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Deciphering the Factors Influencing Labour Underutilization Between Women and Men in West Java, Indonesia

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Abstract: Exploring unequal employment opportunities, remains a compelling subject. West Java as a province in Indonesia exhibits a higher rate of labour underutilization, particularly in the categories of unemployment and underemployment. While numerous studies have focused on highlighting the consequences of labour underutilization on country's development outcomes and individual well-being, this study aims to investigate the determinants of employment outcomes, considering supply and demand sides at the individual level. Utilizing data from the Indonesian Labour Force Survey (*Sakernas*) in August 2022, this study used separate multinomial logistic models for women and men. The result indicates that gender bias is still pronounced in West Java's labour market attachments. This study puts forth actionable policy recommendations such as implementing education and vocational training programs tailored to enhance women's skills and employability, mandate firms to provide accessible childcare services to support mothers in pursuing employment, and introducing flexible pension schemes for informal workers.

Keywords: Labour Underutilization, Women, Men, West Java, Indonesia.

Introduction

Labour underutilization, also referred to as the underutilization of human capital, tends to have consequences on individuals' well-being and country's development process. Recent research conducted by Hashem (2021) in Egypt discovered that the long-term repercussions of underutilized human capital have a more substantial and significant impact on economic growth compared to its short-term effects. Kumar and Balu (2023) also presented evidence of a decrease in labour productivity in India in the short-run due to human capital underutilization. Labour underutilization also reflects a significant decline in labour market productivity, resulting in reduced national income and posing

challenges of individual social exclusion (Hernández, 2021; Mitchell and Muysken, 2008). Several studies also found that some forms of underutilization have adverse effects on individuals' physical, mental, and psychological well-being (see Pratap, Dickson, Love, Zanoni, Donato, Flynn and Schulte, 2021, for a recent comprehensive review).

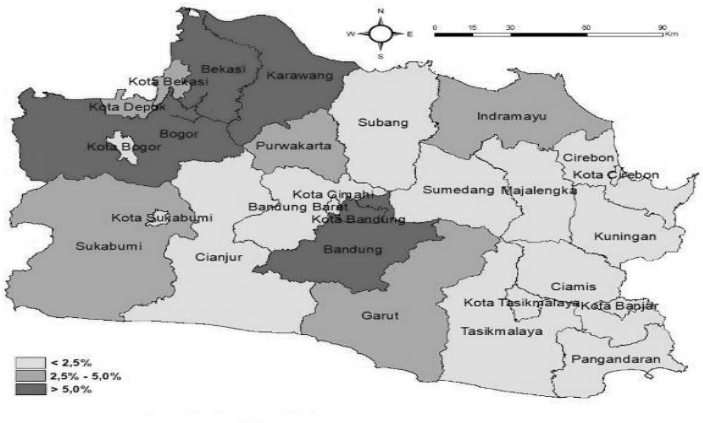
Labour underutilization, in essence, refers to the disparities between the supply of labour and its demand, resulting in unmet employment needs within the population (Gammarano and Mathys, 2018). According to the 19th International Conference of Labour Statisticians or ICLS (cited in Gammarano and Mathys, 2018), there are three distinct categories of labour underutilization: unemployment, time-related underemployment, and potential labour force (or hidden unemployed). The second category is specifically defined as individuals who have an inadequate amount of work hours and are willing to increase their working hours while being available for additional employment. The last category meanwhile is individuals who are not currently employed but have a desire to work, yet face constraints that hinder their ability to actively seek jobs or make themselves available for employment.

There has been a shortage of studies examining the factors contributing to underutilized labour in developing countries. The majority of research has been conducted in developed nations, such as the work in Australia by Wilkins (2006), Baum and Mitchell (2008, 2010, 2022), and Baum, Bill, and Mitchell (2008, 2009), as well as Hernández (2021) in Spain. In the case of Indonesia, there is relatively limited research available, with a recent study by Mahmuda (2020) being one of the few examples. However, the study did not consider the labour demand factors and only focused on a few determinants of time-related underemployment. Moreover, some recent studies in advance countries for instance Hernández (2021) and Baum and Mitchell (2022) emphasis that there are distinct patterns in labour market engagement for women and men.

With this context in mind, our study aims to explore the factors that impact labour underutilization for women and men in West Java, Indonesia. As far as we are aware, this research marks the first attempt to compare patterns of labour underutilization across gender-specific outcomes in the Indonesian context. We will also take into account both of supply factors and local labour demand. Another contribution to the existing body of literature in Indonesia involves the inclusion of additional forms of underutilization, namely, unemployment and the potential labour force. Thus, by understanding the nature of underutilization, this study can provide valuable insights for evidence-based policy interventions to address the issue of labour market attachment effectively.

As per data from the Statistics Indonesia (BPS Provinsi Jawa Barat, 2023), West Java, a province in Indonesia, was home to approximately 48 million people in 2020, representing about 18% of the country's total population. West Java is renowned as the epicentre of manufacturing industries in Indonesia and ranks as the third-largest contributor to the nation's Gross Domestic Product (GDP), contributing an estimated 12%. Despite its economic significance, the province faced substantial labour underutilization challenges. West Java had the second-highest underemployment rate among the four provinces on Java Island, standing at 5.62%. This rate was only marginally lower, by 0.15%, than that of East Java. Additionally, West Java reported an unemployment rate of 8.31%, which is notably higher than both the national average of 5.86% and the highest unemployment rate in the entire country. Given these concerning statistics, it becomes imperative to investigate the factors influencing labour underutilization in West Java, across gender specifically.

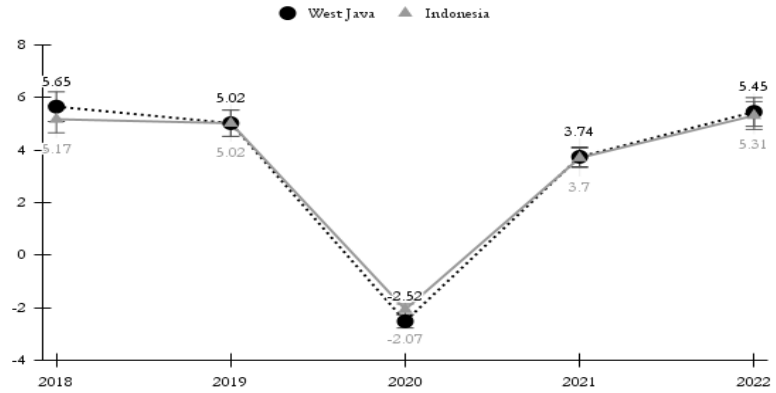
Figure 1. **The Contribution of Districts/Cities GDP to West Java GDP, 2022 (Percent)**



Source**:** Intan and Supriyatin (2023)

In the year 2022, the five primary regions contributing significantly to West Java's economy were Bekasi (15.02%), Bandung City (13.42%), Karawang (10.96%), Bogor (10.94%), and Bandung (5.84%). These areas played a vital role in driving the economic growth of West Java. Prior to 2019, the region's economy had maintained a relatively stable trajectory. In that year, West Java experienced economic growth of 5.02%. However, in 2020, the economic situation took a sharp downturn, with the growth rate plummeting to -2.52%, which was 0.45% lower than the national average, as depicted in Figure 2. Subsequently, there was a recovery in 2021, with West Java's growth rate climbing to 3.74%, and Indonesia's growth rate improving to 3.70%. These positive trends continued into 2022, when West Java's economy rebounded, registering a positive growth rate of 5.45%.

Figure 2**. Economic Growth West Java and Indonesia, 2018-2022 (Percent)**

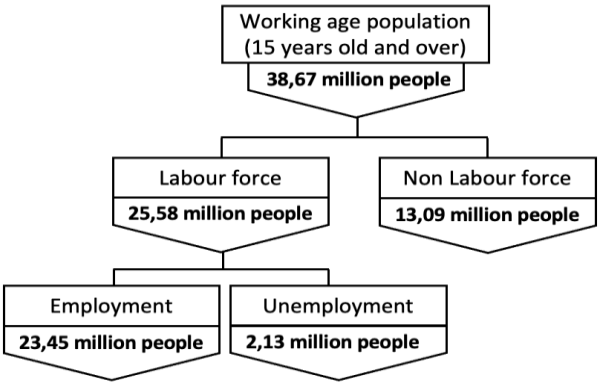


Source: Intan and Supriyatin (2023)

In the context of labour market conditions, West Java boasted a working-age population of approximately 38.6 million individuals, comprising 66% of the total population in 2022 (see Figure 3). Among this demographic, about 66% were actively participating in the labour market, marking an increase of approximately 840 thousand and 1.3 million people from 2021 and 2020, respectively. Concurrently, around 13 million people were not economically active, with 65% of them engaged in

housekeeping. Among the 25 million-strong labour force, 8% remained unemployed. Additionally, 6 million individuals were working less than 35 hours per week, with 5% of this subgroup experiencing time-related underemployment, sometimes referred to as involuntary part-time employment (refer to Figure 4).

