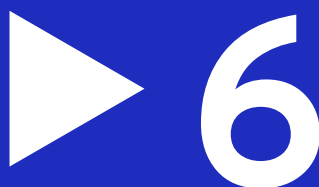


Trade and decent work in Viet Nam:

Insights from small and medium-sized enterprises

**Pelin Sekerler Richiardi, Sajid Ghani
and Pham Ngoc Toan***

* This study was conducted as part of the project entitled “Trade, enterprises and labour markets: Diagnostic and firm-level assessment”, which was funded jointly by the European Commission and the ILO. The author gratefully acknowledges the comments provided by Benjamin Aleman-Castilla, Valentina Barucci, Marva Corley-Coulibaly, Monica Hernandez, Van Nguyen Thi Le, Ira Postolachi, Miguel Sanchez Martinez, Gama da Silva and Christian Viegelahn. We would also like to thank the participants of the meetings and workshops organized by the Research Department of the ILO; the ILO Country Office in Hanoi, the Institute of Labour and Social Affairs (ILSSA), part of the Ministry of Labour, Invalids and Social Affairs (MOLISA), including the social partners, government officials and academics from Viet Nam; and particularly Luu Quang Tuan, Deputy Director General of ILSSA, MOLISA for his contributions. Any errors are the authors' responsibility alone.



► Introduction

Since the mid-1980s, starting with the *Doi Moi* programme, Viet Nam has undertaken major structural reforms to reorientate its planned economy towards a more open-market economy.¹ This transition included a focus on trade liberalization – the country joined the WTO in 2007 and, as of August 2022, is a partner to 15 RTAs in force and notified to the WTO.² During this period, Viet Nam's participation in international trade increased substantially. Exports soared from US\$14 billion in 2000 to US\$264 billion in 2019, while trade (the sum of exports and imports) as a percentage of GDP increased from 111 per cent to 198 per cent.³

There has also been a remarkable evolution in the structure of the labour market following the economic transition, with a shift from employment in agriculture to manufacturing and services. In parallel, some improvement has been observed in working conditions, including lower informality (ILO 2021a) and increased social protection coverage (ILO 2021b). While increased participation in trade might have contributed to these changes, there are not many studies analysing the links between them in the context of Viet Nam.⁴ Even at the global level, studies focus mostly on the effects of trade on employment creation and wages. However, trade might have implications for various aspects of workers' rights and working conditions (ILO 2021c, 2021d). Moreover, trade creates both winners and losers. It is therefore essential to understand how different actors, including different firms and workers, are affected in order to design and implement more effective policies (ILO 2021c, 2021d; WTO 2017).

The contribution of this chapter to the literature is twofold. First, it analyses an extended number of decent work indicators in the context of trade in Viet Nam. In addition to employment creation, the chapter investigates how increased participation of firms in trade has affected the provision of formal contracts, social protection coverage and OSH. OSH measures are essential for protecting workers against health risks at the workplace. Social

1 Currently, Viet Nam has diplomatic relations with 189 countries and is an active member of many international and regional organizations, including the United Nations, ASEAN and the Asia-Pacific Economic Cooperation (APEC).

2 See [the list of agreements](#) at Labour Provisions Hub (LPHub). In addition, the Regional Comprehensive Economic Partnership entered into force in January 2022 and two RTAs are currently under negotiation (Viet Nam–Israel and Viet Nam–EFTA).

3 [World Integrated Trade Solution](#) (WITS) database by the World Bank.

4 Decent work, as defined by the ILO, is a multifaceted concept, which refers to various aspects of work including rights at work, social protection and the promotion of social dialogue (ILO 2008).

protection supports individuals in times of difficulties and events faced throughout the life cycle (such as unemployment, sickness or maternity). Yet informal workers, although most at risk, hardly benefit from any insurance. The safety and protection of workers have also been topics of concern in the context of trade, as firms can be pressured to reduce labour costs to remain competitive. However, despite their relevance, these dimensions are still rarely studied in the literature.

Second, this chapter focuses on SMEs, which make up around 96 per cent of enterprises in Viet Nam and employ roughly half of the workforce (OECD 2021). SMEs are often found to struggle more with providing decent work conditions to their employees compared with large firms (ILO 2015). By shedding light on the implications of trade for SMEs, the findings of this chapter will be useful for formulating policies to better support these firms and their workers.

