Labor Utilization Inefficiency: A Literature Review of Studies on Underemployment and Skills Mismatch in Indonesia

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ABSTRACT

This study examines labor underutilization in Indonesia by analyzing underemployment and skills mismatch as key dimensions of labor market inefficiency. Despite relatively low open unemployment rates, the literature consistently reports that a significant share of the workforce remains underutilized, reflected in limited working hours, low productivity, and mismatches between educational attainment and job requirements. The study employs a semi-systematic literature review, in which the selected studies are analyzed using thematic synthesis, drawing on empirical research, national labor statistics, and international institutional reports related to underemployment and skills mismatch in Indonesia. The findings indicate that underemployment in Indonesia is largely structural, driven by the dominance of informal and low-productivity sectors, regional economic disparities, and the limited availability of quality employment opportunities. In addition, skil-ls mismatch—particularly in the form of overeducation among secondary and tertiary graduates—emerges as a major source of suboptimal labor utilization, resulting in inefficient use of human capital and constrained earnings outcomes. The study concludes that labor market performance in Indonesia cannot be adequately assessed using open unemployment indicators alone and highlights the relevance of examining the alignment between education, skills development, and labor market demand in improving labor utilization efficiency.

INTRODUCTION

Human resources play a central role in economic development, not merely through the availability of labor but through the extent to which labor is utilized productively and in accordance with its productive capacity. Within modern development economics, labor quality and productivity are recognized as key determinants of competitiveness and the sustainability of economic growth, particularly in developing countries (Todaro & Smith, 2015). Consequently, labor market performance cannot be adequately assessed solely on the basis of labor absorption or low open unemployment rates, but must also account

for indicators of labor underutilization, including insufficient working hours and mismatches between workers' skills and job requirements.

In many developing countries, including Indonesia, relatively high labor force participation rates coexist with limited working hours, the prevalence of low-productivity employment, and persistent mismatches between workers' skills and job requirements. These conditions point to suboptimal labor utilization, in which a substantial share of the workforce is formally classified as employed but is unable to fully realize its productive potential. Such inefficiencies in labor utilization carry important implications for economic development, as they may constrain productivity growth, limit returns to education, and weaken efforts to achieve inclusive and sustainable development.

Source: BPS (2025)

Figure 1. Working Population According to Working Hours in Indonesia

Empirical indicators of working hours provide concrete evidence of labor underutilization in Indonesia. A significant proportion of employed workers work fewer than standard full-time hours, reflecting time-related underemployment rather than voluntary part-time employment, particularly in informal and low-productivity sectors. This pattern underscores that employment challenges in Indonesia extend beyond open unemployment to include limitations in the intensity and quality of labor utilization (BPS, 2025).

Underemployment refers to a situation in which employed individuals are not utilized optimally, either in terms of working hours or job quality. In parallel, skills mismatch describes the discrepancy between workers' skills or educational attainment and the requirements of their jobs, which may reduce individual productivity and overall labor market efficiency (Allen & de Weert, 2007; McGuinness, 2006; Quintini, 2011). In developing labor markets, skills mismatch often channels workers into low-productivity employment that does not fully utilize their competencies, reinforcing inefficiencies in labor allocation (ILO, 2018).

While existing studies on Indonesia have generally examined underemployment and skills mismatch as separate phenomena, this study contributes to the literature by synthesizing empirical evidence on both dimensions, highlighting labor utilization inefficiencies that are not captured by conventional unemployment indicators. By integrating the quantitative dimension of limited working hours (time-related underemployment) with the qualitative dimension of skills mismatch, this study advances a unified analytical perspective on labor utilization inefficiency, explaining why workers who are statistically recorded as employed may nevertheless experience persistent underutilization of their productive capacity.

Through a thematic synthesis of national and international literature, this study identifies recurring empirical patterns linking labor market structure, informality, sectoral composition, and regional

disparities to the persistence of underemployment and skills mismatch in Indonesia. Rather than providing a descriptive summary of individual studies, the analysis offers an integrated synthesis that highlights the structural mechanisms jointly shaping labor underutilization.

By situating these findings within the broader context of labor market analysis, this study underscores that low open unemployment rates do not necessarily indicate efficient labor market performance. A multidimensional perspective that incorporates underemployment and skills mismatch is therefore essential for accurately assessing labor market efficiency and for informing the development of employment indicators and policy frameworks that are better aligned with labor market realities in developing economies such as Indonesia.