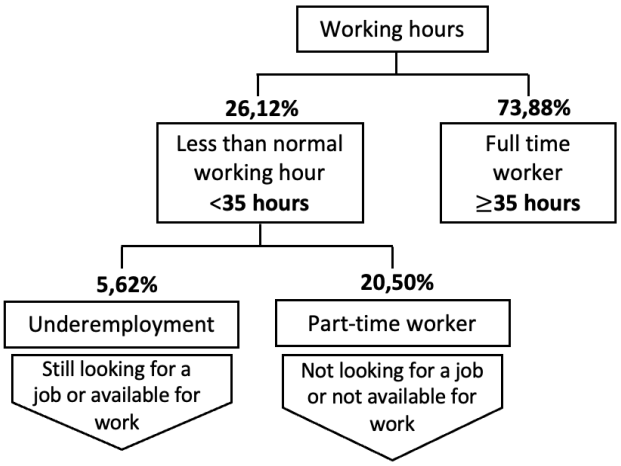
Figure 3. **Employment structure in West Java, August 2022**



Source: BPS Provinsi Jawa Barat (2022)

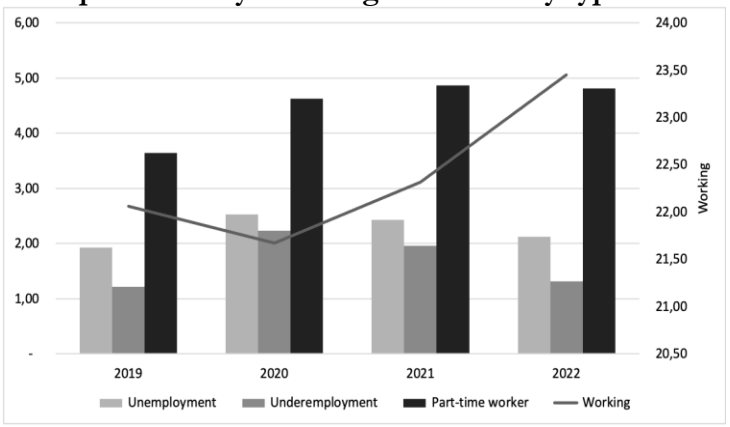
Examining labour conditions from 2019 to 2022 (see Figure 5), the count of unemployed individuals stood at 1.9 million in 2019, escalated to 2.5 million in 2020, and then experienced a decline to 2.1 million in 2022. Simultaneously, there was a noteworthy and rapid surge in employment between 2020 and 2022, resulting in an approximate addition of 2 million employed individuals. Preceding this period, the number of employed individuals witnessed a decrease of around 500 thousand people, attributed to the impacts of Covid-19. Both unemployment and underemployment figures displayed similar fluctuations, with underemployment numbers rising from 1.2 million in 2019 to 2.2 million in 2020. However, this trend reversed, with underemployment decreasing to 1.5 million by 2022. Finally, the count of part-time workers rose from 3.6 million in 2019 to 4.9 million in 2021 before stabilizing somewhat in 2022.

Figure 4. **Characteristic of working people by working hours in West Java, August 2022**



Source: BPS Provinsi Jawa Barat (2022)

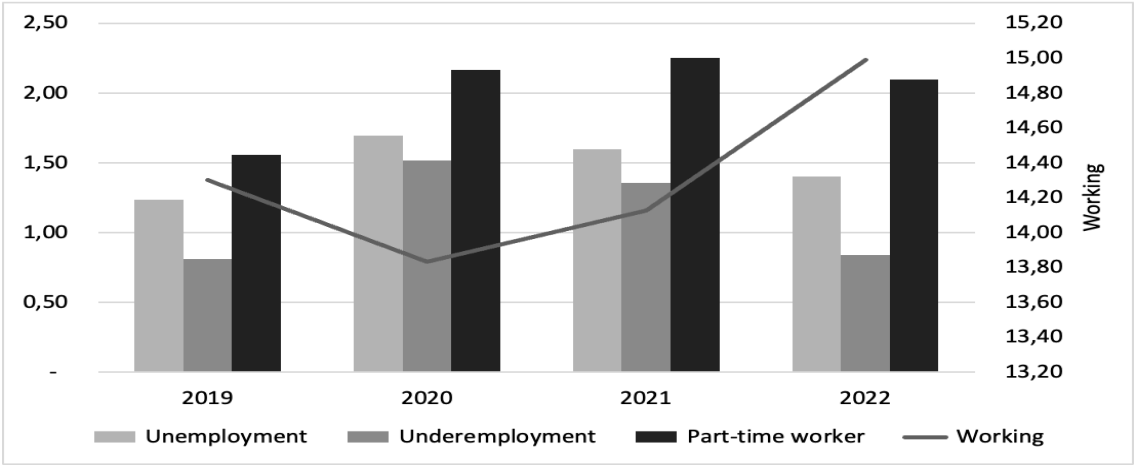
Figure 5. **West Java Population 15 years of age and over by type of activity (in Millions)**



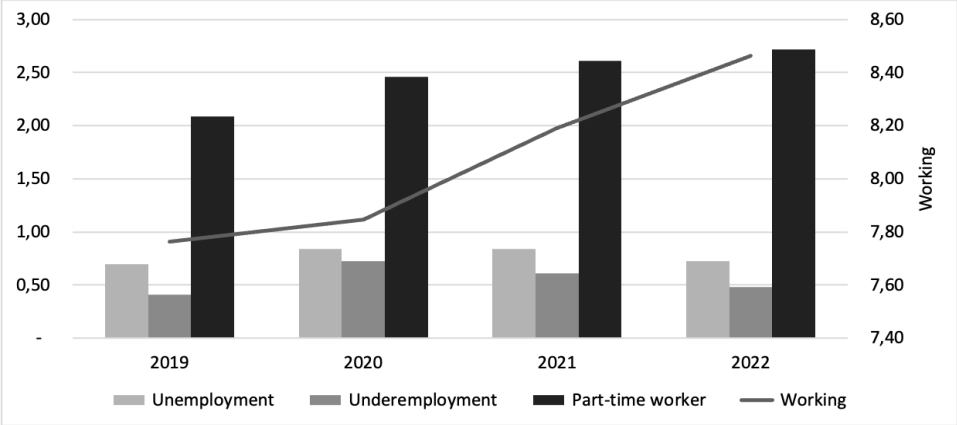
Note: Data based on *Sakernas* surveys in August.
Source: BPS Provinsi Jawa Barat (2021, 2022)

Figure 6 highlights distinctive trends between male and female labour status in West Java. There is a significant difference in the number of female part-time workers compared to male workers, with female part-time workers outnumbering their male counterparts. The number of female part-time workers has been on the rise, at times surpassing 2.5 million workers. In contrast, the number of unemployed females remains consistently below 800 thousand people, and underemployed female workers are generally less than 700 thousand. This indicates that a substantial proportion of female workers in West Java are engaged in part-time work. The trends for male workers show.

Figure 6. **West Java Population 15 years of age and over by type of activity and gender (in Millions)**



Panel a. Female



Panel b. Male
Note: Data based on *Sakernas* surveys in August.
Source: BPS Provinsi Jawa Barat (2021, 2022)

Fluctuations in the number of unemployed, underemployed, and part-time workers. The proportion of male unemployed workers typically falls within the range of 1.2 to 1.7 million people. The number of underemployed male workers fluctuates between 500 thousand to 1.5 million workers. These trends suggest that male workers experience varying degrees of underutilization, with fluctuations in both unemployment and underemployment. The data reveals gender-specific disparities in the labour market of West Java, with females primarily occupying part-time roles and males experiencing fluctuations in both unemployment and underemployment. These variations underscore the need for gender-sensitive labour market policies and interventions in the region.

Literature Review

The Concept of Labour Underutilization

Labour underutilization was a broader framework or a measure of employment inadequacy. The labour market operates as a platform for exchange, with workers offering their time and skills in exchange for contracts and wages from employers. Within this framework, there are four fundamental ways in which inadequate exchange can occur: the absence of a contract, which is essentially unemployment; wages that are insufficient to cover basic needs; not enough hours of work available; and the underutilization of skills (ILO, 2008).

Sarbu and Cimpoies (2020) stated that labour underutilization refers to an unmet need for employment within an economy, stemming from a mismatch between the available labour pool and the requirements of employers. As one of labour underutilization measurements, the unemployment rate is often used as labour market indicator by media and decision-makers worldwide. However, it does not reveal details about the employed or those outside the labour force. Also, it is important to note that having a job does not guarantee a decent one, and employed individuals might not always be better off than the unemployed (Gammarano and Mathys, 2018).

Due to the limitation in the measurement, the 19th ICLS offers the other two additional measurements of labour underutilization: time-related underemployment and potential labour force. The first indicator is defined as a person who has insufficient working time and willing to add working hours

and is available to engage[1]. A Person categorised as time-related underemployment is also known as involuntary part-time[2] or temporary part-time workers based on working hours. Despite there are alternative measures of underemployment, such as those based on income (low-paying jobs) and skills (overqualification) mismatch. Time-related underemployment however stands out due to its clear definition, similarity to the measurement of employment and unemployment, and also widespread global usage (Hernández, 2021; Walling and Clancy, 2010).