This chapter is divided into six sections. Section 6.1 will provide a literature review of trade and labour market outcomes, and section 6.2 will trace broader labour market trends in Viet Nam. The data utilized in this chapter will be presented in section 6.3, while section 6.4 will detail the econometric strategy. Finally, section 6.5 will present the results and section 6.6 will draw the conclusions.

► 6.1 Literature review

Trade has often been associated with economic growth, job creation and welfare gains at the aggregate level (WTO 2017; Frankel and Romer 2009). However, various actors, such as firms and workers with different characteristics, might not benefit from trade in the same way. Contemporary trade theories, developed over the past few decades, have highlighted the importance of taking into account firm and worker heterogeneities, and their possible consequences for the interpretation of trade effects. At the firm's level, theoretical studies and empirical evidence suggest that productive firms benefit more from trade liberalization, expanding their production and labour demand, while less productive firms tend to contract and exit the market (Melitz 2003). Larger firms are also found to engage more in trade compared with SMEs (Bernard, Redding and Schott 2007). The latter face a plethora of challenges, such as high fixed costs of entry, lack of access to

finance, and lack of information and of entrepreneurial skills, among others (WTO 2016; Kazimoto 2014).

Trade also has differential effects on the labour market. The possibility of finding new jobs and the quality of employment created differ for workers with heterogeneous characteristics, such as their skills, age, education and gender. Some workers lose their jobs while others get a chance to enter the labour market for the first time. For instance, trade has been associated with higher demand for skilled workers (Kasahara, Liang and Rodrigue 2016; Meschi, Taymaz and Vivarelli 2016; Goldberg and Pavcnik 2007; Sánchez-Páramo and Schady 2003) and higher skill premiums (Attanasio, Goldberg and Pavcnik 2004; Harrison and Hanson 1999). One reason is that trade facilitates the diffusion of new technologies which require higher skills (Acemoglu and Autor 2011). Increased trade in skill-intensive services has also contributed to this trend (WTO 2019). Besides, trade has been found to create jobs for unskilled workers, especially for women in developing countries in low-paid jobs (Frederick et al. 2021). Some beneficial effects on income have also been identified in developing and emerging countries, as in the case of Viet Nam, with trade liberalization leading to a large wage growth for unskilled workers and to a narrowing of the wage gap between skilled and unskilled workers (Fukase 2013). However, despite these positive effects, trade has often been associated with the rise of inequalities in both developed and developing countries (Harrison, McLaren and McMillan 2011).

In addition, an increasing number of studies have been investigating how trade affects informal employment, with some mixed results. As an example, the tariff reduction due to the United States–Viet Nam bilateral trade agreement has been found to lead to an increase in formal employment in Viet Nam (McCaig and Pavcnik 2018). However, differences between workers are argued to play an important role, with young and more educated workers having a higher chance of moving out of informality. Despite this, other studies do not necessarily find that trade leads to a decline in informal employment, such as Attanasio, Goldberg and Pavcnik (2004) in Colombia. Some studies also highlight the importance of labour institutions in the diffusion of the impact of trade on informality, such as Goldberg and Pavcnik (2003) or Ponczek and Ulyssea (2021).

As this brief overview of the literature suggests, while there are more studies analysing the relationship between trade and the labour market, conclusions are not always clear. Heterogeneities between firms and workers have important consequences for how the effects of trade are diffused. Moreover, many aspects of decent work, such as social protection coverage or OSH, are still largely overlooked in the literature. The few studies that exist on social spending and trade tend to find heterogeneous effects of international

trade on social spending (Desai and Rudra 2019) and on different welfare programmes (Häggqvist 2020). Similarly, a limited number of studies analyse the impacts of trade on OSH, with diverse conclusions. One paper looks at the impact of import competition on the health of workers and concludes that the injury rate increases concomitantly (McManus and Schaur 2016). However, other studies find that OSH conditions in firms can improve as a result of process upgrading through GVCs (ILO 2017). Given the scarcity of the literature on these issues, and the heterogeneity of results, there is considerable scope for more research.

