



# ► Research Brief

May 2025

## Returns to education in Viet Nam: Earnings, education and the transition to formality

### Key points

- Coinciding with robust economic growth and rapid poverty reduction, Viet Nam has made considerable progress in vastly improving education of its workforce, while also expanding decent jobs in the formal economy.
- While real hourly earnings in the formal sector have remained higher than in the informal sector overall, the gap narrowed significantly, from 34.1 per cent in 2016 to 13.9 per cent in 2022 due to higher growth in earnings in the informal sector.
- The returns to education, as measured in terms of earnings, have decreased. The earnings premium for university graduates dropped from 127.6 per cent in 2016 to 68.6 per cent in 2022. This trend is driven in part by the diminishing returns to education in the formal sector.
- When controlling for differences in education, trends show that the gender pay gap is shrinking. However, men still earned 15.6 per cent more than women in the formal sector and 28.7 per cent more in the informal sector in 2022.
- Integrated policies that strengthen formal job creation and wage setting mechanisms through social dialogue, align earnings structures with qualifications, promote gender pay equality, and enhance the quality and relevance of education and training to facilitate the transition to formal sector employment are key to enhancing the returns to education.

## ► Introduction

Investment in education has long been recognized as a crucial driver of economic development and improved labour market outcomes. Progress in education has been linked to the transition from the informal to the formal

economy in developing economies, including in Viet Nam.<sup>1</sup> Coinciding with robust economic growth and rapid poverty reduction, Viet Nam has made considerable progress over the past decades in vastly improving both educational

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<sup>1</sup> See, for example: Era Dabla-Norris et al., "Role of Individual Characteristics and Policies in Driving Labor Informality in Vietnam", IMF Working Paper WP/20/273, 2020; ILO, *Informal Employment in Viet Nam: Trends and Determinants*, 2021.

attainment and quality, while also expanding its formal economy.<sup>2</sup>

Educated and trained workers are integral to economic development and are more likely to transition into the formal economy.<sup>3</sup> This shift is driven by a push-and-pull dynamic, with wages and earnings at its core. The formal sector is characterized by higher, more stable earnings and better working conditions, reflecting increased productivity and compliance with labour regulations. These core characteristics, in turn, help attract educated workers.

Highly educated workers tend to prefer formal employment, where their expertise is better recognized and rewarded. Beyond higher earnings, these jobs provide job security, legal protections, career growth opportunities, financial security – making them significantly more attractive than informal alternatives.

Conversely, the informal sector pushes better educated workers away with low, unstable pay and a lack of employment benefits. Informal jobs often offer neither stable income nor legal and social protections, and limited career growth. Without structured wage setting, even educated and experienced workers risk being underpaid, making formal employment the more viable option for long-term stability.

Wages and earnings that provide adequate returns to education are key drivers of the transition from informal to formal employment – a dynamic that shapes labour markets as economies grow. As well, the returns to

education must be reinforced with better job opportunities, driven by robust demand, with earnings that are commensurate with all levels of schooling and training. However, this transition also affects how education and training are valued by not only individuals but also firms and society, making it essential to understand its broader impact.

Various empirical studies have examined the historical trends in the returns to education in Viet Nam.<sup>4</sup> Despite different methodological approaches, these studies have commonly demonstrated that the returns to education have decreased in recent decades. This policy brief adds to the existent literature on the returns to education in Viet Nam by examining the formal-informal sector dimension.<sup>5</sup> A focus on the formal-informal sector divide allows for deeper insights into labour market heterogeneity and the role of business structure as a determinant of earnings.

Based on data from the Viet Nam Labour Force Survey, this brief presents trends in education, earnings and informal sector employment between 2016 and 2022. It examines the returns to education in both the formal and informal sectors during this period, providing estimates of the impact of schooling on earnings, to support policymakers to assess the economic and social value of education. The brief concludes with policy considerations to strengthen wage setting, foster a better educated and trained workforce and accelerate Viet Nam's transition to the formal economy.

<sup>2</sup> Sachiko Kataoka et al., *Vietnam's Human Capital: Education Success and Future Challenges* (World Bank, 2020); ILO, *A Theory Of Change for Transitioning from the Informal Economy to the Formal Economy in Viet Nam*, 2023.

<sup>3</sup> For further analysis on the linkages between education and training and formal employment in Viet Nam, see: ILO and Institute of Labour Science and Social Affairs (ILSSA), *Research Report: Informal Employment in Viet Nam Through a Gender Lens*, 2024.