Figure 7. **Three categories of labour underutilization (in grey colour) in the composition of the working-age population**

Source: Gammarano and Mathys (2018)

Meanwhile, the potential labour force is divided into two categories. The first group includes individuals who actively sought employment but were presently unavailable, intending to become available in the near future; these are termed "unavailable jobseekers." The second group comprises individuals who desired employment, were available, but did not actively seek it; these are referred to as "available potential jobseekers." Figure 7 below illustrate the labour underutilization categories in the composition of working-age population according to 19th ICLS.

Determinants of Labour Underutilization

At the macro level, classical economic theories attribute changes in unemployment rates to cyclical fluctuations in aggregate demand. Structural changes in the economy, which cause job losses, can also increase unemployment. Baum, Bill, and Mitchell (2008, 2009) provide a model showing employability depends on individual skills and broader factors like local labour market strength and infrastructure (see figure A1 in the Appendix). However, feminist economists highlight that traditional metrics often overlook gender disparities, with women facing higher underemployment due to caregiving roles, hiring discrimination, and wage disparities.

The research about determinants of underemployment or labour underutilization have been previously analysed in the literature (such as Acosta-Ballesteros, Osorno-del Rosal, and Rodríguez-Rodríguez, 2021; Baum et al., 2008; Hernández, 2021; Leppel and Clain, 1988; Mahmuda, 2020; Vuluku, Wambugu, and Moyi, 2013; Wilkins, 2006). Wilkins (2006) highlights multiple factors influencing underemployment, unemployment, and full-time employment. Personal and job-related characteristics play a significant role in underemployment. The study reveals that age, level of

[1]Meanwhile, Statistics Indonesia (BPS, 2022) defines underemployment specifically as an individual who worked under normal working hours (less than 35 hours a week), and he/she is either still looking for a job or available for work.
[2]On the other hand, workers who decide to work part-time rather than full-time is known as voluntary part-time.

education, disability, and past labour market experience similarly impact both underemployed and unemployed individuals. However, there are notable distinctions in the predictors of underemployment and unemployment, such as the influence of family structure, the presence of dependent children, and the frequency of job changes in the previous year. Baum et al. (2008) stated labour underutilization is induced by individual characteristics (education level, age, and gender), personal circumstances (family background, social capital, social network, non-work responsibility), and the impact of local labour market characteristics (as the external factors). For the conceptual framework they separate the factors into the demand and supply sides of labour. Individual and personal circumstances are thought of as factors influencing labour supply. Moreover, the authors put the local labour demand factors such as local unemployment rate. For the result they found that underutilization is associated with a range of individual characteristics and personal circumstances together with the characteristics of the metropolitan local labour market.

The present study seeks to examine gender differences because women experience being underemployed more often than men do. Vuluku et al. (2013) investigated the gender gaps in open unemployment and underemployment in Kenya. Their analysis revealed that, regardless of personal and household characteristics, women were consistently more susceptible to experiencing unemployment or underemployment compared to men. Their research contradicts the opinion of Leppel and Clain (1988), who explain that factors influencing involuntary part-time status have been similar across sexes. Andringa, Nieuwenhuis, and Van Gerven (2015) integrated three categories of individual-level factors related to women's employment and working hours: investment in human capital, household structure, and the gender role attitudes of individual women. They took control variables such as age, education, marital status, motherhood, and gender role attitudes. The findings indicated that the number of hours women work per week is affected by their gender role attitudes, societal gender role attitudes, and expenditure on childcare.

On the other side, Hernández (2021) analysed the main factors associated with labour underutilization, underemployment, and unemployment for both men and women in Spain, both before and after the economic crisis. The study revealed the considerable statistical significance of various variables in explaining the employment status of both genders. It also indicated that economic conditions significantly impact factors related to underemployment and unemployment in Spain. Particularly, the marginal effects estimated for the fourth quarter of 2014 highlighted that older age, particularly between 45 and 54 years, and higher education levels, especially university studies, increase the likelihood of both men and women being adequately employed while reducing the probability of being underemployed or unemployed, particularly for women. In a more recent study conducted in the Australian context, Baum and Mitchell (2022) have expanded the scope of labour underutilization measurements by incorporating the concept of the potential labour force (or "marginally attached to the labour force" (MALF)). The authors observed that the presence of children in a household with only a couple is linked to an increased probability of women experiencing either underemployment or being in a MALF situation compared to becoming employed. Conversely, for single-parent households, the likelihood of both men and women facing underemployment and MALF rises compared to fully engaged. Furthermore, the study found that men were more prone to underemployment when the local region experienced higher levels of unemployment, attributed to the macroeconomic downturn.

There is a limited study in Indonesia that finds the determinants of labour underutilization. A recent study by Mahmuda (2020) examined determinants of marginal part-time employment (also known as time-related underemployment) in Indonesia and found that some individuals tend to face a greater

risk of becoming marginal part-time workers, such as women and people who live in rural areas. In terms of education, there is a fact that a higher level of education will reduce the risk of being a marginal part-time worker. Then it is obvious that education level can be the key to tackling a labour utilisation problem because marginal part-time workers are characterised by social and economic vulnerabilities. However, this study did not consider the determinants of labour underutilization across the segmented market, particularly between women and men. Also, the author did not use the labour demand factors which are important for influencing the individual decision in the labour outcomes as mentioned in previous studies.

In the specific context of female labour force participation in Indonesia, a study by Cameron (2023) reveals a trend where women often withdraw from the labour market post-marriage and childbirth. A notable finding is that women tend to re-enter formal employment when their children reach primary school age, typically around 7 years old. Additionally, there is evidence of women engaging in informal jobs even before their children reach 7 years old (Cameron, Suarez, and Tseng, 2023). This pattern underscores the persistence of societal norms regarding gender roles within households. Similar findings were reported in West Java by Damayanti (2021), indicating that households with more non-productive members (those under 15 or over 64 years old) are associated with a higher likelihood of females being in a non-working status. Conversely, higher levels of education and residing in urban areas increase the probability of female employment. However, the authors employed a dichotomous measurement for labour outcomes, categorizing individuals as either work or non-work. This binary approach may not capture the nuances, as being employed might not always lead to better outcomes, especially in situations of involuntary part-time employment, for instance.

Our paper aims to make at least two significant contributions to the current body of literature. First, we seek to broaden the analysis of the determinants of labour underutilization, distinguishing between women and men in West Java, Indonesia. Specifically, our approach encompasses three forms of labour underutilization: time-related underemployment, unemployment, and the potential labour force. Second, in terms of determinants, our study incorporates a comprehensive range of factors from both the supply and demand sides, aligning with the findings of previous related literature. By pursuing these objectives, we anticipate uncovering distinct results and introducing novel perspectives on labour underutilization in Indonesia, with potential implications extending to a more general understanding applicable to developing countries.

Methods

The main data source for this study is the Indonesian Labour Force Survey (*Sakernas*) conducted in August 2022, a biannual publication by the Indonesian Statistics (BPS). Initiated in 1976, the survey has been a consistent annual event since 1986. Between 1986 and 2014, data collection occurred on an annual, quarterly, or semi-annual basis. Since 2015, the survey has transitioned to a biannual schedule, with the first and second waves taking place in February and August, respectively, utilising a two-stage one-phase stratified sampling approach. Another variable for this study is gathered from BPS at the provincial level, specifically in West Java.

Sakernas offers insights into the labour database, aligning with the ILO's key indicators of the labour market. The data encompasses the working-age population (15 years old and above), covering their employment status, unemployment, underemployment, and those not participating in the labour force. These insights are available at the district/city, provincial, or national levels. Additionally, the data extends to include various employment-related information, such as individual and family

characteristics. Therefore, the information provided by *Sakernas* proves valuable for gauging labour market outcomes and understanding individual and family attributes.

In line with the study's objective and the metrics for labour underutilization, the employment status of respondents (as our dependent variable) is categorized into four groups: adequately employed, unemployed, time-related underemployed, and potential labour force. Since 2016, *Sakernas* has adopted the labour concept from the 13th ICLS and the 19th ICLS, however, BPS's estimates were only published based on the prior concept. This study will follow the national standard measurements for employed and unemployed groups, meanwhile, the two last groups will adhere to the 19th ICLS. BPS defines employed individuals as those engaged in an activity for pay or assisting others in generating pay or profit for at least one hour during the survey week, including unpaid workers contributing to economic activities or businesses. In this study, an employed person is someone working voluntarily, either full-time or part-time[3]. An unemployed person falls into one of the following criteria: (1) Actively seeking employment. (2) In the process of starting a new business. (3) Not searching for work due to the lack of expectations to secure a job. (4) Having a job or business but not having started it yet. The definition of time-related underemployment follows the Indonesian hours of work threshold, 35 hours/week, designed for dividing part-time and full-time workers. We use the respondent's total usual working hours in a week including if they have an additional job. Figure 8 shows the structure of labour underutilization and adequate employed workers that we use in this study.