LITERATURE REVIEW
Efficiency of Labor Utilization in Economic Perspective
In labor economics, labor market performance is not only assessed by the ability to absorb labor but also by the extent to which absorbed labor can be utilized efficiently according to its productive capacity. Labor utilization efficiency refers to the economy's ability to allocate human resources into jobs that allow for optimal use of working time, skills, and productivity. In this context, a low unemployment rate does not necessarily reflect an efficient labor market condition if a portion of the employed labor is still below its productive potential.

Labor economics literature clearly distinguishes between unemployment, underemployment, and the broader concept of labor underutilization. Unemployment describes individuals who are not working but are actively seeking work, whereas underemployment refers to situations in which employed individuals experience insufficient working hours or a mismatch between their characteristics and job demands. The concept of labor underutilization was developed to capture various forms of labor market inefficiencies that are not fully reflected in open unemployment indicators, including forms of labor utilization that are partial and of low quality (Borjas, 2016; McConnell, Brue, & Macpherson, 2021).

This approach emphasizes that the labor market can absorb labor quantitatively but still experiences inefficiencies in human resource utilization, especially when labor is absorbed into low-productivity jobs or jobs that do not match their skills. Therefore, the conceptual framework of labor utilization efficiency becomes important to understand the dynamics of the labor market in developing countries, including Indonesia, where employment issues are not only related to unemployment but also to the quality and optimality of labor utilization among those who are employed.

Human Capital Theory and Skills Mismatch
Human Capital Theory is one of the main foundations for explaining the relationship between education, skills, and labor market performance. This theory starts from the view that investment in education and training will enhance individual productivity, which is subsequently reflected in better job opportunities and higher wage levels (Becker, 1993). Within this framework, the labor market is assumed to be able to allocate labor relatively efficiently, so that individuals with certain levels of education and skills will be absorbed into jobs that match their productive capacity.

However, in practice, this assumption of efficient skill allocation does not always materialize, particularly in developing countries. Rapid changes in economic structure, limited creation of quality jobs, and weak linkages between the education system and business needs drive the occurrence of mismatches between the skills possessed by the labor force and job demands (skills mismatch) (World Bank, 2008; OECD, 2011). Labor market literature shows that skills mismatch can appear in the form of overqualification or underskilling, which basically indicates that the utilization of workforce skills is not optimal (Allen & de Weert, 2007; McGuinness, 2006; Quintini, 2011).

The condition of skills mismatch impacts the efficiency of labor allocation, as individuals tend to work in jobs with lower quality and productivity than their productive potential. The International Labour Organization (ILO) places this condition as part of the broader issue of suboptimal labor utilization, which is not fully reflected in the open unemployment indicators (ILO, 2013). Thus, although Human

Capital Theory remains an important foundation in labor market analysis, this approach needs to be complemented with perspectives that consider skills mismatch and the structural characteristics of the labor market. This conceptual framework provides an analytical basis for understanding the relationship between skills mismatch and underemployment in the context of developing countries.

Skills Mismatch as a Source of Labor Market Inefficiency

Skills mismatch is one of the main mechanisms that explain the occurrence of inefficiency in the labor market because it reflects the mismatch between the skills possessed by the workforce and the available job requirements. Within the framework of labor economics, this condition indicates a failure of market mechanisms to optimally allocate labor according to its productive capacity, which in turn limits the utilization of skills and reduces aggregate productivity as well as the quality of jobs created (McGuinness, 2006; Quintini, 2011).

Literature shows that skills mismatch is not only related to the level of formal education but also includes gaps between technical competencies, cognitive skills, and non-technical skills with job demands. When the structure of skill supply does not align with labor market needs, the workforce tends to be absorbed into jobs that do not optimally utilize their skills or are at relatively low productivity levels, thereby weakening job quality and overall productivity performance (Allen & de Weert, 2007; OECD, 2011). In the context of structural transformation, changes in the composition of economic sectors that are not accompanied by adjustments in the education and training system tend to reinforce skills mismatch and labor market segmentation. The International Labour Organization (ILO) places this condition as part of labor underutilization, where skills mismatch contributes to the emergence of low-productivity jobs and underemployment that is not fully reflected in open unemployment indicators (ILO, 2013; World Bank, 2018).

Thus, skills mismatch cannot be understood merely as an individual issue related to educational or career choices, but rather as a structural phenomenon that reflects the limitations of labor market capacity and the education system in responding to economic dynamics. This perspective emphasizes that the analysis of labor utilization efficiency conceptually places the dimension of skills mismatch as a key mechanism to explain why absorbed labor is not necessarily utilized optimally, especially in developing countries with labor market structures that are not yet fully efficient.