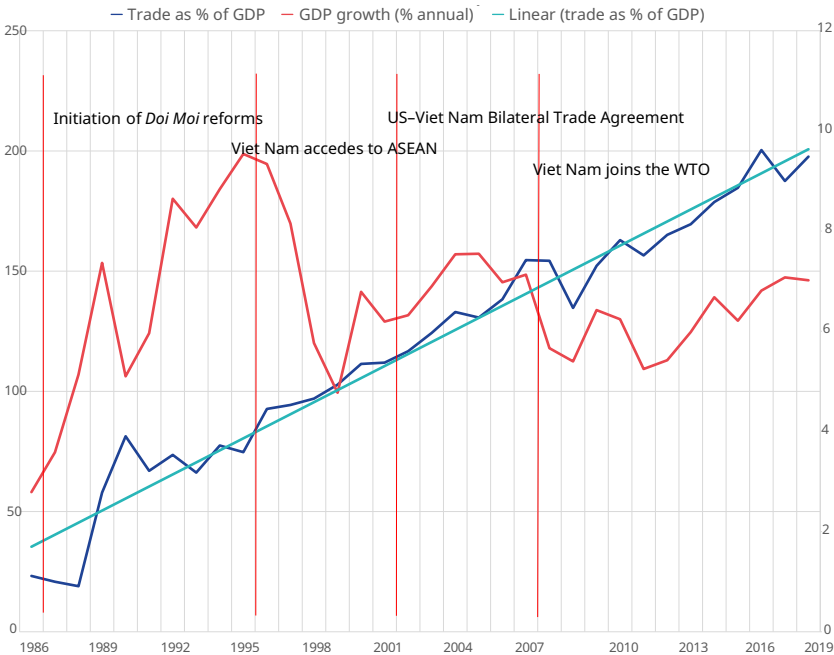
► 6.2 Trade and labour market trends in Viet Nam

The period of structural reform in Viet Nam, *Doi Moi*, has been followed by significant changes in the country's economic and labour landscape. Sharp increases were observed in its participation in international trade (the sum of exports and imports over GDP), from 25 per cent in 1986 to around a spectacular 212 per cent in 2019. Viet Nam's GDP growth rate also soared from 3 per cent in 1986 to 7 per cent in 2019.⁵ Foreign direct investment inflows have also been on an upwards trajectory, rising from 0 per cent of GDP just before the end of the 1980s to 6.2 per cent in 2019.⁶ The country's role in international trade is likely to increase further as there is significant evidence that, because of tensions with China, the United States has started to increase trade with neighbouring countries, such as Viet Nam (Choi and Nguyen 2021). Figure 6.1 traces the trade openness and GDP growth figures for Viet Nam since 1986, along with the key turning points in the trade trajectory of the country, such as accession to ASEAN and the WTO.

5 The figures are provided for 2019 throughout the chapter so as to discount the effects of the pandemic.

6 [World Bank World Development Indicators](#).

► **Figure 6.1 Trade as percentage of GDP and real GDP growth rate in Viet Nam (1986–2019)**



Source: World Bank World Development Indicators.

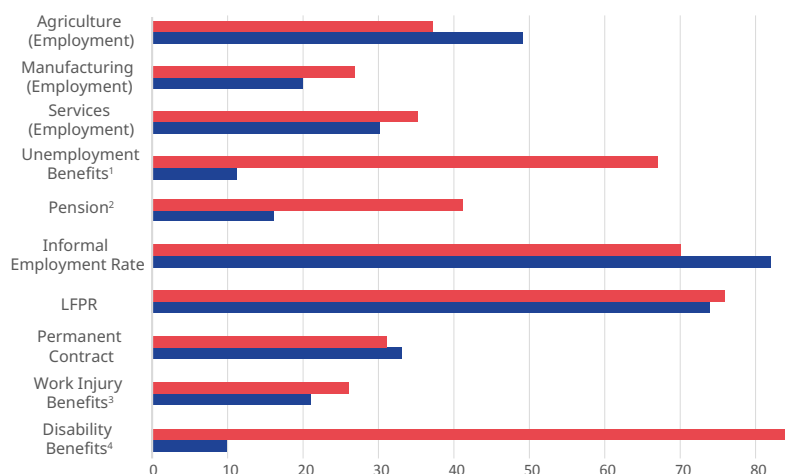
The structure of exports and imports has significantly changed over the past two decades. With a share of 42 per cent in 2019, up from 8 per cent in 2000, machinery and electronics constitute the most exported products. This is followed by textiles and clothing (15 per cent), and footwear and headwear (9.3 per cent), whose shares remained relatively stable throughout the same period. However, exports of raw materials declined markedly from 41 per cent down to 8 per cent, indicating a shift from the exports of unprocessed products to manufactured goods.⁷ In fact, the economic complexity index (ECI) of Viet Nam rose from -1.48 to -0.06 between 1998 and 2020.⁸ In terms of imports, the largest share is again composed of machinery and electronics (40 per cent), followed by raw materials (10 per cent), and textiles and clothing (8 per cent).