In compiling our list of explanatory variables, we take into account both labour supply and demand factors. Drawing from previous literature in this field and leveraging the data available, we incorporate a diverse set of characteristics at the individual and family levels to represent the supply side. On the demand side, we adopt the approach of Baum and Mitchell (2022) by incorporating the local unemployment rate at the district level. However, due to the nature of our data source, we cannot observe some potential explanatory variables on the supply side which are suggested by previous literature such as the employment history of their family and their social capital. Additionally, even though we have individual salary data that could serve as a determinant of labour market attachment, its use may introduce endogeneity problems due to causality issues and it does not accurately represent the reservation wage. For a detailed breakdown, Table A1 in the appendix outlines the operational definition and data source for each variable.

Considering the categorical nature of our dependent variable, we apply unordered multinomial logit models and later estimated marginal effects (MEs). The application of multinomial logit regression becomes valuable when estimating the probability of an individual in the four categories of employment outcomes. The method has been used by several studies in the context of determining labour underutilization such as Wilkins (2006), Baum, Bill, and Mitchell (2008, 2009), and Baum and Mitchell (2010, 2022). Following our objective, we construct models for men and women separately and work with cross-sectional data. To ensure robust estimates and address heteroskedasticity within households, we utilise cluster-robust standard errors at the household level. We also include dummy variables for rural areas and districts to account for characteristics that do not change over time, ensuring our analysis captures the unique and constant aspects of these regions, such as infrastructure quality, geographic features, and long-standing socio-economic conditions (see Figure A2 in the Appendix).

[3] Even though our paper focuses on the three forms of labour underutilization, we include the adequately employed category in our dependent variable to maintain the number of observations.

The basic multinomial logistic models can be written as follows (Cameron and Trivedi, 2010):

$$p_{ij} = \Pr(y_i = j|x_{ik}) = \frac{\exp(x_i'\beta_j)}{\sum_{l=1}^{m}\exp(x_i'\beta_l)}$$

where, $j = 1, 2, \ldots, m$, i = 1, …, N. The probability that the outcome, y_i, for individual i is one of m alternatives (in our case, these are adequately employed, unemployed, time-related underemployed, and potential labour force), and conditional on the k regressors x_i such as age, level of education, head of household, marital status, number of household members, unemployment rate, and district. The value of the p_{ij} is in between 0 and 1, $0 < p_{ij} < 1$. The primary focus is examining how various covariates influence the probability of a specific event. The estimated MEs are conducted using STATA17 following the logistic regressions. It is crucial to note that, in our analysis, we use the Marginal Effects at Average (AMEs) which means, when interpreting the coefficient of an explanatory variable, it is essential to assume that the other predictors are held constant (Williams, 2012). Additionally, the estimated marginal effects are unaffected by the reference category of the dependent variable.

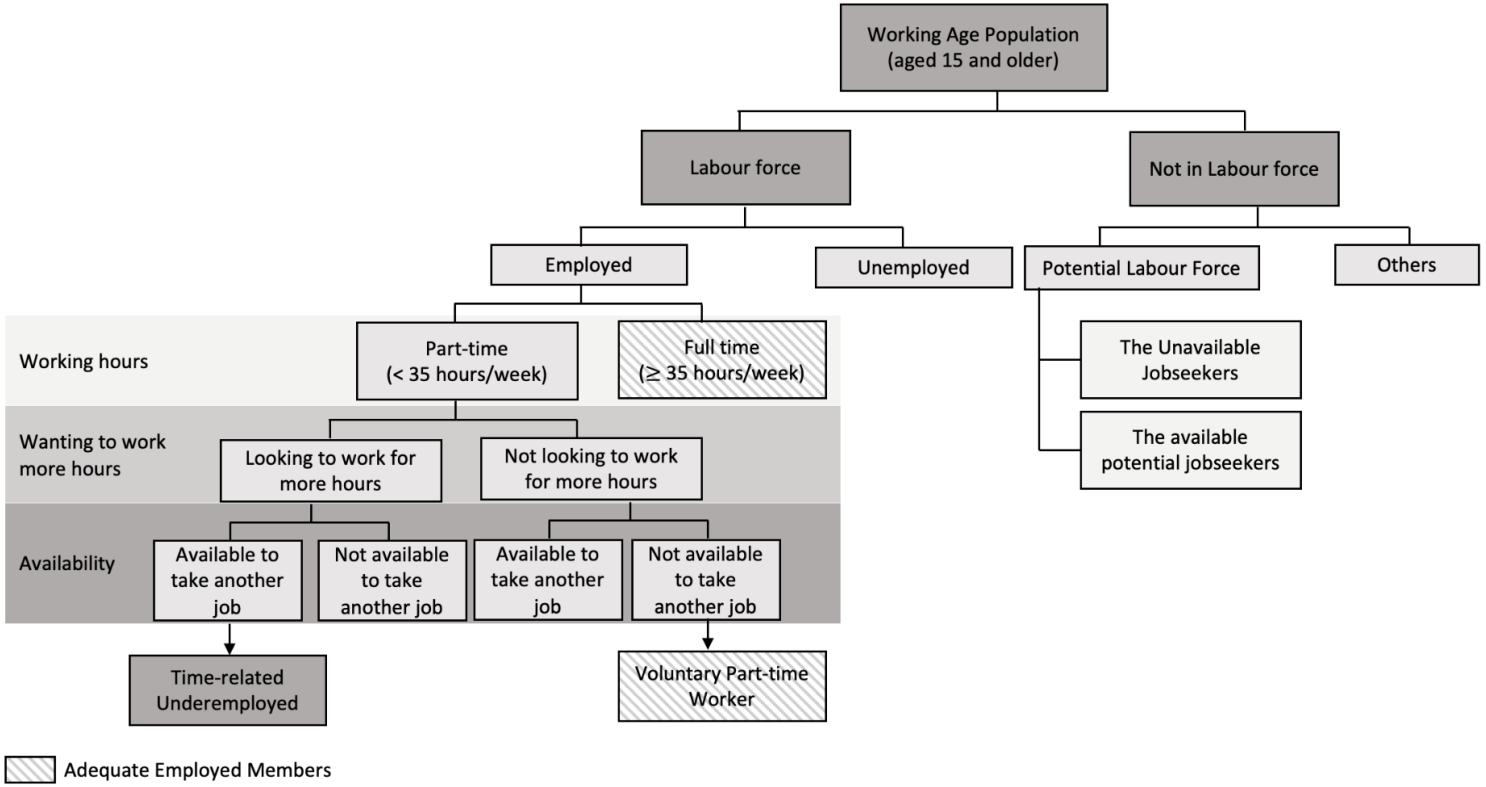
Findings

Out of 55,957, we obtained 37,577 observations of the four categories of labour market outcomes, and approximately 15 percent of them were part of underutilization groups (see Table 1). Regarding gender, males dominated various forms of labour underutilization, except for potential labour force (PLF) status, which encompassed 1480 (or approximately 1 million) women. Nevertheless, when examining various districts (see Figure A2 in the Appendix), distinct patterns of labour market attachment between women and men emerge. In Pangandaran, for instance, the proportion of underemployment to total labour underutilization was higher for men compared to women, and this share was also relatively higher for all genders compared to other districts. Conversely, the proportion of unemployment to total labour underutilization was higher for women compared to men, but this share was relatively lower compared to other districts. It suggests that in Pangandaran, despite a low number of unemployed individuals, all genders tend to face underutilization, with men experiencing it to a greater extent.

Another extreme case is in Banjar which exhibited no proportion of underemployed women, yet their share in the unemployment status was almost equal to that of men and notably substantial, reaching about 60 percent. A contrasting picture also arose in three cities—Cimahi, Cirebon, and Bekasi. The proportion of underemployment for women to total labour underutilization was higher, although Cimahi was almost equal. However, concerning unemployment for men compared to women, the proportion was significantly higher across these cities. Next, regarding the PLF category, in 85 percent of the 27 districts, the proportion of PLF in total labour underutilization was notably higher for women compared to men, exceeding 40 percent, with Bandung having the largest share at approximately 74 percent. Overall, the observed pattern indicates that women and men in the districts exhibit heterogeneous characteristics that influence labour market outcomes, especially in unemployment and underemployment forms. Likely explanations involve gender-based labour market segregation[4], gender norms in a household, and the district's cultural factors.

[4]The analysis of occupational and industrial segregation is not within the scope of this study, but it represents a valuable area for future research.

Figure 8. **The Structure of Labour Underutilization and Adequate Employed Workers**



Source: Authors' framework according to the 19th ICLS and Sakernas Questionary.

Table 1. **Sample and population-weighted estimates – labour market outcomes in persons and within the segmented market in West Java, August 2022**

	Persons		Males		Females	
	Sample Estimate	Population-Weighted estimate	Sample Estimate	Population-Weighted estimate	Sample Estimate	Population-Weighted estimate
Adequately Employed	31,834	21,869,377	19,627	14,021,059	12,207	7,848,318
Unemployed	2,754	638,444	645	441,257	320	197,187
Underemployed	965	2,130,483	1,781	1,402,104	973	728,379
Potential Labour Force (PLF)	2,024	1,442,496	544	392,630	1,480	1,049,866
Total	37,577	26,080,800	22,597	16,257,050	14,980	9,823,750

Source: Authors' calculation using *Sakernas* in August, 2022.

