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How Should We Rethink Minimum Wage for Sustainable Labor Markets? A Sectoral-Structural Framework for Developing Economies

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Abstract:

Minimum wage policies remain a pivotal tool for labor market regulation, yet their effectiveness varies across developing economies due to structural heterogeneity and institutional differences. This conceptual paper employs a systematic literature review following the PRISMA framework to examine global minimum wage models, historical evolution, and their implications for sustainable labor markets. Using databases including Scopus, Web of Science, and Google Scholar, 87 relevant studies were selected and analyzed based on country context, policy type, and temporal trends. The findings highlight the evolution of minimum wage frameworks from early national legislation in industrialized nations to contemporary approaches such as multi-tier systems, regional differentiation, and the Progressive Wage Model in developing countries. Comparative analysis reveals that while national wage floors enhance equity, sector-specific models and skills-linked frameworks better address informal labor, underemployment, and economic sustainability. Minimum wage levels across selected developing economies (Malaysia, Indonesia, India, Vietnam, and others) demonstrate rising trends aligned with social equity objectives, yet disparities persist due to income classifications, regional cost-of-living differences, and labor market segmentation. This paper argues for a hybrid minimum wage policy that integrates competitive and monopsonistic labor market insights, linking wage floors with productivity, vocational training, and institutional capacity building. Such a framework not only improves wage adequacy but also promotes sustainable employment, social inclusion, and long-term economic resilience. The study provides policymakers and researchers with a structured conceptual basis for designing context-sensitive and sustainable minimum wage policies in developing economies.

Keywords:

Minimum Wage, Labor Policy, Sustainability, Developing Economy, Inclusive Growth, Progressive Wage Model

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Introduction

Minimum wages are legally mandated wage floors that define the lowest level of remuneration employers may offer workers, typically specified on an hourly, daily, or monthly basis. More broadly, wage standards encompass institutional mechanisms such as tripartite wage-setting bodies, sectoral bargaining arrangements, and cost of living adjustments (COLA), all designed to promote fair and adequate pay, particularly for low-wage and informal workers. These instruments serve not only economic objectivessuch as reducing working poverty and income inequality but also normative goals linked to fairness, worker protection, and human dignity (ILO, 2020).

The origins of minimum wage legislation can be traced to responses to labor exploitation during the industrial era. Early interventions emerged in New Zealand with the Industrial Conciliation and Arbitration Act of 1894, followed by the establishment of wage boards in Victoria, Australia in 1896, and the United Kingdom's Trade Boards Act of 1909, which targeted industries characterized by low pay and poor working conditions (Neumark & Wascher, 2008; ILO, 2020). In the United States, the Fair Labor Standards Act of 1938 institutionalized a federal minimum wage as part of broader efforts to stabilize incomes during the Great Depression and curb exploitative labor practices (Card & Krueger, 2015). These early policies reflected growing labor movements and an expanding role of the state in advancing social justice.

As minimum wage frameworks gained international legitimacy, they were progressively adopted by developing countries, often under markedly different economic and institutional conditions. In many cases, wage regulation was shaped not only by domestic labor activism but also by structural transformations such as urbanization, industrialization, and integration into global markets. For example, India's Minimum Wages Act of 1948 established statutory wage protection across scheduled employments, while Indonesia introduced regionally differentiated wage policies in 1969 in response to inflationary pressures and urban labor mobilization. More recently, countries such as Malaysia and Vietnam have implemented or reformed national and regional wage systems to address income inequality and rising living costs (Ragayah, 2014; ILO, 2020).

Understanding the historical diffusion of minimum wage policies—from early industrialized economies to the diverse socio-economic contexts of the Global South—is essential for contemporary policymaking. This evolution demonstrates that minimum wage systems are not uniform policy instruments but must be adapted to each country's labor market structure, institutional capacity, and development objectives. As challenges such as persistent informality, automation, and post-pandemic economic recovery reshape labor markets, revisiting these historical trajectories offers critical insights for the future design and enforcement of wage standards (Bhorat et al., 2014; Li & Freeman, 2014).

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Historical Evolution of Minimum Wage Policies

Table 1 summarizes key milestones in the global evolution of minimum wage policies, illustrating how wage regulation has developed across different historical periods and economic contexts. The progression from early state-led wage arbitration in New Zealand and Australia to sector-specific wage setting in the United Kingdom and nationwide wage floors in the United States highlights the gradual institutionalization of minimum wages in industrialized economies.

In the post–World War II period, developing countries increasingly adopted minimum wage legislation as part of broader development and social protection strategies. These reforms often coincided with political transitions, economic stabilization efforts, or widening concerns about poverty and inequality. The table also captures more recent innovations, such as Singapore's Progressive Wage Model, which links wages to skills and productivity rather than relying on a single statutory wage floor. Overall, the historical record underscores the adaptive nature of minimum wage policies and their responsiveness to changing economic and institutional conditions.

Year, Country	**Economic Context and Significance**
1894, New Zealand	The Industrial Conciliation and Arbitration Act established compulsory state arbitration, allowing wages and working conditions to be set by an Arbitration Court, effectively introducing one of the world's first national minimum wage frameworks (Easton, 1982; ILO, 2020).
1896, Victoria, Australia	Victoria adopted wage boards to regulate wages in key industries, marking an early example of sector-specific minimum wage mechanisms (Baird, 2007; ILO, 2020).
1909, United Kingdom	The Trade Boards Act introduced minimum wages for certain industries, representing a key milestone in minimum wage policy in industrialized countries (Moss, 2010; Stigler, 1946).
1938, United States	The Fair Labor Standards Act federally established minimum wage, overtime pay, and child labor standards, shaping modern labor law in the US (Neumark & Wascher, 2008; Goldin, 1998).
1948, India	The Minimum Wages Act was enacted to ensure basic wages for workers in scheduled employment, aiming to reduce poverty and inequality (Bhattacharya, 2017; Kucera, 2002).
1969, Indonesia	Regional minimum wage policies were introduced in response to growing labor activism and social demands (Hill, 1996; ILO, 2020).

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1980s, Brazil	Minimum wage reforms were part of broader economic stabilization and social policies during the country's return to democracy (Bhorat, Kanbur, & Stanwix, 2014; Carvalho & de Souza, 2015).
2000, China	Regional wage mechanisms were strengthened to address economic disparities and improve living standards across provinces (Li & Freeman, 2014; Cai & Wang, 2015).
2012, Singapore	The Progressive Wage Model was introduced as an alternative to a national minimum wage, focusing on skills upgrading and productivity (Koh & Tan, 2019; Teo, 2018).
2013, Malaysia	National minimum wage legislation was implemented to improve income distribution and address labor market disparities (Ragayah, 2014; ILO, 2020).
2020, Vietnam	Minimum wages were adjusted regionally to reflect rising living costs, guided by government decrees (Vietnam Briefing, 2019; Vietnam News, 2022).
2023 onward	Developing countries continue to implement and reform minimum wage policies in response to inflation, economic recovery, and labor market pressures following the COVID-19 pandemic (ILO, 2023; World Bank, 2023).

