logistic regression, which in this study aims to analyze samples derived from Susenas. The multinomial logistic regression model is appropriate for forecasting the likelihood of the categorical outcome of the dependent variable based on several independent variables. Similar to binary logistic regression, logistic regression employs maximum likelihood estimation to determine category probabilities [30], [31], [32].

Logit equation in general form:

(2)

Furthermore, based on the logit equation above, Along with the total p-independent variables, two new logit functions will be established as seen below:

(3)

(4)



Based on the research conducted on the dependent variable (Y) can be defined as women's labor participation, namely:

Y = 1, Access to work participation, 0 other

Finally, after identifying the *logistics regression* formation equation, the following econometric model is obtained:

(5)

## Findings and Discussion

### A. Determinants Between Household Economical Status on Social Economics Behaviour

Our objective is to determine the  $\beta$  coefficient partially through the testing phase. Previous testing stages revealed that each predictor variable impacts the response variable. During this partial test, we will carefully observe and analyze the individual effect of each predictor variable on the response variable.

VARIABLE S	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All	Male	Female	All	Male	Female	All	Male	Female
	All-Region			Urban			Rural		
age	0.000997** (6.28e-05)	-0.00205*** (0.000124)	0.00278*** (9.08e-05)	0.00149*** (8.46e-05)	0.00118*** (0.000168)	-0.000560* (9.03e-05)	0.00151*** (6.13e-05)	-0.00348*** (0.000187)	0.00815***
Lower Secondary Education	-0.147*** (0.0113)	-0.235*** (0.0126)	0.147*** (0.0105)	-0.0845*** (0.00997)	-0.0870*** (0.00178)	0.253*** (0.0619)	-0.492*** (0.00160)	-0.805***	
Upper Secondary Education	-0.274*** (0.0244)	-0.605*** (0.00466)	0.240*** (0.0235)	-0.210*** (0.0254)	-0.343*** (0.00156)	0.309***			
Tertiary Education	-0.195*** (0.0147)	-0.162*** (0.0153)	-0.192*** (0.0157)	-0.339***					
marstat	0.0237*** (0.00183)	0.0455*** (0.00354)	-0.0272*** (0.00250)	0.0224*** (0.00227)	0.0119*** (0.00456)	-0.00545 (0.00288)	0.0342*** (0.00168)	0.0820*** (0.00572)	-0.0438***
mediaaccess	0.0225*** (0.00158)	0.0244*** (0.00290)	0.0188*** (0.00225)	0.00565** (0.00213)	0.0235*** (0.00401)	-0.0743*** (0.00241)	0.0673*** (0.0164)	0.135*** (0.00428)	0.0806***
social media	-0.0162*** (0.00161)	-0.0204*** (0.00300)	-0.0305*** (0.00238)	-0.00361 (0.00254)	-0.00879*** (0.00415)	-0.00676 (0.00216)	-0.0354*** (0.00148)	-0.0237*** (0.00417)	-0.0464***
Child0_4	0.00701*** (0.00144)	-0.0212*** (0.00293)	0.0212*** (0.00215)	0.0171*** (0.00152)	-0.0422*** (0.00491)	0.104*** (0.00193)	-0.00688*** (0.00230)	0.0202*** (0.00364)	-0.0290***
parenteduc	0.0165*** (0.000968)	0.00784*** (0.00439)	-0.0330*** (0.00110)	0.0160*** (0.000553)	0.00744*** (0.00573)	-0.117*** (0.00440)	0.0291*** (0.0112)	0.203***	
elder	-0.0291*** (0.00340)	-0.0553*** (0.00439)	-0.136*** (0.00306)	-0.166***					
Unhabitable Housing	0.0112*** (0.00231)	0.114*** (0.00399)	-0.00859** (0.00360)	0.0292*** (0.00734)	0.154*** (0.00596)	-0.0301*** (0.00292)	-0.00743** (0.00524)	-0.0430***	