Underemployment in the Context of the Labor Market in Developing Countries

Underemployment is an important characteristic of the labor market in developing countries that reflects the condition when the workforce has been absorbed into jobs but has not been utilized optimally, both in terms of working hours and job quality. In contrast to open unemployment, underemployment often occurs in labor market structures dominated by the informal sector and low-productivity jobs, so it is not fully reflected in conventional employment indicators (ILO, 2013; World Bank, 2018). Underemployment in developing countries is generally not voluntary, but rather influenced by the limitations of quality job creation and strong labor market segmentation. In such conditions, the workforce tends to be absorbed into jobs with limited working hours or low productivity as a form of adjustment to the constraints of job opportunities, rather than as a result of optimal choice. This situation indicates the existence of structural inefficiencies in labor allocation, not merely due to individual characteristics.

Empirical studies in Indonesia consistently show that underemployment is concentrated in the informal sector, rural areas, and specific labor groups, reflecting persistent limitations in the availability of quality jobs. These findings emphasize that employment issues in Indonesia are not only related to the unemployment rate but also to the quality and intensity of labor utilization, which directly impacts productivity and worker welfare (Dhanani, 2004; Nagib & Ngadi, 2008; Kinanti, 2015).

Furthermore, recent literature emphasizes that underemployment cannot be separated from structural factors in the labor market, including the limitations of quality job opportunities and the existence of skills mismatch. In this framework, underemployment is understood as part of the problem of suboptimal labor utilization, which contributes to the low efficiency of the labor market in aggregate (Renaldo et al., 2023). Thus, underemployment reflects structural imbalances in the labor markets of developing countries and underscores the importance of an employment analysis approach that focuses not only on open unemployment but also on the quality and intensity of labor utilization.

Integration of Underemployment and Skills Mismatch in the Labor Underutilization Framework
The labor underutilization framework developed by the International Labour Organization (ILO) provides a conceptual approach that allows for the multidimensional analysis of labor utilization inefficiencies, not limited to open unemployment, by integrating limitations on working hours, job quality, and skills mismatch (ILO, 2013). In this framework, skills mismatch functions as a structural mechanism that influences how labor is absorbed into the labor market. The mismatch between the skills possessed by the workforce and the structure of job demand limits the utilization of individual productive capacity, causing the workforce to tend to be absorbed into low-quality jobs or jobs with limited productivity. This condition is not always reflected as unemployment but manifests in the form of low-productivity jobs and limited work intensity.

The dominance of low-productivity jobs and the limited opportunities for skill enhancement reinforce the persistence of skills mismatch, as the labor market does not provide effective adjustment mechanisms for the workforce. This reciprocal relationship causes underemployment and skills mismatch to be persistent, particularly in developing countries. The labor underutilization approach emphasizes that labor market performance evaluation cannot rely on a single indicator. Low unemployment rates can go hand in hand with high levels of suboptimal workforce utilization if job quality and skill suitability are ignored. Therefore, the integration of underemployment and skills mismatch within a single analytical framework is an analytical prerequisite for understanding labor market inefficiencies more comprehensively. This conceptual framework provides a basis for the synthesis of literature in this research to assess the suboptimal utilization of labor in Indonesia, as well as to explain why employment issues are not sufficiently understood solely through the dynamics of open unemployment, but also through the quality and suitability of labor utilization.

Limitations of Literature and Implications for Indonesian Studies
Although international and national literature has extensively discussed the issues of underemployment and skills mismatch, existing studies still show several limitations. Most research tends to analyze these two phenomena separately, both in terms of working hours and skills suitability, so the structural interaction between skills mismatch and the quality of labor utilization has not been fully revealed. This partial approach limits the understanding of the mechanisms of labor market suboptimality comprehensively.

In the context of Indonesia, the limitations of the literature are increasingly evident in the dominance of analyses based on conventional employment indicators, particularly the open unemployment rate. This approach is inadequate to depict the complexity of the Indonesian labor market, which is dominated by the informal sector and low-productivity jobs. As a result, the issues of suboptimal labor utilization are often reduced or not fully identified in empirical analyses. Furthermore, studies that integrate the quantitative and qualitative dimensions of labor utilization within a single analytical framework are still relatively limited. The integration of underemployment and skills mismatch within the framework of labor underutilization allows for a more comprehensive understanding of various forms of labor market inefficiencies, including limitations in working hours and skills mismatches, which are relevant to the characteristics of the Indonesian labor market.

Based on these limitations, this research positions the integration of underemployment and skills mismatch within the framework of labor underutilization as a conceptual approach to understanding the suboptimal utilization of labor in Indonesia. This approach provides a more comprehensive analytical

foundation for studies on Indonesian employment and policy implications that focus not only on labor absorption but also on the quality and optimization of its utilization.