<sup>4</sup> For further discussion, see, for example: Seamus McGuinness et al., "Returns to Education in Vietnam: A Changing Landscape", *World Development*, Vol. 138(C) (2021); Tinh Doan, Quan Le and Tuyen Quang Tran, "Lost in Transition? Declining Returns to Education in Vietnam", *European Journal of Development Research*, Vol. 30 (2) (April 2018): 195-216.

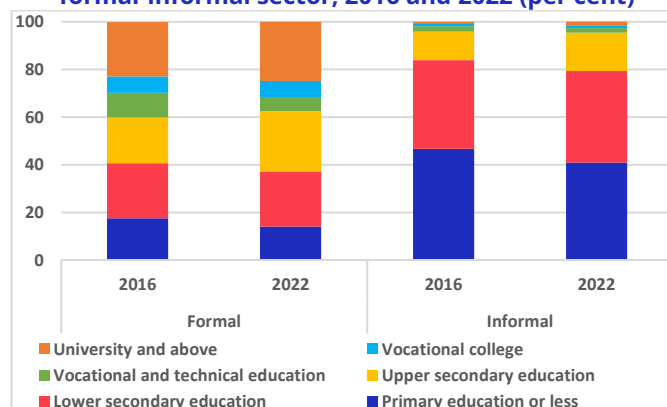
<sup>5</sup> In line with the wide economic literature on returns to education, this policy brief focuses on the returns in terms of earnings. Nonetheless, the returns to education can be examined through other important inter-generational outcomes, including the reduced likelihood of child labour. See, for instance: General Statistics Office and ILO, *Key Findings on the Situation of Working Children and Child Labour in Viet Nam in 2023*, 2025.

## ► Trends in formal employment, education and earnings

During the past decade, Viet Nam recorded notable achievements in expanding formal employment.<sup>6</sup> Between 2016 and 2022, formal employment grew, with the share of workers in formal jobs rising from 27.8 per cent to 33.1 per cent.<sup>7</sup> Likewise, the proportion of employment in the formal sector increased from 39.7 per cent to 42.6 per cent in the same period. However, informality remains widespread, particularly among those with lower education levels.

Corresponding with these positive trends, Viet Nam made important progress in education, with near-universal primary enrolment and a substantial rise in post-secondary enrolment. From 2016 to 2022, the share of workers with tertiary education increased from 11.7 per cent to 14.3 per cent. Higher educational attainment is strongly correlated with formality – 24.8 per cent of workers in the formal sector had a university degree in 2022, compared to just 1.5 per cent among workers in the informal sector (Figure 1).<sup>8</sup> In contrast, nearly 80 per cent of informal sector workers in 2022 had education levels below upper secondary.

► **Figure 1. Employed persons by education and formal-informal sector, 2016 and 2022 (per cent)**



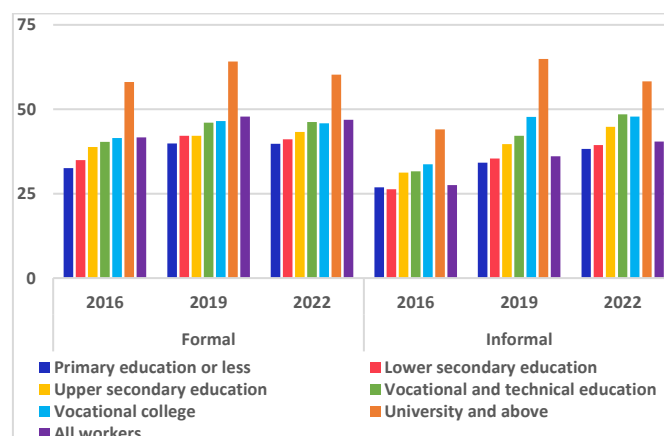
**Note:** Aged 15-64 years.

**Source:** Nguyen (forthcoming) based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

As illustrated in Figure 2, hourly earnings in the formal sector (46,900 VND) exceeded the level in the informal

sector (40,400 VND) in 2022. While formal sector hourly earnings increased overall from 2016 to 2022 for all education levels, the rate of growth was the highest for those with a primary education or less (3.4 per cent) and lowest for workers with a university degree (0.6 per cent).<sup>9</sup> By comparison, in the informal sector, hourly earnings increased annually during the six-year period by 6.1 per cent and 4.8 per cent for the respective education levels.