Table A2 in the Appendix provides descriptive statistics for our explanatory variables. On average, our sample was primarily composed of respondents aged 25 to 55, residing in urban areas, and being married without dependent children. Regarding educational attainment, the average completion of upper-secondary education was higher for males compared to other levels, although it was nearly equal to the completion of primary education. Conversely, the mean for females who completed primary school was higher than other educational levels. Men predominantly served as heads of households, while women primarily managed households, dedicating most of their time to domestic responsibilities like childcare. The average household size was below 4, with no elderly residents, suggesting predominantly nuclear families.

Table 2 shows estimated marginal effects for women's and men's labour outcomes probabilities along with district dummies, meanwhile Table A3 in the appendix show estimations without district dummies. Our results showed significant change which signified distinct district characteristics influencing labour market attachment for women and men in different ways. Therefore, it was essential to control for diverse district-level characteristics when analysing gender-specific determinants of labour market outcomes.

The impact of age on labour status is substantial, with gender bias evident in certain age groups. Individuals aged 15-24, regardless of gender, showed a lower likelihood of full employment or a higher probability of underutilization compared to those aged 25-54. Women in this age range experienced more significant effects. However, a noteworthy finding was that only men aged 15-24 exhibited a significantly higher probability of underemployment (approximately 0.8 percentage points or ppts) compared to the reference group. This could be attributed to limited work experience or networks, as well as lower educational attainment among both young men and women compared to older people.

Gender bias in labour status was more pronounced for older workers (55-64 and over 65) compared to economically active adults, except in the underemployment category. Women

in these age groups were more likely to be fully employed and less likely to be unemployed or marginally attached to the labour force. In contrast, men had a lower probability of being adequately employed, a higher likelihood of unemployment, especially in the 55-64 age group, or being marginally attached to the labour force. One potential explanation is that women aged 55 and over tend to be relatively more productive in labour market due to their lesser time allocation in household activities and higher reported health improvements compared to men, as reported by Suriastini, Wijayanti, and Oktarina (2024).

Education level also revealed gender discrimination in labour market engagement. Women with higher educational qualifications, except for those with only lower secondary level, had an increased likelihood of full employment and a decreased probability of unemployment or being marginally attached to the labour force. Conversely, men with post-secondary qualifications had a higher probability of full employment compared to those with a non-educational background (approximately 2.7 ppts). In underutilized states, men with higher than primary school certifications had a lower likelihood of time-related underemployment. Interestingly, men with a secondary level were more likely to be unemployed compared to those who did not finish primary school. These outcomes may be attributed to occupational and industry segregation, contributing to a persistent gender gap in the labour market concerning educational background. Also, the competitiveness of labour market may be associated with the high level of unemployment for men with secondary level backgrounds.

Family characteristics displayed minimal gender bias for being a household head or a primary household manager. However, societal expectations regarding gender roles in the family persisted, with women being perceived as primary household managers and men as breadwinners as shown by the effect size. Further, single parents compared to single men had a higher probability of full employment, 2.1 ppts. Gender differences were observed in the potential labour force category, where married men had a lower probability (about 1 ppts) compared to single men. Married women meanwhile had a higher probability of being marginally attached to the labour force compared to single women, although it was statistically not significant. In couples with children, men were less likely to be marginally attached to the labour force, while women were more likely, indicating the persistence of traditional gender roles. Women in these relationships prefer to spend most of their time on childcare even though they want and are available to get a job.

Regarding household characteristics, gender bias was evident in the number of household members or living with elderly individuals. Women in households with more than four members had a statistically significant higher probability of employment and a lower probability of unemployment or being marginally attached to the labour force. Moreover, living with elderly individuals over 65 seemed to impact women only, making them more likely to be involuntary part-time workers. However, no significant results were found for men in these variables across all labour categories. This suggests that not only having under-five children but also living with elderly individuals is a determinant of women labour attachment, though they could be marginal part-time workers. The impact also depends on the household structure and roles women assume in eldercare and childcare, although this was not explicitly included in the analysis.

Table 2. **Average Marginal Effects**

	Women				Men			
	Employed	Underemployed	Unemployed	PLF	Employed	Underemployed	Unemployed	PLF
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age1524 (0/1)	-0.1504*** [0.010]	-0.0014 [0.004]	0.0669*** [0.006]	0.0850*** [0.008]	-0.0728*** [0.006]	0.0085** [0.004]	0.0381*** [0.004]	0.0262*** [0.003]
Age5564 (0/1)	0.0999*** [0.012]	-0.0181*** [0.004]	-0.0254*** [0.009]	-0.0564*** [0.010]	-0.0298*** [0.008]	-0.0109*** [0.004]	0.0213*** [0.008]	0.0194*** [0.004]
Age65+ (0/1)	0.1393*** [0.023]	-0.0609*** [0.015]	-0.0436*** [0.015]	-0.0348** [0.016]	-0.0021 [0.013]	-0.0390*** [0.009]	0,0159 [0.011]	0.0251*** [0.005]
Primary (0/1)	0.0377*** [0.012]	-0.0006 [0.004]	-0.0214** [0.008]	-0.0157* [0.009]	-0.0034 [0.010]	-0.0061 [0.005]	0,0122 [0.009]	-0.0027 [0.004]
Lower Secondary (0/1)	0.0616*** [0.013]	-0.0066 [0.005]	-0.0505*** [0.010]	-0.0045 [0.010]	-0.0151 [0.010]	-0.0097* [0.005]	0.0212** [0.009]	0.0036 [0.005]
Upper Secondary (0/1)	0.0570*** [0.013]	0.0002 [0.005]	-0.0186** [0.009]	-0.0386*** [0.011]	-0.0077 [0.010]	-0.0116** [0.005]	0.0223** [0.009]	-0.0031 [0.005]
Post-Secondary (0/1)	0.1614*** [0.017]	-0.0052 [0.006]	-0.0253*** [0.010]	-0.1309*** [0.015]	0.0270** [0.013]	-0.0237*** [0.007]	0.0002 [0.011]	-0.0035 [0.006]
HH Head (0/1)	0.1039*** [0.014]	0.0043 [0.004]	-0.0778*** [0.010]	-0.0304*** [0.011]	0.1364*** [0.008]	0.0019 [0.004]	-0.1203*** [0.007]	-0.0180*** [0.004]
Primary Household Manager (0/1)	-0.1090*** [0.010]	0.0199*** [0.005]	0.0364*** [0.005]	0.0527*** [0.008]	-0.0527*** [0.005]	0.0112*** [0.002]	0.0284*** [0.004]	0.0131*** [0.002]

	Women				Men			
	Employed	Underemployed	Unemployed	PLF	Employed	Underemployed	Unemployed	PLF
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Single Parent (0/1)	-0.0052 [0.018]	-0.0012 [0.007]	-0.0015 [0.009]	0.0079 [0.016]	0.0214* [0.011]	-0.0121 [0.008]	-0.0037 [0.007]	-0.0056 [0.004]
Married (0/1)	0.0693*** [0.011]	-0.0096** [0.004]	-0.0721*** [0.007]	0.0124 [0.009]	0.0633*** [0.007]	-0.0109*** [0.004]	-0.0417*** [0.006]	-0.0106*** [0.003]
Married with children (0/1)	0.0266** [0.012]	-0.0146*** [0.005]	-0.0754*** [0.008]	0.0634*** [0.009]	0.0924*** [0.009]	-0.0132*** [0.005]	-0.0493*** [0.008]	-0.0298*** [0.006]
HH member (0/1)	0.0244*** [0.008]	-0.0016 [0.003]	-0.0108** [0.005]	-0.0119* [0.007]	-0.0014 [0.005]	0.0012 [0.003]	-0.0019 [0.004]	0.0021 [0.002]
Living with elderly (0/1)	-0.0067 [0.012]	0.0073* [0.004]	0.0052 [0.007]	-0.0058 [0.010]	0.0069 [0.007]	-0.0060 [0.005]	-0.0009 [0.005]	-0.0000 [0.003]
Local Unemployment Rate	-0.0122** [0.006]	0.0121*** [0.004]	-0.0007 [0.003]	0.0008 [0.004]	-0.0040 [0.004]	-0.0012 [0.002]	0.0063** [0.003]	-0.0011 [0.002]
Rural (0/1)	0.0049 [0.008]	0.0014 [0.003]	-0.0127** [0.006]	0.0064 [0.006]	-0.0033 [0.005]	0.0073*** [0.003]	-0.0044 [0.004]	0.0004 [0.003]
District Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	14980	14980	14980	14980	22597	22597	22597	22597

Note: *p<0.1, **p<0.05, ***p<0.01. Clustered standard errors are in parentheses and at the household level.
Source: Authors' calculations using *Sakernas* in August, 2022

Regarding labour demand factors, a district's higher unemployment rate increased the likelihood of men being unemployed. Conversely, for women, there was a greater probability of underemployment and a lower chance of full employment. Local labour market conditions did not significantly influence marginal attachment to the labour force for both genders. One plausible explanation is that traditionally, men tend to work in sectors sensitive to economic fluctuations, such as manufacturing, construction, and heavy industries. When the unemployment rate rises, these sectors may experience more significant impacts, thereby increasing the likelihood of men becoming unemployed. On the other hand, women often work in sectors like healthcare, education, and services, which are less prone to layoffs but may see reductions in hours or shifts to part-time work. This scenario can lead to higher rates of underemployment among women rather than outright unemployment.