METHOD

This research uses a semi-systematic literature review approach to analyze the suboptimal utilization of labor through the integration of the concepts of underemployment and skills mismatch within the framework of labor underutilization in Indonesia. This approach was chosen because it allows for a broad and heterogeneous literature search, while also supporting a deep conceptual synthesis of multidimensional and cross-approach employment issues (Snyder, 2019). This study reviews a corpus of approximately 25 scientific articles, academic books, and institutional reports published between 2000 and 2025. The literature includes relevant international and national studies on the issues of underemployment, skills mismatch, and labor underutilization, focusing on the characteristics of labor markets in developing countries and the specific context of Indonesia.

The literature search was conducted through national and international scientific databases, as well as official institutional publications, including the International Labour Organization (ILO), the World Bank, the OECD, the Central Statistics Agency (BPS), and various related academic journals. Keywords used included combinations of the terms underemployment, skills mismatch, labor underutilization, informal employment, and the Indonesian labor market, both in English and Indonesian. The literature selection process was carried out through adapted stages of identification, screening, and inclusion, consistent with the flexibility of a semi-systematic review approach. In the identification stage, all literature relevant to the keywords was collected. The screening stage was conducted by qualitatively assessing topic suitability, source quality, and relevance to the labor utilization analysis framework. The inclusion stage focused on literature that explicitly discusses both quantitative and qualitative aspects of labor utilization, as well as having a connection to the structural dynamics of the Indonesian labor market. International literature was used as a conceptual and theoretical foundation, while national studies were focused on strengthening the empirical context and specific characteristics of the Indonesian labor market.

Literature analysis was conducted through a thematic synthesis approach as an analytical technique by grouping findings into main themes, including characteristics of underemployment, determinants of skills mismatch, and the structural implications of both on labor market efficiency. The focus of the analysis was not directed at quantitative comparisons between studies, but rather at identifying patterns, conceptual relationships, and recurring structural mechanisms in the literature. The results of this synthesis were then integrated into the labor underutilization framework to provide a more comprehensive understanding of the suboptimal labor utilization in Indonesia.

RESULT

This section presents the results of the thematic synthesis of literature, highlighting recurring empirical patterns and relationships related to underemployment and skills mismatch in Indonesia. The focus of the analysis is directed at consistent empirical findings regarding the vulnerability of the workforce to suboptimal utilization, the dominant forms of skills mismatch, and the structural factors of the labor market that underlie them. This synthesis identifies recurring empirical patterns related to underemployment and skills mismatch reported in the Indonesian labor market.
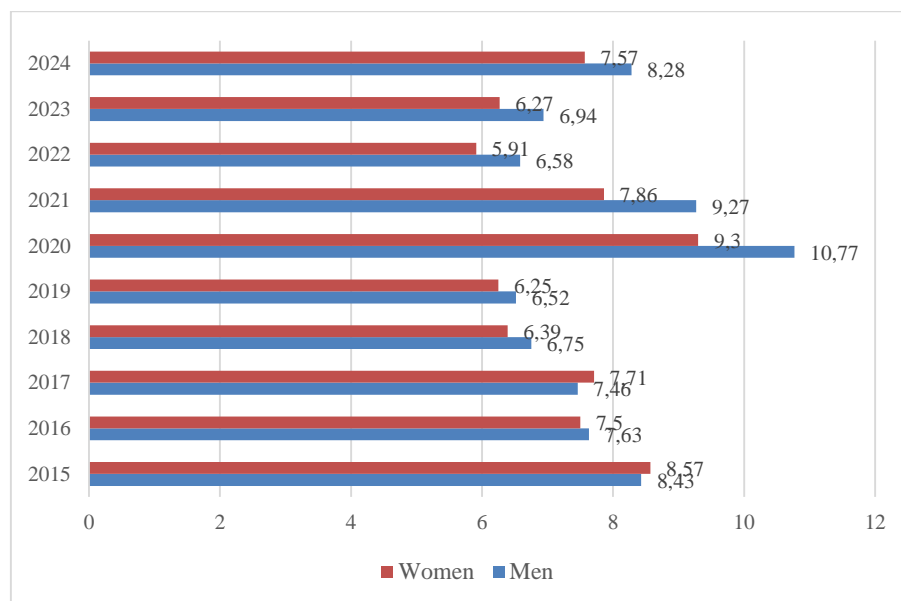
Patterns of Underemployment in the Indonesian Labor Market