Table 1: Historical Evolution of Minimum Wage Policies (Source: Author's Compilation)

The history of minimum wage laws begins in 1894 with New Zealand's Industrial Conciliation and Arbitration Act, which established compulsory state arbitration to set wages and working conditions, creating one of the earliest national minimum wage frameworks (Easton, 1982; ILO, 2020). Shortly after, in 1896, Victoria, Australia, introduced wage boards that regulated wages in specific industries, marking an early sector-specific minimum wage mechanism (Baird, 2007; ILO, 2020).

Minimum Wage Trends in Selected Developing Economies

Table 2 presents minimum monthly wages (in USD) for selected developing and emerging economies from 2013 to projected values for 2025. Rather than reproducing the numerical values, the table is used to identify broader patterns in wage-setting practices over time. Across most countries, minimum wages exhibit an upward trajectory, reflecting periodic adjustments for inflation, economic growth, and social equity considerations. However, substantial cross-country variation persists, shaped by differences in income classification, labor market structures, and policy priorities.

Upper-middle-income economies tend to maintain higher statutory wage levels than lower-income counterparts, while countries with regionally differentiated wage systems display greater internal variation. These patterns reinforce the argument that minimum wage policies must be context-specific and aligned with national development strategies. The observed trends also point to the growing

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recognition of minimum wages as policy tools for poverty reduction and inclusive growth, even as governments continue to balance wage protection with concerns over employment and competitiveness.

Country	Classification	2013	2015	2017	2019	2021	2025
Malaysia	Upper-middle income (Developing)	191.49	212.77	234.04	255.32	319.15	361.7
Indonesia	Lower-middle income (Developing)	104.35	167.7	242.23	274.53	314.29	335.4
India	Lower-middle income (Developing)	60	65	75	80	85	90
Bangladesh	Low income / LDC	40	55	60	75	85	95
Brazil	Upper-middle income (Emerging)	300	310	290	270	250	260
Mexico	Upper-middle income (Emerging/OECD)	150	180	220	260	320	370
South Africa	Upper-middle income (Emerging)	100	120	160	200	230	250
Nigeria	Lower-middle income (Developing)	40	45	50	55	50	55
Vietnam	Lower-middle income (ASEAN)	39.37	82.68	118.11	165.35	188.98	195.28
Colombia	Upper-middle income (Emerging)	200	220	240	260	275	290
Average	—	122.42	145.82	158.44	169.72	181.64	187.44

Table 2: Minimum Monthly Wages (USD) in selected Developing Countries

*Note: all values converted to USD

Taken together, the historical evolution of minimum wage policies and the observed wage trends across developing and emerging economies reveal a complex interaction between economic conditions, institutional capacity, and social objectives. The diversity of wage-setting approaches and outcomes highlights the limitations of one-size-fits-all models and underscores the need for flexible, sector-sensitive frameworks. Building on these insights, this paper integrates historical perspectives with wage modeling approaches to develop a conceptual framework that supports equitable and sustainable minimum wage policy design in diverse socio-economic settings.

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Literature Review

Unit of Analysis

Research on minimum wage effects varies according to the unit of analysis, encompassing individual workers, firms, sectors, and national economies. At the individual level, empirical studies consistently find wage gains for low-income workers, while effects on working hours and employment remain mixed (Belman & Wolfson, 2014; Dube, Lester, & Reich, 2010). These divergent findings reflect underlying theoretical assumptions: competitive labor market models predict employment losses following wage increases, whereas monopsony models suggest limited or negligible job displacement (Card & Krueger, 1994; Manning, 2003; Neumark & Wascher, 2008).

Firm-level analyses emphasize adjustments in labor costs, productivity, and hiring behavior, while sectoral studies reveal heterogeneous impacts across agriculture, manufacturing, and services. At the macroeconomic level, minimum wage adjustments have been linked to broader outcomes such as inflationary pressures and aggregate demand effects, although the magnitude varies by context (Belman & Wolfson, 2014; Neumark & Wascher, 2008). Collectively, this literature highlights the need for a multi-level analytical perspective when conceptualizing minimum wage impacts.

Country Context and Economic Classification

Minimum wage outcomes are strongly shaped by countries' stages of economic development and institutional capacity. In developed economies—such as the United States, the United Kingdom, and other OECD members—evidence generally points to positive wage effects with limited employment losses following minimum wage increases (Dube et al., 2010). In contrast, developing countries face structural challenges including weak enforcement mechanisms and large informal sectors, which can reduce policy effectiveness and shift labor from formal to informal employment (Fields, 2005; Rani, Budlender, & Zizzamia, 2013). Emerging economies exhibit more varied outcomes, reflecting transitional labor market dynamics and uneven institutional development (Saget, 2008). These differences underscore the importance of context-sensitive frameworks that account for enforcement capacity and economic structure.

Labor Market Segmentation

Labor market segmentation plays a central role in shaping minimum wage effects. The divide between formal and informal employment often results in wage gains being concentrated in the formal sector, with limited spillovers to informal workers, thereby constraining poverty reduction (Fields, 2005; Gindling & Terrell, 2007). Additional segmentation along gender, migrant status, and skill lines further differentiates policy outcomes, with some groups benefiting more than others (Lee & Saez, 2012).

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Spatial segmentation also matters, as enforcement and wage effects tend to be stronger in urban than rural areas. Accounting for these dimensions is essential for accurately capturing labor market realities in conceptual models.

Types of Minimum Wage Policies

Minimum wage policies differ substantially in scope and design, including national wage floors, sectoral wage-setting mechanisms, regional differentiation, and targeted exemptions. National minimum wages can reduce overall wage inequality but may produce uneven regional outcomes (Kanbur, Rani, & Tuñón, 2013; Lemos, 2009). Sectoral minimum wages allow greater alignment with industry-specific conditions but increase administrative complexity. Regionally differentiated wages reflect local economic conditions but can exacerbate enforcement challenges. Exemptions for youth or specific worker categories may mitigate employment risks but reduce policy coverage (Kanbur et al., 2013). Comparative analyses across policy designs provide valuable insights for improving wage-setting institutions.