Further, living in rural areas had different effects across gender, with men having a higher probability of underemployment only, while women were less likely to be part of the unemployment category. In rural Indonesia, men might predominantly engage in agricultural or manual labour, which can be seasonal or subject to economic fluctuations, leading to higher probabilities of underemployment. On the other hand, women in rural areas may be engaged in activities that are less prone to underemployment, such as subsistence farming, home-based work, or small-scale entrepreneurship, which might provide more stable income sources.

Conclusion

This paper seeks to analyse the factors influencing labour market outcomes in a segmented market, particularly examining gender disparities in West Java, Indonesia. The study evaluates four indicators of labour market outcomes: full employment, underemployment related to time, unemployment, and potential labour force participation. The latter three indicators are categorized as forms of labour underutilization as defined by the International Labour Organization (ILO) during the 19th International Conference of Labour Statisticians (ICLS). The analysis considers individual-level factors affecting labour supply and local labour demand, represented by the local unemployment rate. Data from the Indonesian Labour Force Survey (*Sakernas*) conducted in August 2022 is utilized for the study. Separate models are developed for females and males, utilizing the multinomial logistic regression technique.

The study highlights that women and men exhibit heterogeneous characteristics influenced by age, education, family roles, and district-level characteristics. Gender-based labour market segregation, societal norms, and cultural factors are crucial role in shaping these outcomes. In this paper, we find that the proportion of labour underutilization for men is higher in various forms of labour underutilization compared to women, except for potential labour force status. However, there is an indication that all genders tend to face underutilization because there might be a low number of unemployed individuals in some areas. On the other side, females dominated various forms of labour underutilization in several cities, such as Cimahi, Cirebon, and Bekasi. This might be caused by the traditional gender roles in Indonesia which expects women to be primary household managers. It makes women tend to spend their time with children when they are married even though they want to get a job. Household composition also influences women's employment probabilities, especially when living with elderly individuals. Besides, the impact of age and education on labour status differs between genders, with older workers and educational qualifications affecting employment probabilities differently for men and women.

Based on our findings, policymakers can use this paper to develop targeted policies aimed at reducing labour underutilization, particularly among women who consistently face greater challenges in accessing employment compared to men. Key recommendations include implementing education and vocational training programs tailored to enhance women's skills and employability. Additionally, policies should mandate firms to provide accessible childcare services to support mothers in pursuing employment, thereby challenging traditional family role expectations. Moreover, initiatives are needed to upgrade skills for older workers, potentially extending the pensionable age and introducing flexible pension schemes for informal workers. These measures collectively aim to create a more inclusive labour market, addressing barriers specific to gender and age demographics while fostering greater economic participation and equity.

This paper has several limitations. Our data does not provide detailed information about several determinants, such as parents' employment history, household or individual wealth, social capital, and other cultural factors. These characteristics are likely to influence labour market decisions. Methodologically, this paper does not consider the Independent and Irrelevant Alternatives (IIA) assumption in Multinomial Logistic Regression. Future research would benefit from performing various tests to verify this assumption. Additionally, future studies might include experimental research. Some areas in West Java exhibit significantly different characteristics in terms of labour underutilization outcomes. Conducting an experimental study could provide more detailed insights into observable characteristics that administrative data cannot capture. Lastly, future researchers might consider expanding the sample size by scaling the study to a national level and accounting for labour underutilization conditions over time.

References

Acosta-Ballesteros, J., Osorno-del Rosal, M. del P., & Rodríguez-Rodríguez, O. M. (2021). Measuring the effect of gender segregation on the gender gap in time-related underemployment. *Journal for Labour Market Research*, *55*(1).

Andringa, W., Nieuwenhuis, R., & Van Gerven, M. (2015). Women's working hours: The interplay between gender role attitudes, motherhood, and public childcare support in 23 European countries. *International Journal of Sociology and Social Policy*, *35*(9–10), 582–599.

Baum, S., & Mitchell, W. (2008). Adequate Employment, Underutilisation and Unemployment: an Analysis of Labour Force Outcomes for Australian Youth. *Australian Journal of Labour Economics*, *11*(3), 187.

Baum, Scott, Bill, A., & Mitchell, W. (2008). Labour underutilisation in metropolitan labour markets in Australia: Individual characteristics, personal circumstances and local labour markets. *Urban Studies*, *45*(5–6), 1193–1216.

Baum, Scott, Bill, A., & Mitchell, W. F. (2009). Employability and labour under-utilization in non-metropolitan labour markets. *Regional Studies*, *43*(8), 1091–1103.

Baum, Scott, & Mitchell, W. (2022). Employment Outcomes for Men and Women Following an Economic Downturn: Labour Underutilisation in Australia. *Indian Journal of Labour Economics*, *65*(1), 85–101.

Baum, Scott, & Mitchell, W. F. (2010). Labour underutilisation and gender: Unemployment versus hidden-unemployment. *Population Research and Policy Review*, *29*(2), 233–248.

BPS Provinsi Jawa Barat. (2021). *Keadaan Angkatan Kerja di Provinsi Jawa Barat Agustus 2021*.

BPS Provinsi Jawa Barat. (2022). *Keadaan Angkatan Kerja di Provinsi Jawa Barat Agustus 2022*.

BPS Provinsi Jawa Barat. (2023). *Provinsi Jawa Barat Dalam Angka 2022*.

Cameron, A., & Trivedi, P. (2010). *Microeconometrics using Stata* (Stata Press College Station (ed.)). TX: Stata Press.

Cameron, L. (2023). Gender Equality and Development: Indonesia in a Global Context. *Bulletin of Indonesian Economic Studies*, *59*(2), 179–207.

Cameron, L. A., Suarez, D. C., & Tseng, Y.-P. (2023). Women's Transitions in the Labour Market as a Result of Childbearing: The Challenges of Formal Sector Employment in Indonesia. *SSRN Electronic Journal*.

Damayanti, K. (2021). Determinan perempuan bekerja di Jawa Barat. *Jurnal Kependudukan Indonesia*, *16*(1), 55.

Gammarano, R., & Mathys, Q. (2018). Avoiding Unemployment is Not Enough an Analysis of Other Forms of Labour Underutilization. In *ILOSTAT Spotlight on Work Statistics* (Vol. 4). https://www.ilo.org/global/statistics-and-databases/publications/WCMS_644467/lang--en/index.htm

Hashem, A. E. (2021). The Impact of Human Capital Underutilization on Productivity and Economic Growth in Egypt. *Economics and Business Quarterly Reviews*.

Hernández, J. E. R. (2021). Factors determining labor underutilization in Spain by gender before and after the economic crisis. *Economic and Industrial Democracy*, *42*(1), 92–115.

ILO. (2008). Beyond Unemployment: Measurement of Other Forms of Labour Underutilization. *18th International Conference of Labour Statisticians*, *December*, 1–35.

Intan, M., & Supriyatin, R. (2023). *Tinjauan Ekonomi Provinsi Jawa Barat 2022*.

Kumar, M. V., & Balu, B. (2023). Estimating the Impact of Human Capital Underutilization on the Productivity and Economic Growth in India. *Journal of the Knowledge Economy*.

Leppel, K., & Clain, S. H. (1988). The growth in involuntary part-time employment of men and women. *Applied Economics*, *20*(9), 1155–1166.

Mahmuda, D. (2020). Marginal Part-Time Employment in Indonesian Labor Market: Profile and Determinant. *Jurnal Economia*, *16*(2), 236–244.

Mitchell, W., & Muysken, J. (2008). Full employment abandoned: Shifting sands and policy failures. *Full Employment Abandoned: Shifting Sands and Policy Failures*, 1–298.

Pratap, P., Dickson, A., Love, M., Zanoni, J., Donato, C., Flynn, M. A., & Schulte, P. A. (2021). Public health impacts of underemployment and unemployment in the united states: Exploring perceptions, gaps and opportunities. *International Journal of Environmental Research and Public Health*, *18*(19).

Sarbu, O., & Cimpoies, L. (2020). Labor force underutilization as a social and economic problem in Moldova. *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*, *20*(1), 539–548.

Suriastini, N. W., Wijayanti, I. Y., & Oktarina, D. W. I. (2024). Older People's Capacity to Work in Indonesia. *Asian Development Review*, *41*(1), 69–94.

Vuluku, G., Wambugu, A., & Moyi, E. (2013). Unemployment and underemployment in Kenya : a gender gap analysis. *Economics*, *2*(2), 7–16.

Walling, A., & Clancy, G. (2010). Underemployment in the UK labour market. *Economic and Labour Market Review*, *4*(2), 16–24.

Wilkins, R. (2006). Personal and Job Characteristics Associated with Underemployment. *Australian Journal of Labour Economics*, *9*(4), 371–393.

Williams, R. (2012). Using the Margins Command to Estimate and Interpret Adjusted Predictions and Marginal Effects. *Stata Journal*, *12*(2), 308–331.