The results of the literature synthesis indicated that underemployment in Indonesia is a recurring phenomenon across various observation periods and is often found in the informal sector and low-productivity jobs. Various cross-temporal studies consistently document limitations in labor utilization across different observation periods, particularly in sectors dominated by small-scale enterprises and

informal activities (Dhanani, 2004; Nagib & Ngadi, 2008; Renaldo et al., 2023). Underemployment is reflected in a combination of working hours below standard, low income levels, and limited access to stable and quality jobs, indicating low work intensity and productivity. Literature shows that these conditions are primarily found in the agricultural sector, small trade, and informal services, which are frequently identified as sectors absorbing a large share of underemployed workers (Khoiruddin et al., 2024; Nagib & Ngadi, 2008; Utari et al., 2025).
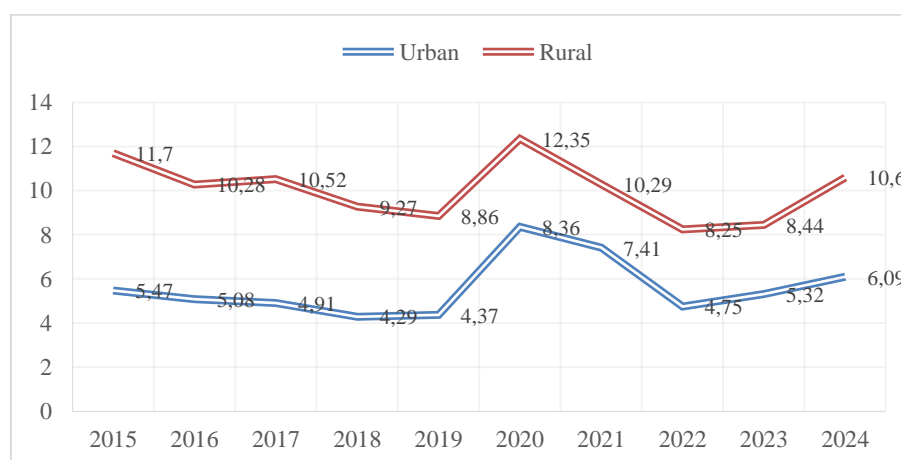
To provide empirical context for the patterns identified in the literature, national labor statistics are incorporated into the analysis. Data from the Central Statistics Agency (BPS) indicate that the underemployment rate in Indonesia has remained persistently high over the period 2015–2024, reinforcing the recurring empirical patterns documented in previous studies. When disaggregated by gender, the data show that women consistently experience higher rates of underemployment than men, suggesting persistent gender-related disparities in the intensity of labor utilization (Figure 2).

Source: BPS (2025)

Figure 2. The Rate of Underemployment in Indonesia 2015-2024 by Gender (%)

Beyond gender differences, spatial disparities are also evident. Underemployment rates are systematically higher in rural areas than in urban areas throughout the same period, reinforcing the characterization of rural labor markets as being dominated by informal and low-productivity employment structures that constrain effective labor utilization (Figure 3).

Source: BPS (2025)

Figure 3. Underemployment Rate in Indonesia by Residence Area 2015-2024

In terms of individual characteristics, the literature further reports that underemployment is more frequently observed among rural workers, women, and individuals with secondary to higher educational attainment who are employed in jobs that do not fully utilize their productive capacity. This pattern is characterized by low work intensity and limited productivity outcomes among these groups (Kinanti, 2015; Tjitrajaya et al., 2024; Utari et al., 2025). Moreover, several studies note that the proportion of underemployed workers who actively seek additional employment remains relatively limited (Kinanti, 2015).

Skills Mismatch and Job Quality

A synthesis of the literature shows that skills mismatch is a phenomenon frequently reported in the Indonesian labor market and is related to the quality of available jobs. Skills mismatch is particularly observed when the level of education and competencies of the workforce are not optimally utilized in the jobs undertaken, which is often found in the informal sector and low-productivity jobs (Nagib & Ngadi, 2008; Kinanti, 2015; Renaldo et al., 2023).

The literature also indicates that an increase in education level is not always followed by an improvement in job quality, especially in the context of limited formal job creation. In such conditions, some workers with secondary and higher education are absorbed into jobs that do not require skills in accordance with their educational background. This pattern is reported in studies examining the distribution of educational attainment relative to job requirements in Indonesia (Khoiruddin et al., 2024; Kinanti, 2015; Renaldo et al., 2023). Various empirical studies consistently note that the proportion of workers with education levels exceeding job requirements (over-education) is greater than those with education below job requirements (under-education), particularly in regions with limited sectoral diversity (Pratomo, 2015; Khoiruddin et al., 2024; Tjitrajaya et al., 2024).

Furthermore, skills mismatch is reported to be associated with relatively low job quality, characterized by limited wage levels, part-time work hours, and minimal opportunities for skill development in the workplace. Several studies report that workers experiencing skills mismatch are concentrated in jobs with limited wages, part-time hours, and restricted opportunities for skill development (Nagib & Ngadi, 2008; Renaldo et al., 2023).