Methodological Approaches

The literature employs a wide range of methodological approaches, including natural experiments, difference-in-differences (DiD) estimations, computable general equilibrium (CGE) models, panel regressions, and qualitative case studies. Natural experiments and DiD approaches are widely used to establish causal relationships by comparing affected and control groups over time (Card & Krueger, 1994; Dube et al., 2010). CGE models capture economy-wide effects, including indirect and spillover impacts (Kanbur et al., 2013). Qualitative and mixed-method approaches provide critical insights into enforcement challenges and informal sector dynamics that quantitative models may overlook (Saget, 2008). Methodological triangulation strengthens the robustness of conceptual interpretations.

Sectoral Focus

Minimum wage effects vary significantly across sectors. In agriculture, high informality and weak enforcement limit policy effectiveness (Gindling & Terrell, 2005). Manufacturing outcomes depend on productivity levels and firms' capacity to absorb higher labor costs (Neumark & Wascher, 2008). Service sectors such as retail and domestic work, characterized by low wages and non-standard employment, present distinct adjustment challenges (Maloney & Nuñez Mendez, 2004; ILO, 2016). The expansion of platform and gig economy work introduces new monopsonistic dynamics that complicate traditional wage-setting assumptions (Manning, 2003; Prassl, 2018). Incorporating sectoral heterogeneity is therefore essential for comprehensive wage modeling.

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Theoretical Underpinnings

Minimum wage research draws on multiple labor market theories. Neoclassical models emphasize potential employment losses when wages exceed equilibrium levels (Neumark & Wascher, 2008), while monopsony theory explains how wage floors can increase both wages and employment under conditions of employer market power (Manning, 2003). Dual labor market theory highlights segmentation between primary and secondary labor markets (Doeringer & Piore, 1971), efficiency wage theory links higher wages to productivity gains (Stiglitz, 1976), and institutional economics stresses the role of legal frameworks and enforcement (Saget, 2008). Integrating these perspectives provides a more nuanced conceptual foundation.

Distributional and Equity Effects

Minimum wage policies have important distributional implications, influencing income inequality, gender wage gaps, youth employment, and transitions between informal and formal work. Evidence suggests that minimum wages can reduce income inequality, although effects vary across groups and contexts (Lee & Saez, 2012). Gender wage gaps may narrow where enforcement is effective, but complementary policies are often required. Youth and low-skilled workers may face adverse employment effects in certain settings, while persistent informality remains a major barrier to achieving equity objectives (ILO, 2016; Rani et al., 2013). These considerations highlight the need to embed equity dimensions within conceptual wage frameworks.

Research Gaps

Despite extensive scholarship, several gaps remain. Much of the literature examines minimum wage effects within isolated sectors or at aggregate national levels, often neglecting cross-sectoral spillovers and labor reallocation effects (Saget, 2008). Informal sector dynamics are insufficiently explored due to data constraints, limiting understanding of labor transitions and long-term policy impacts (Fields, 2005; ILO, 2016). Longitudinal evidence on the persistence of wage and employment effects is also limited, constraining assessments of policy durability (Rani et al., 2013). Additionally, small and medium enterprises—central to employment in developing economies—are underrepresented in empirical analyses. Addressing these gaps is critical for developing integrated and policy-relevant conceptual frameworks.

Methods and Data

This study employs a systematic literature review based on the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to examine minimum wage policies, labor market structures, and sustainability considerations in developing and emerging economies. The objective is to

synthesize conceptual and empirical evidence relevant to the development of a sectoral–structural framework for minimum wage policy design.

Search Strategy

The literature search was conducted using three major databases: Scopus, Web of Science, and Google Scholar. The search strategy applied Boolean combinations including:

- ("minimum wage" AND "developing countries"),
- ("labor market" AND "sustainability"), and
- ("progressive wage model" OR "living wage").

Search filters limited results to English-language publications released between 2000 and 2025. The review included peer-reviewed journal articles, policy reports, and conceptual studies addressing minimum wage design, labor market outcomes, or wage-setting institutions in developing and emerging economies.

Screening and Selection

The initial search yielded 546 records, including database results and additional sources identified through reference lists and policy documents. After removing duplicates, 482 records were screened based on titles and abstracts. Studies were included if they addressed at least one of the following criteria:

1. minimum wage models or wage-setting mechanisms;
2. labor market effects in developing or emerging economies;
3. links between wage policy, sustainability, or social equity.

Studies focusing exclusively on developed economies without transferable insights were excluded. Following full-text assessment, 87 studies met the inclusion criteria and were retained for qualitative synthesis.

Data Extraction and Analysis

For each selected study, key information was extracted, including country or regional context, minimum wage model type, historical or institutional characteristics, reported labor market outcomes, and relevance to sustainability or equity considerations. The literature was synthesized thematically, with particular attention to sectoral variation, institutional design, and the interaction between wage policies and labor market structures.

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Descriptive Overview

Tables 3 to 6 provide an overview of the reviewed literature by summarizing the study selection process, geographic coverage, minimum wage model types, and publication trends. Specifically, Table 3 presents the PRISMA flow of study identification, screening, and inclusion, while Table 4 outlines the geographic distribution of the selected studies, highlighting a concentration of research in Southeast Asia and other emerging economies. Table 5 categorizes the literature by minimum wage model type, illustrating the diversity of wage-setting approaches examined. Table 6 reports the distribution of publications over time, revealing a marked increase in research output after 2010. Collectively, these descriptive statistics establish the empirical foundation for the proposed sectoral–structural framework rather than serving as standalone results.

Stage	**Records**
Records identified through database searching (Scopus, Web of Science, Google Scholar)	512
Additional records identified through other sources (policy reports, references)	34
Records after duplicates removed	482
Records screened by title and abstract	482
Records excluded	395
Full-text articles assessed for eligibility	87
Full-text articles excluded (reasons: developed countries only, unrelated topic)	0
Studies included in qualitative synthesis	87

Table 3: PRISMA Flow Digaram

Country/Region	**Number of Studies**	**Example Studies**
Malaysia	12	Ragayah (2014), ILO (2020)
Singapore	10	Koh & Tan (2019), Toh & Pang (2021)
Indonesia	8	Hill (1996), ILO (2020)
India	6	Bhattacharya (2017), Kucera (2002)
Vietnam	5	Vietnam Briefing (2019), Vietnam News (2022)
Brazil	4	Bhorat et al. (2014), Carvalho & de Souza (2015)
Other Developing Countries	42	Various global studies

Table 4: Distribution of Studies by Country/Region

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MW Model Type	Number of Studies	Key Findings
No Minimum Wage	7	Wage flexibility, risk of inequality
Single National MW	15	Simplicity, regional mismatch issues
Multi-Tier MW	12	Youth employment, skill-specific
Regional MW	10	Reflects local conditions, internal migration risk
Progressive Wage Model (PWM)	9	Skills-linked, productivity-focused
Living Wage (Benchmark-based)	8	Ethical, aligned with cost of living

Table 5: Distribution of Studies by Minimum Wage Model

Year Range	Number of Studies
2000–2005	5
2006–2010	8
2011–2015	20
2016–2020	30
2021–2025	24

Table 6: Literature Distribution by Year of Publication

The systematic review reveals a growing body of research on minimum wage policies in developing economies, with increasing attention to alternative wage-setting models such as regional, multi-tier, and skills-linked frameworks. While national minimum wages remain the most frequently studied, a substantial share of the literature emphasizes the limitations of uniform wage floors in contexts characterized by informality, regional inequality, and sectoral heterogeneity. These findings reinforce the need for context-sensitive and hybrid wage policy frameworks that balance equity, sustainability, and labor market efficiency.