► **Figure 2. Real hourly earnings by formal-informal sector and education, 2016, 2019 and 2022 (thousand VND)**



**Note:** See Table A1.

**Source:** Authors' estimates based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

Figure 3 examines further the evolution of earnings between 2016 and 2022, which was shaped by two distinct economic periods. From 2016 to 2019, during a phase of strong economic growth, earnings rose significantly. Informal sector real hourly earnings grew at an annual rate of 9.5 per cent – more than double the 4.7 per cent growth rate in the formal sector. In contrast, from 2019 to 2022, amid the economic slowdown of the COVID-19 pandemic, formal sector earnings stagnated or even declined for some education levels. Meanwhile, earnings in the informal

<sup>6</sup> See ILO and ILSSA for additional data and trends analysis on formal-informal employment and earnings in Viet Nam.

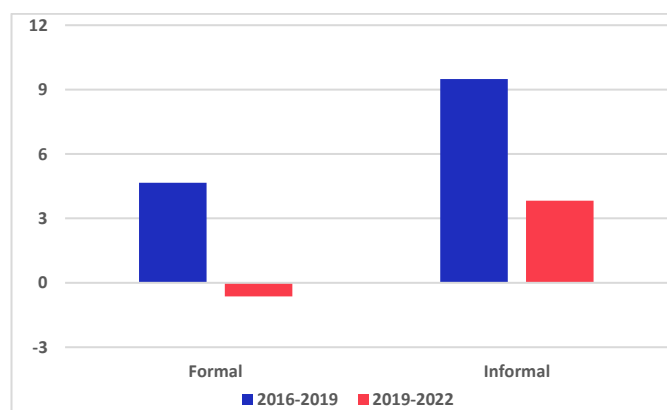
<sup>7</sup> Unless noted otherwise, data on employment, education and earnings are based on Nguyen (forthcoming).

<sup>8</sup> More than half of the informal sector workers with an advanced education were employed in just three industries – namely, agriculture, forestry and fishery; manufacturing; and wholesale and retail trade – and around three in five were in occupations as service and sales workers, professionals or craft and related trades workers. Source: Authors' estimates based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

<sup>9</sup> Estimates are based on compounded annual growth rate.

sector generally increased, except for workers with a university degree, who experienced a decline.

► **Figure 3. Real hourly earnings growth rate by formal-informal sector, 2016-2019 and 2019-2022 (per cent)**



**Note:** Compounded annual growth rate. Aged 15-64 years.

**Source:** Authors' estimates based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

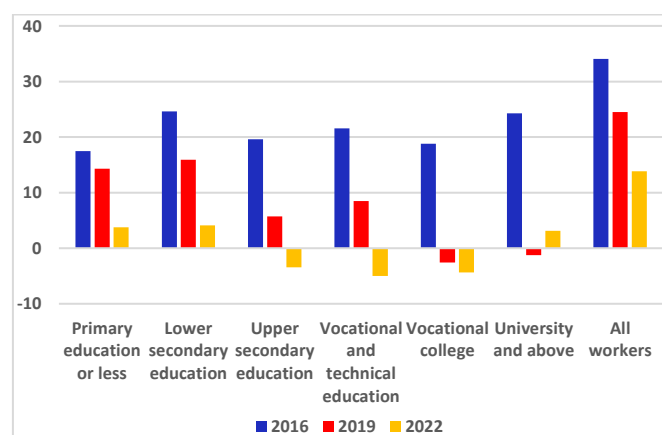
The key takeaway from these two periods is that earnings in the informal sector have evolved, reducing disparities with the formal sector. This narrowing earnings gap between the formal and informal sectors signals a more integrated and cohesive labour market. This trend suggests a tightening labour market, where differences in average earnings for all levels of education attainment have significantly diminished across both sectors.

It also points to robust occupational shifts in the informal sector away from low-skill, elementary occupations to medium-skill occupations with higher pay. From 2016 to 2022, the share of medium-skill occupations in the informal sector increased 17.9 percentage points from 45.7 per cent to 63.6 per cent to nearly match the level in the formal sector (64.9 per cent).<sup>10</sup> Notably, the largest increases in the informal sector were among service and sales workers (6.5 percentage points) and craft and related trades workers (4.4 percentage points).