⁷ Source: WITS.

⁸ The ECI indicator provides a measure of knowledge embedded in the products produced by a country. It utilizes a combination of the diversity of exports of a country and their ubiquity (Hidalgo and Hausmann 2009). The index is calculated on a scale of -1 (lowest complexity) to 1 (highest complexity).

Important changes also took place in the labour market throughout the same period. Some indicators related to this chapter's areas of interest (employment structure, social protection and informality) are presented in figure 6.2.⁹ Between 2007 and 2019, the share of employment in agriculture declined from 49 per cent to 37 per cent, while it increased in manufacturing (from 20 per cent to 27 per cent) and in services (from 30 per cent to 35 per cent).¹⁰ The LFPR has remained relatively stable throughout this period, at around 76 per cent in 2019. This indicates that job declines in agriculture were accompanied by job creation in other sectors.

► **Figure 6.2** Selected labour market indicators for Viet Nam (percentage)



Note: ¹Data for 2010 and 2020. ²Initial data for 2010. ³Data for 2015 and 2020. ⁴Data for 2016 and 2019.

The employment figures are ILO-modelled estimates by broad economic sector (agriculture, manufacturing and services). Unemployment benefits correspond to the proportion of the population receiving benefits. Pension is defined as the proportion of persons above retirement age receiving benefits. The informal employment rate is the proportion of informal employment in total employment. The LFPR is defined as the proportion of people of working age who are employed and unemployed. The permanent contract rate is defined as workers in paid employment holding permanent contracts. Finally, disability and work injury benefits are defined as the proportion of persons with severe disability collecting disability social protection benefits and the employed covered in the event of a work injury.

Source: ILOSTAT.

⁹ OSH-related data are scarce in Viet Nam. ILO (2019) indicates that the number of occupational injuries increased from 2010 to 2018. However, the coverage of the data remains limited.

¹⁰ Source: ILOSTAT.

Social protection has improved substantially in Viet Nam over the past decades.¹¹ The share of unemployed persons receiving unemployment benefits increased from 11 per cent in 2010 to 67 per cent in 2019.¹² Additionally, where 16 per cent of persons above retirement age received a pension in 2000, 41 per cent did in 2019. The coverage rate following a work injury also increased from 21 per cent in 2015 to 26 per cent in 2019. Finally, 84 per cent of persons with severe disability were collecting financial disability benefits in 2019, whereas only 10 per cent were in 2016.¹³ These improvements can be linked to changes in laws on social and health insurance that the country adopted over the past decade with the objective of increasing coverage (ILO 2021b). However, large gender gaps exist in terms of social protection, with women's rates and benefit levels being lower than men for many contingencies, including old age and sickness (ILO 2021e).

The informal employment rate also improved, falling from around 82 per cent in 2007 to 70 per cent in 2019.¹⁴ This decrease was mostly due to the decline of employment in the agricultural sector (ILO 2021a). Interestingly, female employees tend to have a lower informal employment rate than men (67 per cent compared with 72 per cent, respectively, in 2019),¹⁵ suggesting that they are more likely to be employed in predominantly formal industries such as manufacturing (ILO 2021f).¹⁶ Despite this progress, the share of workers on permanent contracts (as opposed to temporary) dropped slightly from 33 per cent to 31 per cent between 2007 and 2019, which is an indication of increased precarity.¹⁷ While this rate has declined both for men and women, women still tend to have more permanent contracts: 36 per cent compared with 27 per cent of men in 2019. However, women are disproportionately represented in vulnerable employment,¹⁸ especially as contributing family workers (ILO 2021f).