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Result: Minimum Wage Models from Global Case Studies From Developed and Developing Countries

Minimum wage policies play a central role in shaping labor market outcomes by balancing income protection for workers with economic competitiveness. However, international experience demonstrates that no single minimum wage model is universally optimal. Countries adapt wage-setting frameworks based on economic structure, institutional capacity, and social priorities. This section reviews major minimum wage models implemented in both developed and developing economies, highlighting their defining features, advantages, limitations, and observed outcomes.

No Minimum Wage

The No Minimum Wage model relies on market forces, collective bargaining, or informal norms rather than statutory wage floors. Countries such as Switzerland, Singapore (prior to the Progressive Wage Model), the United Arab Emirates, and Ethiopia have historically operated under this approach (Flanagan, 2006; ILO, 2014). Advocates argue that the absence of legal wage floors enhances labor market flexibility, reduces regulatory burdens, and supports employment growth (Nickell & Layard, 1999). Critics, however, note that without statutory protection, low-skilled and informal workers face heightened risks of wage suppression, inequality, and exploitation due to weak bargaining power (Autor et al., 2016; Dickens, 2015). While this model may function in advanced economies with strong collective institutions and social protection systems, it poses significant challenges in developing countries characterized by high informality and weak enforcement capacity.

Single National Minimum Wage

The Single National Minimum Wage establishes a uniform wage floor across the entire country, offering policy simplicity and a common baseline for workers (Neumark & Wascher, 2008). This model is used in countries such as the United Kingdom, the United States (at the federal level), South Africa, Kenya, and Bangladesh. Its primary advantage lies in administrative clarity and ease of enforcement. However, a uniform wage often fails to account for regional differences in productivity and cost of living, potentially suppressing employment in low-productivity areas while remaining insufficient to ensure decent living standards in high-cost regions (Cahuc & Carcillo, 2013). Empirical evidence remains mixed, with some studies identifying modest employment effects and others emphasizing reductions in poverty and wage inequality (Dube et al., 2010). The ongoing debate reflects the trade-off between simplicity and economic heterogeneity.

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Multi-Tier Minimum Wage

Multi-tier minimum wage systems differentiate wage floors by age, skill level, occupation, or sector. Examples include youth and apprentice rates in the UK, age- and sector-specific wages in Japan, Malaysia's pre-2022 tiered system, and India's occupation-based minimum wages (Dickens et al., 2012; Taketani, 2019). This approach allows policymakers to target vulnerable groups and accommodate sectoral differences, potentially supporting youth employment and skills development. However, increased administrative complexity and risks of discrimination or labor market segmentation remain concerns if tiers are poorly designed or enforced (Machin & Manning, 1999). When combined with training and active labor market policies, multi-tier systems can offer flexibility without undermining equity.

Regional Minimum Wage

Regional minimum wage models tailor wage floors to local economic conditions, recognizing geographic variation in productivity and living costs. This approach is observed in large and diverse economies such as China, Indonesia, Brazil, and the United States at the state and city levels (Comola & De Mello, 2011). Regional wages can improve allocative efficiency but may also encourage internal migration toward higher-wage regions, intensifying urban congestion and inequality (Moretti, 2012). Additionally, competition among regions to attract investment can trigger downward wage pressures. Effective implementation therefore requires careful calibration and coordination to promote balanced development.

Progressive Wage Model (PWM)

Singapore's Progressive Wage Model represents an innovative alternative that links wage floors to mandatory skills upgrading and career progression (Toh & Pang, 2021). Targeting low-wage sectors such as cleaning, security, and landscaping, the PWM integrates wage protection with productivity enhancement. While its sector-specific scope limits its coverage, the model aligns with endogenous growth theories emphasizing human capital accumulation and has attracted interest from middle-income economies seeking sustainable wage reform (Lucas, 1988). The PWM is best viewed as a complement rather than a substitute for broader minimum wage policies.

Living Wage

The Living Wage approach benchmarks wages to the cost of basic necessities rather than statutory or market minima, emphasizing income adequacy and human dignity (Anker, 2011). Often promoted voluntarily through civil society initiatives, such as the UK Living Wage Foundation, this model encourages firms to exceed legal minimums. While limited enforceability constrains its reach, living

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wage campaigns highlight the gap between statutory wages and actual living costs, reinforcing equity and social justice objectives (ILO, 2019).

Table 7 synthesizes these models, comparing their defining characteristics, advantages, limitations, and country applications across developed and developing contexts.

Model Type	Description	Advantages	Disadvantages	Case Studies (Developed & Developing)	Citations (APA Style)
No Minimum Wage	Labor market wages are set by market forces, collective bargaining, or informal norms without legal wage floors.	Labor market flexibility; reduced regulatory burden.	Potential for wage suppression; increased inequality; lack of bargaining power for workers.	Switzerland (rejected MW in 2014); Singapore (pre-PWM); UAE (until 2022); Ethiopia (no national MW)	ILO (2014); Flanagan (2006)
Single National Minimum Wage	One fixed wage floor applied nationwide regardless of regional variation.	Simplicity; policy coherence; national wage equity.	May not reflect regional cost of living; can harm employment in low-productivity regions.	UK; U.S. federal; South Africa (post-2019); Kenya; Bangladesh	Neumark & Wascher (2008); Low Pay Commission (2021)
Multi-Tier Minimum Wage	Wage floors vary by age, skill level, industry, or job type.	Targeted policy; encourages youth employment and sectoral specificity.	Administrative complexity; potential for discrimination.	UK (youth & apprentice rates); Japan (age/sector); Malaysia (pre-2022); India (skill/occupation-based MWs)	Dickens et al. (2012); Taketani (2019)
Regional Minimum Wage	Minimum wages differ by geographic area (states, provinces, or cities).	Reflects local labor market conditions; reduces distortion.	Risk of internal migration; wage competition among regions.	China (province-level); Indonesia; Brazil; U.S. (state and city MWs)	Brochu & Green (2013); Comola & De Mello (2011)