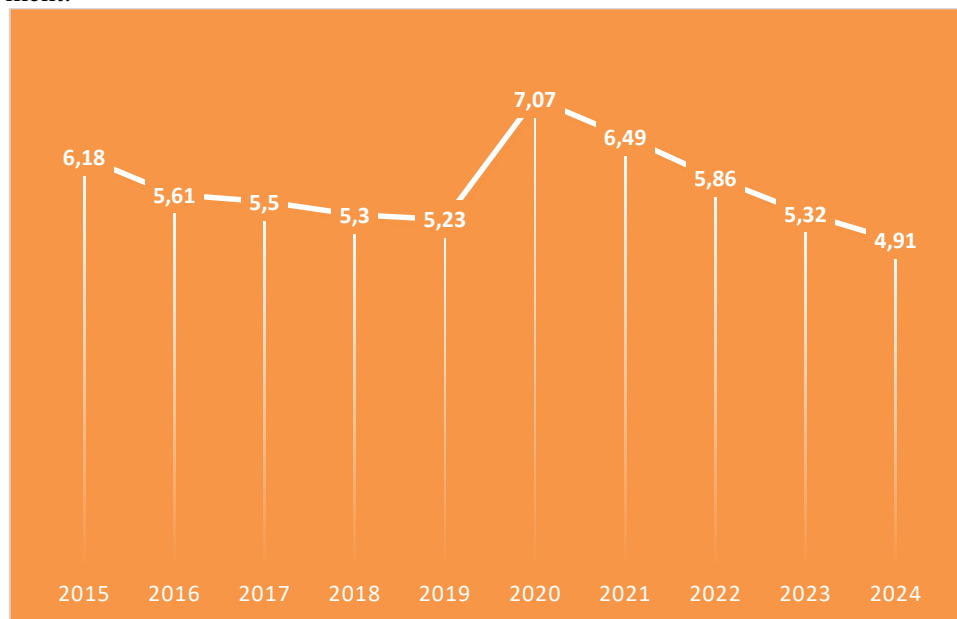### The Relationship Between Underemployment and Skills Mismatch

The literature consistently documents the co-occurrence of underemployment and skills mismatch in the Indonesian labor market. Several empirical studies report that workers experiencing skills mismatch are frequently employed in jobs characterized by limited working hours and low productivity (Nagib & Ngadi, 2008; Kinanti, 2015; Renaldo et al., 2023). These studies indicate that educated and skilled workers are often absorbed into jobs that do not fully utilize their productive capacity, particularly in labor market segments dominated by informal and low-productivity employment (Dhanani, 2004; Renaldo et al., 2023).

In addition, the informal sector plays a key role as the main absorber of labor experiencing skills mismatch. The literature demonstrates that high levels of labor absorption in the informal sector coexist with the persistence of underemployment and skills mismatch, suggesting that these two phenomena frequently arise simultaneously within the same employment settings (Dhanani, 2004; Nagib & Ngadi, 2008).

Indonesia's open unemployment rate exhibits a relatively stable or declining trend over the period 2015–2024. Data from the Central Statistics Agency (BPS) indicate that, despite year-to-year fluctuations, overall unemployment levels remain comparatively low during this period (Figure 4). This pattern highlights that improvements in employment absorption are not necessarily accompanied by

efficient labor utilization, as underemployment and skills mismatch persist alongside low open unemployment.

Source: BPS (2025)

Figure 4. Open Unemployment Rate in Indonesia

Empirical Implications of Underemployment and Skills Mismatch on Labor Utilization in Indonesia
Several studies report that employed individuals experiencing underemployment and skills mismatch exhibit lower observed productivity outcomes, indicating that employment status alone does not necessarily reflect effective labor utilization (Pratomo, 2015; Nagib & Ngadi, 2008; Kinanti, 2015). The literature also identifies that the combination of limited working hours and skills mismatch is associated with low levels of aggregate productivity, particularly in sectors dominated by informal and low-productivity jobs, where labor is absorbed but constrained from operating at its full productive capacity (Utari et al., 2025; Renaldo et al., 2023). Furthermore, several studies report that workers with secondary and higher education are concentrated in jobs characterized by low job quality, reflecting a form of qualitative underemployment in which educational attainment is not matched by job requirements (Kinanti, 2015; Renaldo et al., 2023).

Overall, the literature consistently documents the persistence of underemployment and skills mismatch in the Indonesian labor market, particularly in sectors characterized by low productivity, limited working hours, and weak alignment between workforce skills and job requirements. These findings imply that labor market inefficiency in Indonesia stems not merely from insufficient employment creation, but from suboptimal labor utilization that limits the effective translation of human capital into productive output.