In addition, the narrowing wage gap may partly reflect changes in employment composition within the informal sector. Between 2016 and 2022, the share of wage earners in the informal sector rose by 14.2 percentage points, while

own-account workers and contributing family workers declined by 7.4 percentage points and 6.9 percentage points, respectively. This shift toward wage employment – which is more responsive to formal wage-setting norms – may have contributed to stronger earnings growth among informal workers. While real hourly earnings in the formal sector remained higher than in the informal sector overall, the gap decreased from 34.1 per cent in 2016 to 13.9 per cent in 2022 (Figure 4).<sup>11</sup> Notably, by 2022, workers with upper secondary or vocational education earned more on an hourly basis in the informal sector, signalling a significant shift in the structure and incentives of the labour market.

► **Figure 4. Gap in average real hourly earnings between formal and informal sectors by education, 2016, 2019 and 2022 (per cent)**



**Note:** Aged 15-64 years. Gap measured as the difference between formal and informal sector real hourly earnings as a percentage of formal sector real hourly earnings.

**Source:** Authors' estimates based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

The trends in education-related earnings point to emerging challenges. Traditionally, education has been regarded as a pathway to higher earnings and economic security. However, recent labour market data suggest a declining return on education. This is supported by the National Wage Report, which highlights a shrinking earnings premium for higher education particularly among university graduates, as well as other empirical studies.<sup>12</sup> This decrease is driven in part by qualifications mismatches and an oversupply of graduates in certain fields, resulting

<sup>10</sup> Authors' estimates based on National Statistics Office, Ministry of Finance, Labour Force Surveys. Medium-skill occupations are defined as International Standard Classification of Occupations 2008 (ISCO-08) major groups 4 (clerical support workers), 5 (services and sales workers), 6 (skilled agricultural, forestry and fishery workers), 7 (craft and related trades workers) and 8 (plant and machine operators and assemblers).

<sup>11</sup> The overall wage gap between formal and informal workers remains positive despite negative gaps in some education groups, due to a composition effect. In 2022, 25 per cent of formal workers held university degrees – compared to just 1.5 per cent in the informal sector – and continued to earn significantly more. In contrast, the informal sector is concentrated among lower-educated and lowest-paid workers. Although some groups with medium levels of education show negative gaps, their small share and earnings have limited influence.

<sup>12</sup> Ministry of Labour, Invalids and Social Affairs (MOLISA), *National Wage Report 2021*, 2023.

in many workers employed in jobs below their qualification level. As well, the diminishing earnings differential between the formal and informal sectors underscores the increased importance of investing in formal job creation and providing better working conditions, social protection and other employment benefits to attract workers to the formal sector.

The next section examines the evolution of the returns to education in Viet Nam based on econometric analysis of data from the Labour Force Survey of 2016, 2019, and 2022. It explores the earnings premium associated with different levels of education, the earnings disparity between formal and informal sector employment, and the persistent gender pay gap.

## ► Returns to education: Trends and linkages to the formal sector

To assess the impact of education on earnings, this brief employs an econometric regression analysis rather than relying solely on raw average values.<sup>13</sup> The key variable of interest is the logarithm of hourly earnings,<sup>14</sup> enabling the interpretation of returns to education in percentage terms. To isolate the effect of education on earnings, the regression model controls for factors such as age, gender, and household composition.<sup>15</sup>

Table 1 shows that between 2016 and 2022, returns to education declined across all levels, with higher education experiencing the sharpest drop. The earnings premium for university graduates fell from 127.6 per cent to 68.6 per cent, while returns for vocational college dropped from 66.8 per cent to 35.1 per cent. This trend suggests an oversupply of graduates and a shifting labour market in which higher education no longer guarantees the same earnings advantage as before.

► **Table 1. Earnings premium relative to primary education or below by education level, 2016, 2019 and 2022 (per cent)**

	2016	2019	2022
Lower secondary education	4.4	11.3	7.8
Upper secondary education	29.1	22.4	22.1
Vocational and technical education	46.4	37.5	26.1
Vocational college	66.8	52.8	35.1
University and above	127.6	97.5	68.6

**Note:** Aged 15–64 years.

**Source:** Nguyen (forthcoming) based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

Similarly, vocational and technical education also experienced declining returns, suggesting a possible mismatch between training and labour market demand. In contrast, returns to lower and upper secondary education remained relatively low but more stable, with earnings exceeding those of workers with only primary education or less by 7.8 per cent and 22.1 per cent, respectively, in 2022.