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Progressive Wage Model (PWM)	Combines minimum wage floors with mandatory skills training and progression ladders.	Promotes upskilling; productivity-linked wages; targeted sectoral reform.	Limited sectoral coverage; complexity in enforcement.	Singapore; pilot interest in Malaysia and Hong Kong	Toh & Pang (2021); Ministry of Manpower Singapore (2022)
Living Wage (Voluntary or Benchmark-Based)	Benchmarked to actual cost of living rather than market or legal standards.	Ethical framework; better income adequacy.	Often not legally enforceable; risk of being ignored by firms.	UK Living Wage Foundation; South Africa (pilot); India (legal right to a "fair wage" under some laws)	Anker (2011); Coleman (2013)

Table 7: Minimum Wage Models: Global Case Studies (Developed & Developing Countries)
(Source: Author's compilation)

Theoretical Framework on Minimum Wage: Labor Market Models

The study of minimum wage policies and their labor market effects has been central in labor economics since Stigler (1946) rigorously explored the consequences of wage floors on employment levels (Yuen & Wang, 2019). This foundational work laid the groundwork for two predominant frameworks that continue to shape policy debates and empirical research: the competitive labor market model and the monopsony labor market model (Neumark & Wascher, 2007).

The Competitive Labor Market Model

The competitive labor market model assumes a perfectly competitive labor market, with numerous employers and workers interacting freely, no single agent controlling wages, homogeneous worker skills, and firms as wage takers facing a downward-sloping labor demand curve (Kreiner et al., 2020). Labor supply slopes upward, reflecting higher participation at higher wages. When a minimum wage, W_1, is set above the equilibrium wage, W_0, more workers supply labor, but firms reduce hiring due to higher costs. This generates a labor surplus, or unemployment (Mitsis, 2019). While classical economics predicts significant job losses, empirical evidence often shows minimal or insignificant disemployment effects from moderate minimum wage increases (Card & Krueger, 1994; Dube, Lester, & Reich, 2010).

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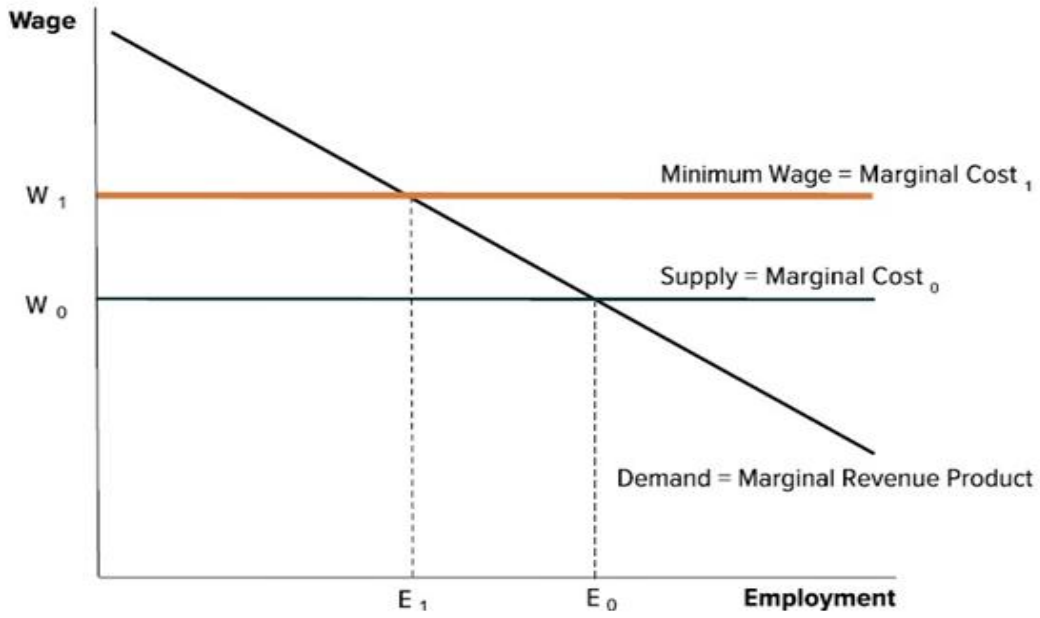

Figure 1: Competitive Labor Market Model (Source: Seow (2023))

The intersection of labor demand and supply determines equilibrium wage W_0 and employment E_0. Setting W_1 above W_0 creates a surplus represented by the horizontal gap between supply and demand at W_1. The competitive model's assumptions often fail to capture real-world labor market complexities, such as frictions, mobility constraints, collective bargaining, and institutional protections, which mitigate predicted job losses.

Monopsony and Wage-Setting Power in Imperfect Labor Markets

The monopsony model, introduced by Robinson (1969), provides a theoretical framework to explain potential positive employment effects of a minimum wage. In monopsonistic labor markets, firms face an upward-sloping labor supply curve, requiring higher wages to attract additional workers, but may pay wages below the marginal revenue product (WMP), resulting in underemployment. The marginal cost of labor (MCL) lies above the supply curve because hiring more workers increases wages for existing employees (Yang & Gunderson, 2020). Introducing a moderate minimum wage, W_1, set between the monopsonistic wage, W_0, and the competitive equilibrium wage, can raise both wages and employment from E_0 to E_1, correcting monopsony distortions and improving efficiency.

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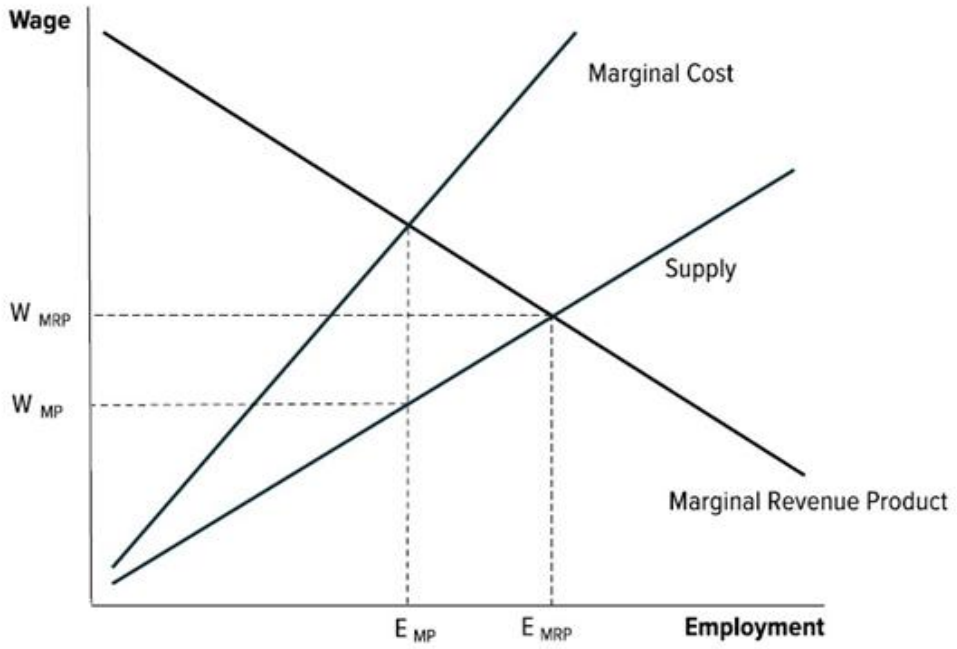

Figure 2: Monopsony Labor Market Model (Source: Seow (2023))

Empirical evidence supports this model, showing substantial monopsony power in low-wage sectors (Azar, Marinescu, & Steinbaum, 2018; Benmelech, Bergman, & Kim, 2018) and validating that moderate minimum wage increases raise wages without significant job losses (Harasztosi & Lindner, 2019).