MSME	-0.0426***	-0.0234***	-0.0355***	-0.0258***	0.0125***	-0.0364***	-0.0742***	-0.0324***	-0.0737***
(0.00133)	(0.00118)	(0.00250)	(0.00185)	(0.00198)	(0.00317)	(0.00199)	(0.00137)	(0.00406)	
Secondary Sector	0.0247***	0.0147***	-0.0880***	0.0220***	0.0548***	-0.101***	0.0519***	-0.0173***	-0.0396***
(0.00150)	(0.00113)	(0.00380)	(0.00234)	(0.00220)	(0.00530)	(0.00199)	(0.00209)	(0.00564)	
Tertiary Sector	-0.0162***	-0.0460***	0.0259***	-0.00363	-0.00953***	0.0759***	0.0103***	-0.0141***	0.0293***
(0.00159)	(0.00183)	(0.00255)	(0.00223)	(0.00283)	(0.00370)	(0.00249)	(0.00285)	(0.00401)	
o.elder	-	-	-	-	-				
4o.EDUC_L EVEL	-	-	-						
3o.EDUC_L EVEL	-								
o.parented uc	-								
o. Ineligible House	-								
Observatio ns	312,056	169,455	138,525	177,106	94,956	81,008	128,679	62,826	57,286

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 2.** Estimation result

Hartoko, (2019) has been shown that there is a negative correlation between age and workforce participation. This negative association exists because older age reflects low productivity due to the decline in a person's physical and non-physical abilities [33]. [34] throughout the Special Region of Yogyakarta, age has become a barrier for men to access work participation. The same condition also occurs in rural areas, where an inverse correlation exists between age and labor participation for men. Meanwhile, age has become a barrier for women to access work participation in urban areas.

However, Boheim et al. (2021) demonstrated a favorable correlation between age and access to labor participation. Khan and Jin, (2024) stated that incentives in old age have encouraged people to continue to be productive in work participation. Across the Special Region of Yogyakarta, age is not a barrier for women in accessing work participation. The same condition also occurs in rural areas. However, age is not a barrier to labor participation in urban areas.

A high level of education is often juxtaposed with broader employment opportunities. Arifin and Firmansyah, (2017). Generally, educational attainment adversely affects labor participation access throughout the Special Region of Yogyakarta. At the junior secondary school level, males in the Yogyakarta Special Region exhibit an adverse correlation between educational attainment and labor participation access. For females, the negative relationship only occurs in rural areas. Similarly, men in the Yogyakarta Special Region also experience a bad connection at the senior high school level. Meanwhile, at the tertiary level, women in the Yogyakarta Special Region encounter an adverse correlation between educational attainment and access to labor participation.

Eddin Omar Jabak et al. (2024) observed that the inverse correlation between educational attainment and labor market engagement arises from the restricted *skill* set of each graduate. So, a high level of education does not guarantee that a person has sufficient *skills* to enter the world of



work. Not only that, but higher education levels also encourage individuals to be selective in choosing a job, resulting in a decrease in access to labor participation (Choon Wei & Yunn Cinn, 2021).

Furthermore, the condition of married status can be used as a reference to see the correlation to labor participation. Based on the findings in the documents provided, marital status influences labor force participation differently for men and women. For men, being married and having children tends to increase their participation in the labor force due to social norms that support men's role as the main breadwinner in the family [4], [39]. In contrast, for women, getting married and having children, especially young children, tends to diminish their engagement in the labor force. Women with a partner, particularly a spouse, exhibit lower labor force participation rates than women who reside independently. This phenomenon is more evident when couples have at least one child under six, except in sub-Saharan Africa. This discrepancy is attributable to discriminatory social norms and gender stereotypes that reinforce women's role as caregivers while men are encouraged to be breadwinners [40], [41]

Further findings based on accessibility to media are expected to assume a significant role in disseminating information about job opportunities, training, and economic development. With better access to media, individuals can more easily find information on job vacancies, training programs, and other opportunities that can improve their skills, thereby enhancing engagement in the labor market. In line with the findings of Damayanti, (2021) accessibility to media can also help reduce barriers to labor participation for certain groups, such as women or individuals in remote areas, by providing information and opportunities that may not be easily accessible through traditional channels. Meanwhile, social media is often a significant source of distraction. Excessive use of social media can disrupt an individual's focus and productivity during and outside working hours. Prolonged engagement with social media has been associated with heightened levels of stress, anxiety, and depression. Poor mental health can reduce an individual's motivation and ability to engage in the labor market. For example, someone who feels depressed or anxious due to social comparisons made on social media may become less motivated to look for a job or improve their skills [43], [44], [45]