Several factors could explain this pattern, including the growing supply of higher-educated workers, changes in the demand for specific qualifications, shifts in the occupational distribution (as discussed previously) and evolving economic structures. This underscores the need to not only expand access to education but also improve its quality and alignment with labour market demands.

Another factor behind the observed diminishing returns to education is the rising earnings of low-paid and less-educated workers.<sup>16</sup> Rather than weakening the value of education, this reflects shrinking earnings differentials, as those with lower education levels are catching up. As a result, with the earnings gap between lower- and higher-educated workers narrowing, the overall earnings premium for education has reduced.

### Gender pay gap and the formal-informal divide

The different returns to education in the formal and informal sectors provide a key factor to examine. Regarding the gender earnings gap, male workers consistently earned more than their female counterparts in both sectors in 2022. However, the disparity is more pronounced in the informal sector.<sup>17</sup>

<sup>13</sup> A Heckman selection model is used to correct for potential selection bias – ensuring that the results account for the fact that individuals with higher education are more likely to participate in the labour market. For comparison, Ordinary Least Squares (OLS) regression is also estimated. Both models provide consistent findings, reinforcing the robustness of the results. For further discussion on the methodology, see Nguyen (forthcoming).

<sup>14</sup> Earnings data is collected for employees, employers, and self-employed workers. For wage-earning workers, their labour-related income includes wages, bonuses, and other additional income from the main job. To compute hourly income, the monthly income is multiplied by 12 to get the yearly income, then divided by the product of weekly working hours worked and 52.

<sup>15</sup> The model controls for key exogenous factors such as age and gender, while household composition variables are included in the selection equation to address participation bias.

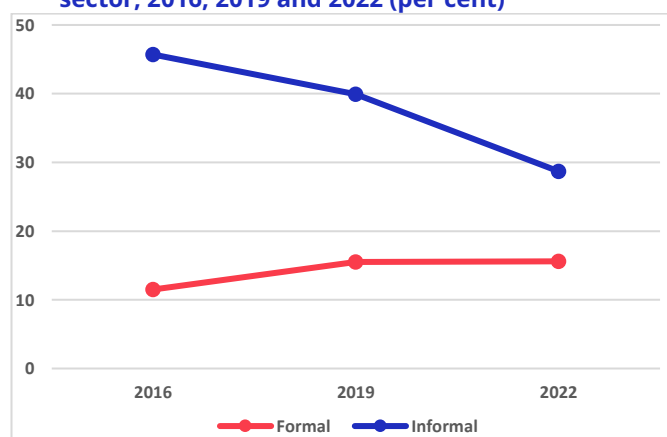
<sup>16</sup> Wage policies, including statutory minimum wages, may have contributed to lifting earnings at the lower end of the distribution, but their role should be seen within a broader context of labour market and institutional changes. Preliminary findings from forthcoming ILO research suggest improvements in minimum wage compliance in recent years, which may have supported earnings growth among low-wage workers in both the formal and informal sectors. See: ILO, Research on Minimum Wage Effects in Viet Nam, forthcoming.

<sup>17</sup> This finding is consistent with the gender wage analysis in ILO and ILSSA.

Gender disparities in earnings and returns to education remain evident despite improvements in female educational attainment. Male workers continue to earn more than women across all education levels, and this gap is more pronounced in the informal sector, where labour regulations and wage-setting mechanisms are weaker. As well, gender-based occupational segregation particularly in the informal sector is an important factor. For example, women accounted for a disproportionate share of elementary occupations, which tend to be comparatively lower paid.<sup>18</sup>

Nevertheless, this gender gap has gradually narrowed over time, particularly in the informal sector. In 2022, male workers earned 15.6 per cent more than female workers in the formal sector and 28.7 per cent more in the informal sector (Figure 5). The persistence of earning disparities highlights the need for policies that promote gender equality in the labour market, address gender-based occupational segregation and workplace discrimination and ensure that women receive equal pay for work of equal value.