APPENDIX

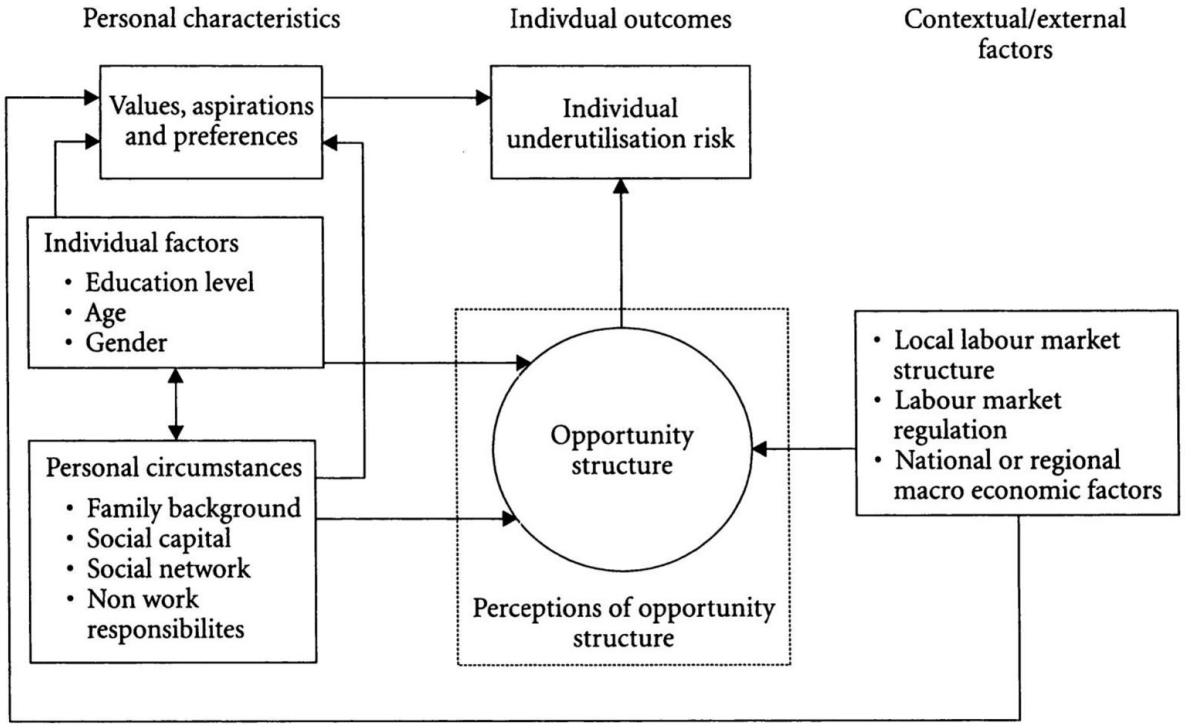
Table A1. **Operational definition of explanatory variables**

Variable	Definition	Source
Age1524 (0/1)	1 if the respondent *i* is aged 15-24; 0 otherwise.	*Sakernas*
Age2554 (0/1)*	1 if the respondent *i* is aged 25-34; 0 otherwise.	*Sakernas*
Age5564 (0/1)	1 if the respondent *i* is aged 35-44; 0 otherwise.	*Sakernas*
Age65+ (0/1)	1 if the respondent *i* is aged 45-54; 0 otherwise.	*Sakernas*
Non-educated (0/1)*	1 if the respondent *i* has not completed any formal education; 0 otherwise.	*Sakernas*
Primary (0/1)	1 if the respondent *i*'s highest level of education is primary-level education (or equivalent); 0 otherwise.	*Sakernas*
Lower Secondary (0/1)	1 if the respondent *i* has completed lower secondary-level education (junior high school or equivalent); 0 otherwise.	*Sakernas*
Upper Secondary (0/1)	1 if the respondent *i* has finished upper secondary-level education (senior high school or equivalent); 0 otherwise.	*Sakernas*
Post-Secondary (0/1)	1 if the respondent *i*'s highest level of education is post-secondary level education (diploma or higher); 0 otherwise.	*Sakernas*
HH Head (0/1)	1 if the respondent *i* is the head of household; 0 otherwise.	*Sakernas*
Primary Household Manager (0/1)	1 if the respondent *i* spend most of his/her time on the last week on household works; 0 otherwise	*Sakernas*
Single (0/1)*	1 if the respondent *i* is single (unmarried or divorce) without dependent under-five children; 0 otherwise.	*Sakernas*
Single Parent (0/1)	1 if the respondent *i* is a single parent with dependent children aged of 5 or bellow; 0 otherwise.	*Sakernas*

Variable	Definition	Source
Married (0/1)	1 if the respondent *i* has married status and does not have dependent under aged of 5; 0 otherwise.	*Sakernas*
Married with children (0/1)	1 if the respondent *i* has married status and has dependent under aged of 5; 0 otherwise.	*Sakernas*
HH member (0/1)	1 if the household members are greater than 4; 0 otherwise.	*Sakernas*
Living with elderly (0/1)	1 if the respondent was living with elderly (65 years old or older); 0 otherwise.	*Sakernas*
Local Unemployment Rate	The unemployment rate at district level.	BPS West Java
Rural (0/1)	1 if the respondent lives in a rural area; 0 if otherwise.	*Sakernas*
District**	The district where the respondent live (as a categorical variable and Bandung city is the reference).	*Sakernas*

Notes: *the reference variable. **there are 27 districts in West Java, see figure 1 or figure A1 for the list.

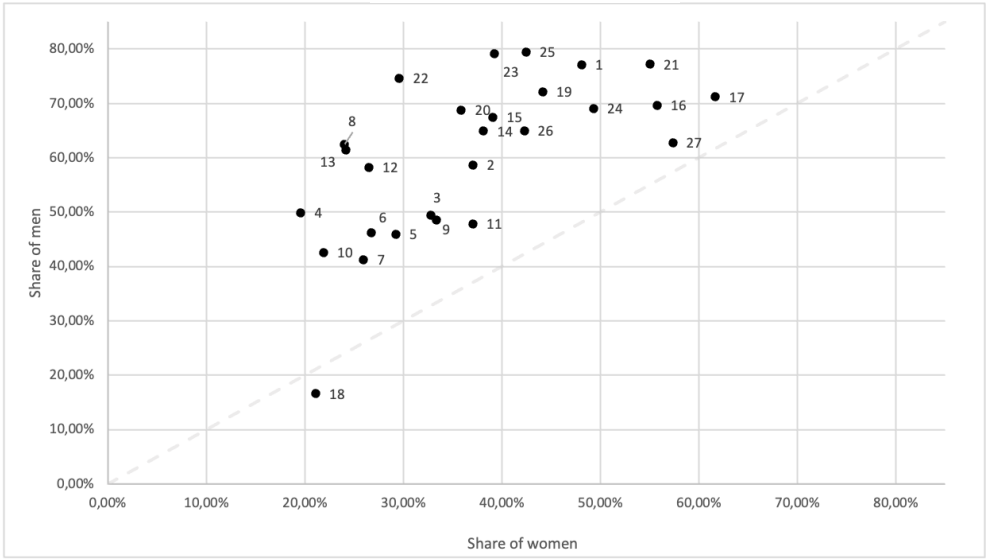
Figure A1. **Heuristic Model of Individual Underutilisation Risk**



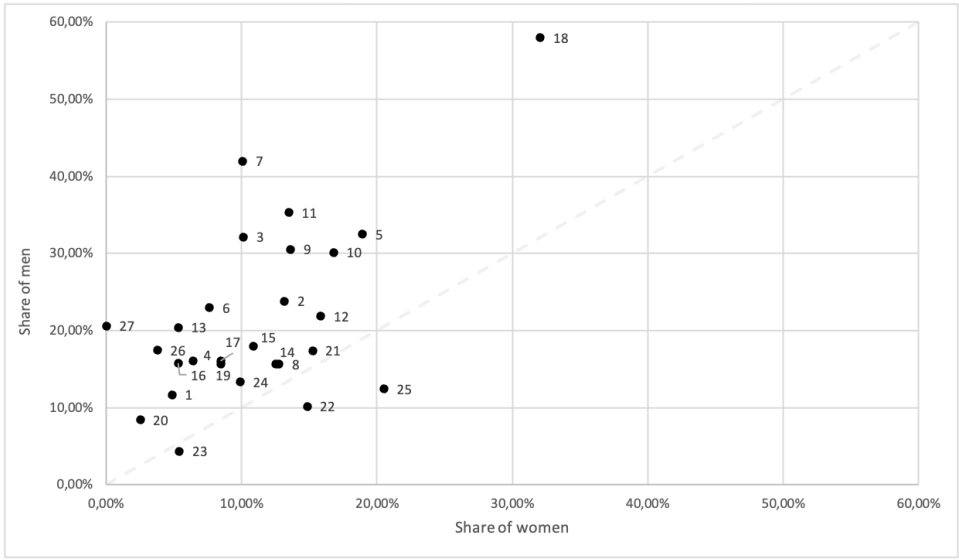
Source: adapted from Galster and Killen (1995) from Baum, Bill, and Mitchell (2008, 2009)