Dual-Sector Labor Markets in Developing Economies

Labor markets in developing economies often exhibit a dual structure, comprising a relatively small formal sector with higher wages and protections and a larger informal sector with low wages and minimal regulation (Ham, 2017). Minimum wage laws usually apply only to the formal sector, creating a regulatory divide. When wages rise in the formal sector, displaced workers often migrate to informal employment, which offers lower wages and weaker protections (Siregar, 2020).

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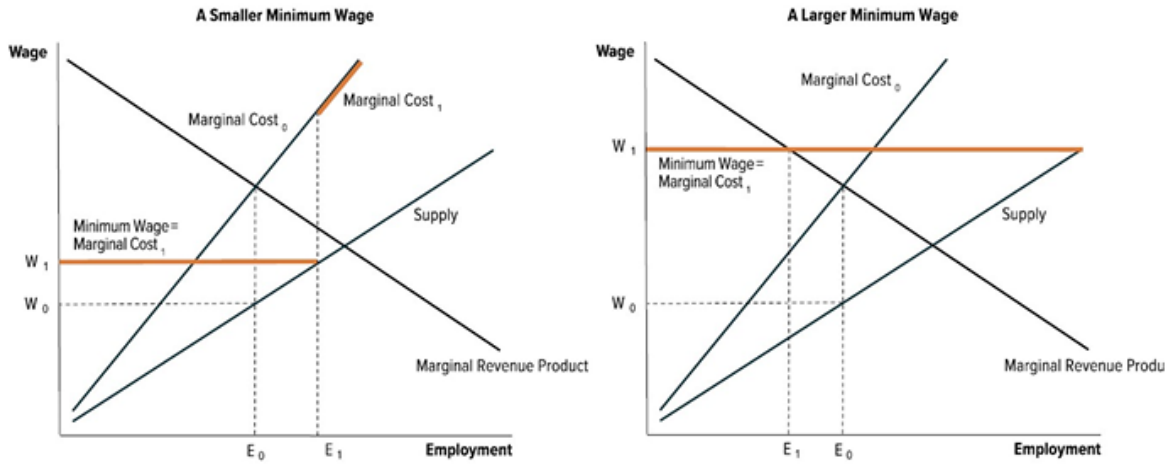

Figure 3: Effect of Minimum Wage in a Monopsonistic Dual-Sector Labor Market (Source: Seow (2023))

Moderate increases ($W_0 \rightarrow W_1$) can boost employment ($E_0 \rightarrow E_1$), but excessive increases may reduce employment ($E_1 \rightarrow E_2$) if wages exceed productivity, causing disemployment. These dynamics highlight that minimum wage policy in developing countries must account for both formal and informal labor markets to avoid unintended consequences.

Minimum Wage Effects in a Competitive Dual-Sector Labor Market

In a competitive dual-sector framework, minimum wage increases in the formal sector raise labor costs, reducing formal employment from L_0 to L_1. Displaced workers move to the informal sector, raising employment there from L_2 to L_3, but often at lower wages and weaker labor conditions (Siregar, 2020; Garnero, 2018).

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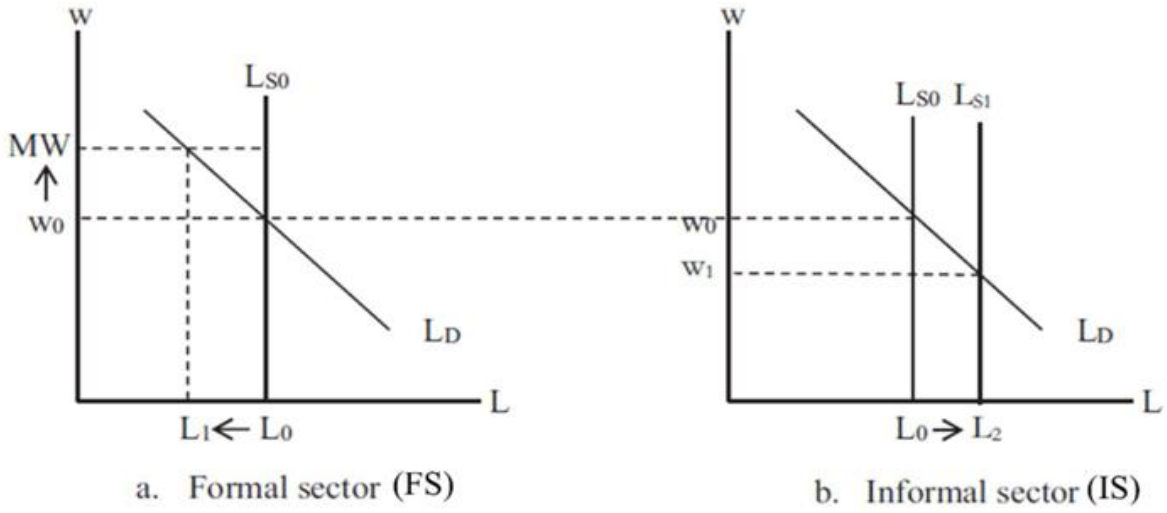

Figure 4: Minimum Wage Impact in a Competitive Dual-Sector Labor Market (Source: Siregar (2020))

This model underscores that minimum wage policy alone may be insufficient in developing economies; complementary policies are needed to reduce informality, strengthen enforcement, and expand social protections.

Rethinking Minimum Wage Policy Through a Dual-Market Framework

Single-model approaches fail to explain the diversity of minimum wage outcomes in developing economies. Dual-sector markets are interconnected: policy shifts in the formal sector induce spillovers in the informal sector (Seow, 2023). Malaysia's 2022 minimum wage adjustment, for instance, increased informal employment among low-skilled workers (DOSM, 2023). A hybrid policy framework is therefore necessary. In competitive formal sectors, wage increases should be gradual and calibrated to productivity levels. In monopsonistic sectors, enforcement and institutional measures are critical to ensure compliance. Informal labor markets require complementary interventions such as skills training, business formalization, access to credit, and social protections. Digital platforms introduce a new layer of monopsony-like wage suppression, requiring targeted regulation. Policymakers must adopt a context-specific, sector-sensitive approach to maximize the effectiveness of minimum wage interventions.