Parents' education level has different effects on male and female labor participation. Nautet and Piton, (2021) state that mothers with high education levels are more likely to reduce their working time after becoming parents, with 14 percent more likely to engage in part-time employment compared to comparable women who do not have children. In contrast, fathers with low education levels tend to have a lower propensity to work part-time after becoming parents, mainly due to strong social norms that encourage them to be the primary breadwinners. In addition, according to Hu et al.(2023) showed that the role of parental education towards women with higher education tends to work as professionals and administrative staff. In contrast, women with lesser educational attainment are more employed in the industrial and service industries. This is inversely proportional to the findings in the Special Region of Yogyakarta, where women with elevated parental education often encounter significant obstacles to labor involvement.

Women are often expected to be the primary carers for elderly family members. When a woman lives in a household with an elderly member, she may have to reduce her working hours or even withdraw from the labor force to offer full-time caregiving. These responsibilities can reduce their employment opportunities and their ability to fully participate in the labor market. When there are elder care needs in the household, women often have to decide to prioritize family care over their careers. This can lead to women missing out on opportunities for career development, promotion, or even basic participation in the workforce [48], [49]

Living in an uninhabitable home can adversely affect the physical health of residents, including women. Unhealthy environments, such as poor ventilation, humidity, or low hygiene, can lead to illness or chronic conditions that require women to be frequently absent from work or even drop out of the labor force to care for themselves or sick family members [50], [51] In many households,

women are often responsible for household maintenance. If homes are uninhabitable, household workloads may increase, forcing women to spend more time and energy coping with these issues, which can reduce the time and energy available for work or career development [52].

Traditionally, occupations in the tertiary sector (including commerce, educational services, healthcare, and administration) are often considered more suited to social roles typically attributed to women, such as caring, teaching, and providing services. Meanwhile, the secondary sector (which includes manufacturing, construction, and heavy industry) is more often associated with physically intensive and risky labor, which has historically been considered more suitable for men [53], [54], [55], [56] Women generally possess superior access to education in disciplines associated with the tertiary sector, such as education, health, and social services. The tertiary sector is also more demanding of interpersonal and administrative skills, which are often more associated with the education and training that women receive. On the other hand, men are more often trained and encouraged to develop technical skills required in the secondary sector, such as engineering, mechanics, and production [56], [57], [58]

The choice of employment sector is also influenced by personal preferences and social values instilled early in life. Women may prefer the tertiary sector due to a work environment that is more stable, secure, and in line with traditional female roles. Conversely, men may be more encouraged to choose the secondary sector due to higher earning potential and masculinity values associated with physical labor. Labor markets frequently mirror and perpetuate the gender division of labor. In numerous nations, work prospects for women are predominantly found in the tertiary sector, while positions in the secondary sector are largely occupied by men. Social barriers, such as gender discrimination and stereotypes, can also limit women's access to secondary-sector employment. [14], [56], [58], [59]

## Conclusion

Based on the information provided, this study investigates women's participation in the Special Region of Yogyakarta, Indonesia, highlighting the significant gender gap in labor force engagement. Despite Indonesia's economic growth since the 1998 financial crisis, female labor force participation remains low at 38.5%, compared to 54.8% for men, with a persistent gap of 16.3%. Factors influencing women's labor force participation encompass social and cultural standards, marital status, childcare obligations, and educational attainment. The research emphasizes addressing barriers to women's employment to improve household welfare and contribute to national economic progress.

In addition, women are often the primary carers for elderly family members, which can reduce their employment opportunities. These responsibilities often force women to prioritize family care over careers, resulting in lost career development and promotion opportunities. Gender discrimination and stereotypes also limit access of women to jobs in the secondary sector, which men dominate.

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