DISCUSSION
Building on the empirical patterns identified in the Results section, this discussion interprets the findings of the literature synthesis by linking them to the framework of Human Capital Theory, the perspective of labor market segmentation, and the literature on structural transformation. This approach is used to examine the theoretical implications of persistent underemployment and skills mismatch as manifestations of suboptimal labor utilization in Indonesia.

Underemployment and Limitations of Human Capital Theory in the Context of Indonesia
In the framework of Human Capital Theory, the increase in education and skills is assumed to enhance individual productivity and encourage the placement of labor in jobs that match the productive capacity possessed (Becker, 1993). However, the findings of this literature synthesis suggest that this assumption

is not fully realized in the Indonesian labor market, particularly in contexts where educated workers are absorbed into informal and low-productivity employment.

This pattern suggests that low labor utilization in Indonesia cannot be explained solely by individual characteristics or skill levels, but is also related to limitations in the labor demand structure that constrain the efficient absorption of human capital. In a labor market condition dominated by the informal sector and low-productivity jobs, various studies note that the returns on educational investment tend to be limited.

These findings have implications for the human capital literature by emphasizing that the effectiveness of education as an instrument for increasing productivity is strongly conditioned by the quality and characteristics of available jobs. When job opportunities that match skill levels are limited, educated labor has the potential to experience underutilized human capital, which is a condition where the skills and knowledge possessed are not fully actualized in the production process. Thus, underemployment in Indonesia cannot be understood solely as an individual problem or a lack of skills, but rather as a reflection of structural limitations in the labor market's ability to translate human capital accumulation into productivity gains and job quality. This perspective highlights the contextual limitations of Human Capital Theory when applied to developing economies such as Indonesia, without negating its general theoretical relevance.

Labor Market Segmentation and Persistence of Labor Utilization Inefficiencies

Underemployment and skills mismatch in Indonesia can be understood within the framework of a segmented labor market structure. Labor market segmentation theory emphasizes that the labor market is not homogeneous but is divided into formal and informal segments with different productivity, stability, and mobility opportunity characteristics. In the context of Indonesia, various studies show that the informal sector functions as a secondary segment that absorbs labor when formal job opportunities are limited, a pattern consistent with the concentration of underemployment and skills mismatch within informal and low-productivity segments of the labor market.

The labor market segmentation perspective provides a framework for explaining why workers with secondary and higher education can experience skills mismatch and underemployment simultaneously. The limited access to formal and quality jobs is related to the tendency of labor to be absorbed into informal jobs that do not fully utilize skills or working hours. This pattern contributes to the persistence of low-productivity jobs and limits labor mobility towards more productive labor market segments.

Thus, underemployment and skills mismatch do not merely reflect inappropriate educational choices or individual preferences but are the result of a labor market structure that restricts the adjustment mechanisms between labor supply and demand. This perspective shows that the problem of labor utilization in Indonesia is structural, so that an analytical approach that only emphasizes improving individual skills has limitations in explaining the dynamics of the labor market as a whole. The consistency of these findings across different periods and empirical settings suggests that underemployment and skills mismatch in Indonesia are not transitory phenomena, but rather persistent features embedded in the existing labor market structure.

Skills Mismatch as a Structural Mechanism of Labor Underutilization

In the framework of labor underutilization developed by the International Labour Organization, skills mismatch is understood as part of the suboptimal utilization of labor, even though individuals are statistically recorded as employed. The synthesis of literature findings suggests that skills mismatch operates as a structural mechanism that channels workers into jobs characterized by limited working hours and low productivity.

Literature also shows that the mismatch between the skills of the workforce and the available job structure is related to low income and individual welfare, and has implications for the process of human capital accumulation in aggregate. When skills are not used and developed optimally in economic activities, the long-term productivity potential of labor tends to be reduced. In this context, various studies note that skills mismatch is associated with the persistence of underemployment, particularly in labor market segments characterized by limited job quality, low productivity, and restricted opportunities for skill utilization. This association reflects structural constraints in the labor market, where available jobs are unable to fully absorb and utilize the skills and educational attainment of the workforce. As a result, individuals may remain employed while experiencing suboptimal labor utilization, manifested in limited working hours, low productivity, and inadequate returns to education, thereby creating a reinforcing mechanism in which skills mismatch and underemployment mutually sustain suboptimal labor utilization over time.