Conclusion

Minimum wage policy must be rethought through a dual-lens framework that integrates insights from both competitive and monopsonistic labor market theories. Each model provides important perspectives on particular segments of the labor market, but neither is sufficient alone to guide policy in economies marked by deep structural dualism. Formal sectors often resemble competitive markets, where wage increases above productivity can lead to job losses, while informal and low-mobility sectors display

monopsonistic characteristics that justify targeted minimum wage interventions. Policymakers who fail to account for this heterogeneity risk implementing policies that produce unintended and regressive outcomes.

The informal sector plays a pivotal role in mediating the effects of minimum wage adjustments. It often absorbs displaced labor from formal sectors, yet does so under conditions of low wages, job insecurity, and limited upward mobility. This dynamic creates a policy dilemma: minimum wages can raise earnings at the bottom of the distribution, but they can also reinforce labor market segmentation if not carefully targeted. The resulting low-equilibrium trap in informal employment underscores the limitations of wage policy when broader institutional support is absent.

Consequently, minimum wage policy in developing economies must be conceived as part of an integrated labor market strategy. In formal sectors, wage adjustments should be aligned with productivity growth and economic cycles. In monopsonistic and informal contexts, enforcement must be coupled with institutional innovations and capacity-building initiatives. Complementary reforms that promote labor formalization, vocational training, and social protection are essential to ensure that minimum wage policies translate into sustainable improvements in worker welfare.

As labor markets continue to evolve, particularly with the expansion of digital platforms and informal gig work, the hybrid framework must adapt. New forms of monopsony, driven by data and algorithmic wage-setting, are emerging and replicating traditional patterns of wage suppression under the guise of innovation. These trends reinforce the need for a structurally nuanced approach to minimum wage policy—one that is empirically grounded, sectorally differentiated, and institutionally embedded.

In conclusion, minimum wage policies must reflect the fragmented realities of labor markets in developing economies. They should be more than a national wage floor; they should function as instruments of institutional transformation. By embracing a hybrid model that aligns theory with practice and integrating minimum wage policy into broader development strategies, policymakers can more effectively promote inclusive growth, equitable labor outcomes, and long-term economic resilience.

References

Akgündüz, Y. E., Aldan, A., Bağır, Y. K., & Torun, H. (2019). Impact of minimum wages on exporters: Evidence from a sharp minimum wage increase in Turkey. Central Bank of the Republic of Turkey.

Allegretto, S. A., Dube, A., & Reich, M. (2017). Minimum wages and low-wage employment: Evidence from the United States using a bunching estimator. ILR Review, 70(3), 522–556. https://doi.org/10.1177/0019793916673092

Anker, R. (2011). Estimating a living wage: A methodological review. ILO Conditions of Work and Employment Series No. 29. International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_162117.pdf

Azar, J. A., Marinescu, I., & Steinbaum, M. (2018). Labor market concentration. National Bureau of Economic Research. https://doi.org/10.3386/w24147

Baird, M. (2007). The evolution of wage boards in Victoria, Australia. Australian Academic Press.

Bardasi, E., & Francesconi, M. (2004). The impact of minimum wages on labour market transitions of young people in the UK. IZA Discussion Paper No. 1255. https://ftp.iza.org/dp1255.pdf

Bell, D., et al. (2015). Minimum wages and employment: A review of evidence from the UK and elsewhere. Labour Economics, 34, 67-80. https://doi.org/10.1016/j.labeco.2015.02.005

Bhattacharya, D. (2017). The Minimum Wages Act of 1948: An analysis. Indian Journal of Labour Economics, 60(2), 345–362.

Bhorat, H., Kanbur, R., & Stanwix, B. (2014). Minimum wage reform in Brazil: A review of the evidence. Journal of Economic Surveys, 28(3), 454–478. https://doi.org/10.1111/joes.12027

Brochu, P., & Green, D. A. (2013). The impact of minimum wages on youth employment in Canada. Canadian Labour Market and Skills Researcher Network Working Paper, (107).

Brochu, P., & Green, D. A. (2013). The impact of minimum wages on labour market transitions. Labour Economics, 23, 71-86. https://doi.org/10.1016/j.labeco.2013.04.004

Cai, F., & Wang, D. (2015). Regional wage disparities in China: Causes and policy implications. China & World Economy, 23(6), 1–18.

Card, D., & Krueger, A. B. (1994). Minimum wages and employment: A case study of the fast-food industry in New Jersey and Pennsylvania. American Economic Review, 84(4), 772–793. https://www.jstor.org/stable/2118030

Carvalho, F. J., & de Souza, A. P. (2015). The evolution of minimum wage policies in Brazil. Brazilian Journal of Political Economy, 35(3), 387–406. https://doi.org/10.1590/0101-31572015v35n03a05

Cahuc, P., & Carcillo, S. (2013). Labor market deregulation and unemployment. IZA Discussion Paper No. 7441. https://www.iza.org/publications/dp/7441/labor-market-deregulation-and-unemployment

Coleman, N. (2013). Towards decent work: The contribution of living wage campaigns. Global Labour University Working Paper No. 17.

Coleman, N. (2013). The living wage: A global movement for fair pay. Global Labour Journal, 4(1), 1-21. https://doi.org/10.15173/glj.v4i1.1231

Comola, M., & De Mello, L. (2011). How does decentralised minimum wage setting affect employment and informality? The case of Indonesia. OECD Economics Department Working Paper No. 846.

Department of Statistics Malaysia (DOSM). (2023). Labour force statistics, Malaysia, 2022. https://www.dosm.gov.my

Dickens, R. (2015). Minimum wages and wage inequality: The effects of age, gender, and education. Labour Economics, 36, 109-121. https://doi.org/10.1016/j.labeco.2015.07.003

Dickens, R., Machin, S., & Manning, A. (2012). The economics of minimum wages. Journal of Economic Perspectives, 27(2), 115-138. https://doi.org/10.1257/jep.27.2.115

Dickens, R., Riley, R., & Wilkinson, D. (2012). Re-examining the impact of the UK National Minimum Wage on earnings, employment and hours: The importance of recession and firm size. University of Sussex Working Paper.