► **Figure 5. Gender pay gap by formal-informal sector, 2016, 2019 and 2022 (per cent)**



**Note:** Aged 15-64 years.

**Source:** Nguyen (forthcoming) based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

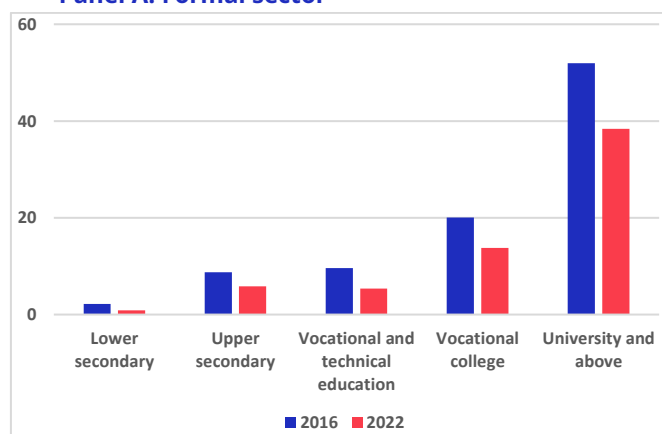
## Education-based earnings premium and informality

Meanwhile, returns to education, measured as the percentage increase in real hourly earnings relative to individuals with primary education or lower, reveal important dynamics in regard to changes between 2016 and 2022 as well as sectoral differences. Historically, the

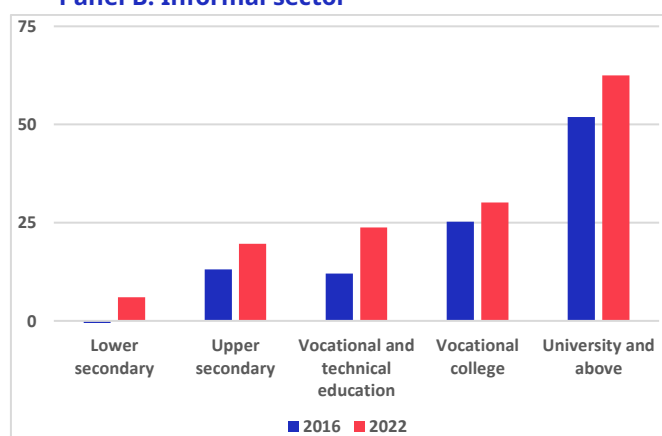
formal sector offered robust returns to education, but recent trends suggest an important shift (Figure 6, Panel A).

► **Figure 6. Earnings premium relative to primary education or below by education and sector, 2016 and 2022 (per cent)**

**Panel A. Formal sector**



**Panel B. Informal sector**



**Note:** Aged 15-64 years.

**Source:** Nguyen (forthcoming) based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

In 2022, university graduates employed in the formal sector earned 38.4 per cent more than workers with a primary degree, representing the highest returns to education relative to all education levels and nearly three times the earnings premium of vocational college graduates. Notably, however, the returns to a university education marked a sharp decline compared to 51.9 per cent in 2016 and mirrored a common pattern of a diminishing earnings premium at all levels of education. For example, the returns to education for workers with a lower secondary degree

<sup>18</sup> Authors' estimates and analysis based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

were merely 0.8 per cent in 2022, down from 2.2 per cent in 2016.

In contrast, the trends in the returns to education in the informal sector reveal a distinctly different pattern (Figure 6, Panel B). The earnings premium for all education levels increased between 2016 and 2022. For instance, university graduates employed in the informal sector earned 62.5 per cent more than primary-educated workers in 2022, a considerable increase from 51.9 per cent in 2016.

Similarly, vocational college graduates experienced an earnings premium of 30.1 per cent in 2022, up from 25.3

per cent six years earlier. The increasing returns on education in the informal sector extends to lower secondary and upper secondary education as well, with the earnings premiums relative to primary education increasing by 6-7 percentage points between 2016 and 2022. Nevertheless, the robust and increasing earnings premiums in the informal sector may come at the cost of job security, labour and social protections, and employment benefits such as paid leave, sick leave, and pensions.



## ► Conclusion and key considerations

Viet Nam has made significant progress in expanding access to education and training of its workforce. However, declining returns to education, earning disparities between the formal and informal sectors, and persistent gender gaps highlight the need for policy adjustments.

Recent wage growth among low-paid and less-educated workers has contributed to narrowing the earnings differentials across education levels. While this trend supports more inclusive labour market outcomes, it also reduces the financial rewards of higher education. To address this, policymakers need to ensure fair remuneration while fostering an economy where education remains a valuable investment rather than merely a means to escape low pay.