These findings support the argument that labor market performance evaluation is inadequate if it relies solely on a single indicator, such as the open unemployment rate. A low unemployment rate can coexist with high suboptimal labor utilization if the dimensions of job quality and skills fit are ignored. Thus, the integration of skills mismatch and underemployment into a single analytical framework becomes important to understand the dynamics of the Indonesian labor market more comprehensively.

Theoretical Implications for Labor Market Performance Measurement

The findings of this literature synthesis have important implications for how labor market performance is understood and measured in the Indonesian context. While Indonesia's open unemployment rate has remained relatively stable or has shown a declining trend in recent years, the persistence of underemployment and skills mismatch indicates that conventional unemployment indicators do not fully capture the extent of labor underutilization.

The contrast between relatively favorable unemployment figures and widespread suboptimal labor utilization suggests that low unemployment rates may coexist with structural inefficiencies in labor use. In labor markets dominated by informal and low-productivity employment, a substantial share of the workforce may remain employed yet experience limited working hours, low productivity, and weak alignment between skills and job requirements.

These patterns highlight the limitations of relying solely on open unemployment rates as indicators of labor market performance. Instead, a multidimensional approach that incorporates underemployment and skills mismatch provides a more comprehensive understanding of labor utilization efficiency. This perspective aligns with the labor underutilization framework, which emphasizes that employment quality and the optimal use of human capital are central dimensions of labor market performance, particularly in developing economies such as Indonesia.

Policy Implications from a Structural Perspective

These policy implications are derived from the documented persistence of underemployment and skills mismatch alongside relatively high labor force participation. From a policy perspective, the findings of this research indicate that efforts to improve the efficiency of labor utilization in Indonesia cannot solely focus on increasing access to education and training. Without the creation of quality jobs and the expansion of the productive sector, skill enhancement has the potential to result in ongoing skills mismatch and underemployment. Therefore, this finding indicates the importance of alignment between the education system, economic structure, and labor market needs in an effort to increase the efficiency of labor utilization.

In addition, labor market policies need to pay attention to regional and sectoral dimensions, considering that variations in economic structure across regions affect the levels of underemployment and skills mismatch. This approach emphasizes that the evaluation of employment policies needs to consider not only the absorption of labor but also the quality and intensity of its utilization as part of a sustainable human resource development strategy.

CONCLUSION AND RECOMMENDATIONS

This research synthesizes empirical literature to analyze underemployment and skills mismatch as two main dimensions of suboptimal labor utilization in the Indonesian labor market, using the labor underutilization framework. The study results show that both phenomena are persistent, structurally interconnected, and significantly contribute to inefficiencies in labor utilization, even though the level of labor absorption is relatively high. Underemployment in Indonesia is not only temporary but is inherent in a labor market structure dominated by the informal sector and low-productivity jobs. At the same time, the existence of skills mismatch (especially in the form of overeducation) reflects a misalignment between the increase in labor capacity and the limitations of quality job creation. This condition emphasizes that improvements in education and skills have not automatically translated into optimal human capital utilization.

The relationship between underemployment and skills mismatch indicates that inefficiencies in labor utilization cannot be understood in isolation. Skills mismatch drives labor to work below its productive capacity, while persistent underemployment limits opportunities for skill development and job mobility, thereby reinforcing the sustainability of suboptimal labor utilization. Theoretically, these findings emphasize that the effectiveness of human capital investment heavily depends on the structure of the labor market and the quality of available jobs. From a policy perspective, these study results indicate the importance of evaluating labor market performance that not only focuses on the quantity of labor absorption but also on the quality, intensity, and suitability of labor utilization as part of a sustainable human resource development strategy in Indonesia.

RESEARCH LIMITATION AND FUTURE RESEARCH
RESEARCH LIMITATION

This research is a literature synthesis, so the findings depend on the scope, quality, and methodological approaches of the studies reviewed. Variations in definitions and measurement methods of underemployment and skills mismatch across studies limit the comparability of results and the consistency of findings across studies. In addition, the dominance of cross-sectional data research and aggregate indicators limits the analytical ability to capture long-term dynamics as well as regional and sectoral heterogeneity of the suboptimal labor utilization phenomenon. This research also does not conduct direct empirical evaluations of specific employment and education policies, so the policy implications generated are conceptual and based on literature synthesis.

FUTURE RESEARCH

Future research should utilize longitudinal microdata to analyze the dynamics of underemployment and skills mismatch transitions, and test the causal relationships between workforce characteristics, occupational structure, and labor market outcomes using a more robust causal approach. Studies focusing on regional and industrial sector dimensions are also needed to capture the heterogeneity of Indonesia's labor market structure. Furthermore, empirical evaluation of education, training, and labor market intervention policies is crucial to identify the most effective policy instruments for improving the quality and efficiency of labor utilization.

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