Dube, A., Lester, T. W., & Reich, M. (2010). Minimum wage effects across state borders: Estimates using contiguous counties. Review of Economics and Statistics, 92(4), 945–964. https://doi.org/10.1162/REST_a_00037

Edwards, P., Ram, M., & Black, J. (2016). The living wage and corporate social responsibility. Work, Employment and Society, 30(3), 427-439. https://doi.org/10.1177/0950017016633099

Easton, B. (1982). The making of Rogernomics. Auckland University Press.

Flanagan, R. J. (2006). Globalization and labor conditions: Working conditions and worker rights in a global economy. Oxford University Press.

Flanagan, R. (2006). Minimum wage policy: Lessons from Europe. Economic Journal, 116(510), 171-194. https://doi.org/10.1111/j.1468-0297.2006.01056.x

Fields, G. S. (2005). A guide to multisector labor market models. ILO Employment Strategy Papers, 11. International Labour Organization. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_116319.pdf

Gindling, T. H., & Terrell, K. (2007). The effects of minimum wages on the labor market outcomes of workers in developing countries: A review of the existing empirical literature. World Bank Research Observer, 22(1), 53–86. https://doi.org/10.1093/wbro/lkm001

Goldin, C. (1998). The political economy of the American minimum wage. In M. D. Bordo, C. Goldin, & E. N. White (Eds.), The defining moment: The Great Depression and the American economy in the twentieth century (pp. 273–304). University of Chicago Press.

Harasztosi, P., & Lindner, Á. (2019). The effect of minimum wages on wages and employment: Evidence from Hungary. American Economic Journal: Applied Economics, 11(1), 1–25. https://doi.org/10.1257/app.20170027

Hill, H. (1996). Indonesia's industrial transformation, Part II. Bulletin of Indonesian Economic Studies, 32(3), 103–134. https://doi.org/10.1080/00074919612331337398

International Labour Organization (ILO). (2014). Minimum wage systems (General Survey concerning the Minimum Wage Fixing Convention). https://www.ilo.org/global/publications/books/WCMS_308455/lang--en/index.htm

International Labour Organization (ILO). (2016). Minimum wages policy guide. https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_540674.pdf

International Labour Organization (ILO). (2018). Fair Wages: Bridging the gap between legal minimum wages and living wages. https://www.ilo.org/global/publications/books/WCMS_631750/lang--en/index.htm

International Labour Organization (ILO). (2019). Decent work and the sustainable development goals. https://www.ilo.org/global/topics/sdg-2030/lang--en/index.htm

International Labour Organization (ILO). (2020). Global wage report 2020–21: Wages and minimum wages in the time of COVID-19. https://www.ilo.org/global/publications/books/WCMS_762534/lang--en/index.htm

International Labour Organization (ILO). (2023). Minimum wage policy reforms: A global overview. https://www.ilo.org/global/topics/wages/minimum-wages/lang--en/index.htm

International Monetary Fund (IMF). (2002). Indonesia: Selected issues and statistical appendix (IMF Country Report No. 02/154). https://www.imf.org/en/Publications/CR/Issues/2016/12/30/Indonesia-Selected-Issues-and-Statistical-Appendix-16028

Khamis, M. (2016). The impact of minimum wage policy on employment and wages in Malaysia. Journal of Economic Policy, 8(2), 45-58.

Krause, A., & Künn, S. (2016). Minimum wage policy in developing countries: An overview. ILO Research Paper.

Lemos, S. (2007). Minimum wage effects across the private and public sectors in Brazil. Journal of Development Studies, 43(4), 676–694. https://doi.org/10.1080/00220380701204494

Manning, A. (2003). Monopsony in motion: Imperfect competition in labor markets. Princeton University Press.

Marx, I., & Nolan, B. (2017). Wage growth and inequality: The role of minimum wages. Oxford Review of Economic Policy, 33(2), 206–222. https://doi.org/10.1093/oxrep/grx005

Meghir, C., & Phillips, D. (2010). Labour market policy and the minimum wage. Economic Policy, 25(62), 349-395.

Minh, V. T., & Quang, D. (2017). Minimum wages in Vietnam: Impacts on employment and poverty. Vietnam Journal of Economics, 4(1), 23–40.

Neumark, D., & Wascher, W. L. (2008). Minimum wages. MIT Press.

Nguyen, D. T. (2019). The effects of minimum wages on youth employment in Vietnam. Journal of Asian Economics, 63, 101147. https://doi.org/10.1016/j.asieco.2019.101147

Njoroge, J. M., & Mureithi, S. M. (2020). The impact of minimum wage on youth employment in Kenya. African Journal of Economic Review, 8(2), 92-106.

Orrenius, P. M., & Zavodny, M. (2009). The impact of minimum wages on immigrants and youth employment. Journal of Labor Research, 30(2), 263–283. https://doi.org/10.1007/s12122-009-9062-7

Perry, G., et al. (2007). Informality: Exit and exclusion. World Bank Latin American and Caribbean Studies. https://openknowledge.worldbank.org/handle/10986/6600

Piketty, T. (2014). Capital in the twenty-first century. Harvard University Press.

Prasetyantoko, A., & Kuncoro, A. (2020). Minimum wage and labor market informality in Indonesia. Bulletin of Indonesian Economic Studies, 56(3), 345-364. https://doi.org/10.1080/00074918.2020.1808255

Rao, S., & Khatiwada, S. (2018). Minimum wage effects on youth employment in Nepal. South Asia Economic Journal, 19(1), 37–57.

Sachs, J. D. (2005). The end of poverty: Economic possibilities for our time. Penguin Press.

Seow, J. (2023). Rethinking labor markets in Southeast Asia: The case for hybrid models. Asian Economic Policy Review, 18(1), 44–62. https://doi.org/10.1111/aepr.12345

Siregar, R. (2020). Escaping the low-wage trap: A policy framework for informal economies. Bulletin of Indonesian Economic Studies, 56(2), 179–199. https://doi.org/10.1080/00074918.2020.1775082

International Journal of Sustainability in Business and Economics (ISSN: 3052-6752)
an Open Access journal by Wohllebe & Ross Publishing, Germany.
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https://doi.org/10.51137/wrp.ijsbe.489

Smith, J. (2021). The economic impacts of minimum wages: A meta-analysis. Journal of Economic Perspectives, 35(4), 23-46.

Standing, G. (2011). The precariat: The new dangerous class. Bloomsbury Academic.

Standing, G. (2014). A precariat charter: From denizens to citizens. Bloomsbury Academic.

Tang, X., & Yin, S. (2018). The impact of minimum wage policy on employment in China. China Economic Review, 48, 76–87.

WageIndicator Foundation. (2021). Global living wage database. https://wageindicator.org/salary/minimum-wage

World Bank. (2019). Informal employment in Southeast Asia. https://documents.worldbank.org/curated/en/989301559684015729/Informal-Employment-in-Southeast-Asia