Figure A2. **Share of three forms underutilization in total labour underutilization between women and men**

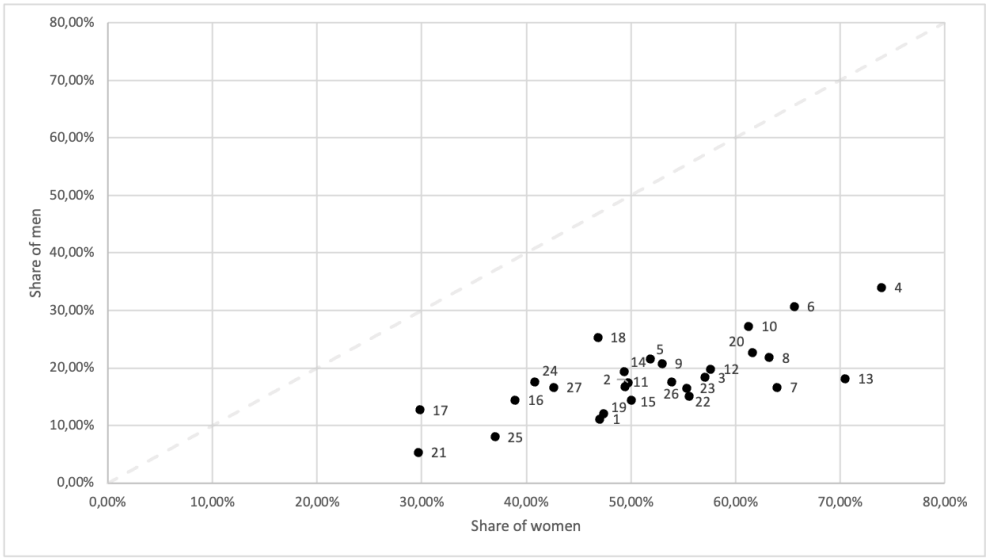
Panel a. Unemployment



Panel b. Underemployment



Panel c. Potential Labour Force



Notes: (1) Bogor, (2) Sukabumi, (3) Cianjur, (4) Bandung, (5) Garut, (6) Tasikmalaya, (7) Ciamis, (8) Kuningan, (9) Cirebon, (10) Majalengka, (11) Sumedang, (12) Indramayu, (13) Subang, (14) Purwakarta, (15) Karawang, (16) Bekasi, (17) West Bandung, (18) Pangandaran, (19) Bogor City, (20) Sukabumi City, (21) Bandung City, (22) Cirebon City, (23) Bekasi City, (24) Depok City, (25) Cimahi City, (26) Tasikmalaya City, (27) Banjar City.

Source: Authors' calculation using *Sakernas* (August, 2022).

Table A2. **The basic descriptive statistics of explanatory variables for men and women**

Variable	Males			Females		
	Obs.	Mean	Std. Dev.	Obs.	Mean	Std. Dev.
Age1524 (0/1)	22597	0.14	-	14980	0.17	-
Age2554 (0/1)	22597	0.65	-	14980	0.64	-
Age5564 (0/1)	22597	0.14	-	14980	0.14	-
Age65+ (0/1)	22597	0.06	-	14980	0.05	-
Non-educated (0/1)	22597	0.07	-	14980	0.10	-
Primary (0/1)	22597	0.32	-	14980	0.34	-
Lower Secondary (0/1)	22597	0.18	-	14980	0.18	-
Upper Secondary (0/1)	22597	0.33	-	14980	0.26	-
Post-Secondary (0/1)	22597	0.10	-	14980	0.13	-
HH Head (0/1)	22597	0.77	-	14980	0.17	-
Primary Household Manager (0/1)	22597	0.31	-	14980	0.85	-
Single (0/1)	22597	0.24	-	14980	0.30	-
Single Parent (0/1)	22597	0.02	-	14980	0.03	-
Married (0/1)	22597	0.53	-	14980	0.52	-
Married with children (0/1)	22597	0.21	-	14980	0.16	-
HH member (0/1)	22597	0.22	-	14980	0.19	-
Living with elderly (0/1)	22597	0.11	-	14980	0.11	-
Local Unemployment Rate	22597	8.00	2.20	14980	7.80	2.28
Rural (0/1)	22597	0.33	-	14980	0.34	-

Source: Authors' calculation using *Sakernas* (August, 2022)

Table A3. **Average marginal effects without district dummies**

	Women				Men			
	Employed	Underemployed	Unemployed	PLF	Employed	Underemployed	Unemployed	PLF
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age1524 (0/1)	-0.1587*** [0.010]	0.0004 [0.004]	0.0693*** [0.006]	0.0890*** [0.008]	-0.0742*** [0.006]	0.0095** [0.004]	0.0380*** [0.004]	0.0267*** [0.003]
Age5564 (0/1)	0.1037*** [0.012]	-0.0189*** [0.005]	-0.0264*** [0.009]	-0.0585*** [0.010]	-0.0309*** [0.008]	-0.0105*** [0.004]	0.0227*** [0.008]	0.0186*** [0.004]
Age65+ (0/1)	0.1404*** [0.023]	-0.0606*** [0.015]	-0.0433*** [0.015]	-0.0365** [0.016]	-0.0050 [0.013]	-0.0373*** [0.009]	0,0183 [0.011]	0.0239*** [0.006]
Primary (0/1)	0.0376*** [0.012]	-0.0004 [0.004]	-0.0212** [0.008]	-0.0159* [0.009]	-0.0063 [0.010]	-0.0043 [0.005]	0,0128 [0.009]	-0.0022 [0.004]
Lower Secondary (0/1)	0.0656*** [0.013]	-0.0068 [0.005]	-0.0533*** [0.010]	-0.0055 [0.010]	-0.0172* [0.010]	-0.0084* [0.005]	0.0226** [0.009]	0.0029 [0.005]
Upper Secondary (0/1)	0.0693*** [0.013]	-0.0021 [0.005]	-0.0243*** [0.009]	-0.0429*** [0.010]	-0.0067 [0.010]	-0.0121** [0.005]	0.0231** [0.009]	-0.0042 [0.005]
Post-Secondary (0/1)	0.1813*** [0.017]	-0.0080 [0.006]	-0.0336*** [0.010]	-0.1397*** [0.015]	0.0297** [0.013]	-0.0262*** [0.007]	0.0015 [0.011]	-0.0051 [0.006]
HH Head (0/1)	0.1030*** [0.014]	0.0050 [0.004]	-0.0785*** [0.010]	-0.0296*** [0.011]	0.1374*** [0.008]	0.0015 [0.004]	-0.1210*** [0.007]	-0.0178*** [0.004]
Primary Household Manager (0/1)	-0.1117*** [0.010]	0.0201*** [0.005]	0.0362*** [0.005]	0.0553*** [0.008]	-0.0523*** [0.004]	0.0114*** [0.002]	0.0283*** [0.004]	0.0125*** [0.002]
Single Parent (0/1)	-0.0061 [0.019]	-0.0006 [0.007]	-0.0005 [0.009]	0.0072 [0.016]	0.0191* [0.011]	-0.0109 [0.008]	-0.0031 [0.007]	-0.0050 [0.004]
Married (0/1)	0.0657*** [0.011]	-0.0084** [0.004]	-0.0709*** [0.007]	0.0136 [0.009]	0.0619*** [0.007]	-0.0100** [0.004]	-0.0415*** [0.006]	-0.0103*** [0.003]
Married with children (0/1)	0.0200 [0.012]	-0.0125*** [0.005]	-0.0733*** [0.008]	0.0659*** [0.009]	0.0897*** [0.009]	-0.0121*** [0.005]	-0.0487*** [0.008]	-0.0290*** [0.006]
HH member (0/1)	0.0244*** [0.008]	-0.0020 [0.003]	-0.0113** [0.005]	-0.0110* [0.007]	-0.0022 [0.005]	0.0013 [0.003]	-0.0014 [0.004]	0.0024 [0.003]
Living with elderly (0/1)	-0.0088 [0.012]	0.0076* [0.004]	0.0045 [0.007]	-0.0033 [0.010]	0.0060 [0.007]	-0.0060 [0.005]	-0.0005 [0.005]	0.0005 [0.004]
Local Unemployment Rate	-0.0088*** [0.001]	0.0003 [0.001]	0.0051*** [0.001]	0.0034*** [0.001]	-0.0049*** [0.001]	-0.0014*** [0.001]	0.0077*** [0.001]	-0.0014*** [0.000]
Rural (0/1)	-0.0094 [0.007]	0.0051* [0.003]	-0.0070 [0.005]	0.0114** [0.006]	-0.0138*** [0.005]	0.0125*** [0.003]	-0.0008 [0.004]	0.0020 [0.002]
District dummies	No	No	No	No	No	No	No	No
Obs.	14980	14980	14980	14980	22597	22597	22597	22597

Note: *p<0.1, **p<0.05, ***p<0.01. Clustered standard errors are in parentheses and at household level. Source: Authors' calculations using SAKERNAS (August, 2022).