Over time, there has been a sharp movement among informal sector workers in elementary occupations to medium-skill occupations. In addition, more workers have transitioned from the informal to the formal sector, which may have contributed to slower earnings growth in formal jobs. The COVID-19 pandemic also impacted the formal sector more severely, contributing to the relative increased returns to education in the informal sector. Consequently, the comparatively high returns to education in the informal sector could create an alternative employment option for university graduates, despite the trade-offs of lower job security and limited social protection.

Viet Nam's experience underscores the need to align education policies with labour market realities. To ensure education remains a valuable investment while promoting fair earnings, wage policies must align with broader labour market and social protection strategies. By focusing on the following priorities, policymakers in Viet Nam can ensure fair wages and earnings, improve the returns to education and foster growth of the formal economy.

**Invest in formal job creation.** The decline in returns to education reflects both the expansion of educational attainment and structural limitations in the labour market, particularly the large informal sector. When formal sector job creation remains limited, some educated workers are unable to access high-paid formal jobs and are instead pushed into informal employment – even if returns to

education in the informal sector may be temporarily robust.

**Strengthening wage setting through social dialogue.**<sup>19</sup> Determination of wages and earnings should be based on collective bargaining and tripartite dialogue, ensuring that wages reflect both the needs of workers and their families and economic factors. Aligning earning structures with education, training and qualifications can enhance the financial returns to education while reducing gender pay disparities.

**Balancing fair earnings and incentives for higher education and training.** While minimum wages help reduce inequality and raising earnings for the most vulnerable, they should be complemented by wage and earning structures that incentivize skill acquisition and reward experience. Policymakers should prevent wage compression from discouraging higher education and training by ensuring pay differentiation based on qualifications and sector-specific demand.

**Closing gender and sector-based earning gaps.** Policies should promote equal pay for work of equal value, address gender-based occupational segregation, and enforce anti-discrimination laws. Investments in education and training should improve access to higher paying sectors, particularly for women and marginalized groups.

**Transitioning to the formal sector and boosting productivity.** Despite considerable progress in recent years, many workers remain in low-paid jobs in the informal sector. Addressing informality through an integrated approach that prioritizes policies that enhance the link between education and training systems and the transition to the formal sector, stronger labour market institutions, better compliance and enterprise support can improve returns to education and drive growth in earnings. As well, policies should support small businesses, encourage innovation and create pathways to the formal sector.

**Fostering economic structural transformation.** Economic shifts from low-productivity sectors to higher value-added sectors are crucial for boosting earnings and accelerating the transition to the formal economy.

<sup>19</sup> For further discussion on strengthening labour market institutions and social dialogue to ensure that productivity growth results in wage growth, see: ILO, *Global Wage Report 2024-25: Is wage inequality decreasing globally?*, 2024.

Investments in research, advanced technologies, and entrepreneurship support can create better-paying jobs, spur demand for highly educated and trained workers and ensure education translates into meaningful economic opportunities.

## ► Appendix

► **Table A1. Real hourly earnings of workers by formal-informal sector and education, 2016 and 2022 (thousand VND)**

	Formal sector		Informal sector	
	2016	2022	2016	2022
Primary education or less	32.6	39.8	26.9	38.3
	(0.4)	(0.6)	(0.4)	(0.6)
Lower secondary education	34.9	41.1	26.3	39.4
	(0.4)	(0.5)	(0.4)	(0.5)
Upper secondary education	38.8	43.3	31.2	44.8
	(1.1)	(0.5)	(0.6)	(1.1)
Vocational and technical education	40.3	46.2	31.6	48.5
	(0.4)	(0.6)	(1.4)	(1.4)
Vocational college	41.5	45.8	33.7	47.8
	(1.0)	(0.5)	(1.5)	(1.4)
University and above	58.1	60.2	44.0	58.3
	(0.7)	(0.6)	(2.3)	(1.6)
All workers	41.7	46.9	27.5	40.4
	(0.4)	(0.4)	(0.3)	(0.5)

**Note:** The sample includes individuals aged 15-64 years. Earnings are adjusted to the price in December 2022 using the overall monthly consumer price index. Formal and informal sectors are defined based on the production-unit approach. Standard errors are in parentheses.

**Source:** Authors' estimates based on National Statistics Office, Ministry of Finance, Labour Force Surveys.

### Contact details

International Labour Organization  
Country Office for Viet Nam  
Green One UN House  
304 Kim Ma Street  
Hanoi 11112, Viet Nam

T: +84 24 38 500 100  
E: HANOI@ilo.org  
W: [www.ilo.org/hanoi](http://www.ilo.org/hanoi)