11 Source: ILOSTAT. Data on types of social protection are not available on a yearly basis and, where available, are provided from the earliest year to 2019.

12 It should be noted that overall unemployment is relatively low in Viet Nam, under 3% annually since 1996 (source: ILOSTAT).

13 Source: ILOSTAT.

14 The [complete definition of what constitutes informal employment](#) encompasses both the characteristics of the job being performed and the characteristics of the enterprise.

15 Source: ILOSTAT.

16 However, these jobs tend to be low-skilled and low-paid and gender pay gaps persist. In Viet Nam, the overall gender wage gap was 8.3 per cent in 2021, rising to 17.9 per cent in occupations predominant in the manufacturing industries such as plant and machine operators, and assemblers (source: ILOSTAT).

17 Source: ILOSTAT. This statistic is for the employed population aged 15 to 64 who have a contract and are in paid employment.

18 The term "vulnerable employment" encompasses own-account workers and contributing family workers (ILO 2010).

While improvements have been observed both in Viet Nam's trade participation and in some indicators linked to the labour market, the link between the two has rarely been explored in the literature. This chapter sheds light on a set of labour market dimensions that have not been extensively analysed so far. For this purpose, the study uses a unique firm- and worker-level survey dataset which covers the universe of both formal and informal SMEs in Viet Nam.

► 6.3 Data

This study uses data from a survey on SMEs in Viet Nam, which was conducted biennially from 2011 to 2015.¹⁹ SMEs in the database are described as those with fewer than 300 employees, with micro enterprises having up to 10 employees, small enterprises up to 50 and medium enterprises up to 300.²⁰ The reasons for choosing this database are twofold: first, the database contains labour indicators that support an analysis of the effects on various aspects of decent work, such as those relating to social protection and informality. Second, both firms and their workers were surveyed so it is possible to analyse firm-level worker outcomes from the dataset. It must be noted that micro-identifiers for workers were anonymized and, therefore, individual workers cannot be followed over time. However, the data do make it possible to follow enterprises over time.

Enterprise-level data from the SME survey contain information on several key variables, such as enterprise code, products, indicators related to financial performance (assets and revenue), import and export status of firms (yes/no), export and import values, and indicators related to labour (total employment, female workers, wages and labour cost). The total number of unique firms in the final dataset is 3,504. The enterprises were asked about the above-mentioned variables for the two years preceding each questionnaire. Therefore, using this questionnaire, it was possible to create a panel over six years, from 2009 to 2014, for this chapter. Table 6.1 describes the firms in the dataset.

¹⁹ Viet Nam SME Surveys were conducted in 2011, 2013 and 2015 by the Institute of Labour Science and Social Affairs (ILSSA), the Central Institute for Economic Management (CIEM), the Development Economics Research Group (DERG) at the University of Copenhagen, and UNU-WIDER, with technical support and finance from the Danish International Development Agency (DANIDA). The first survey was conducted in 2009; however, data from that round are not available.

²⁰ This definition corresponds to the World Bank definition of SMEs.

► Table 6.1 Descriptive statistics for firms (averages) by year

Year	Revenue (billions of VND) ¹	Exports (billions of VND) ¹	Labour cost (billions of VND) ¹	No. of employees	Assets (billions of VND) ¹	Value-added (billions of VND) ¹	Age	Exporters (% of total)	Direct importers (% of total importers)
2009	7.66	0.47	0.39	13.7	4.76	1.21	11.4		
2010	6.09	0.55	0.32	14.0	3.76	0.99	12.4		
2011	4.22	0.49	0.45	13.9	3.77	1.15	13.6	6.0	1.6
2012	4.80	0.58	0.518	13.5	4.13	1.26	14.6		
2013	8.49	1.83	0.67	13.8	5.89	1.83	14.5	6.2	1.9
2014	9.84	1.90	0.73	14.1	6.24	1.72	15.5	7.1 ²	1.7 ²

Note: ¹Deflated using 2009 as base year. ²Figure for the year 2015.

Comparing 2009 and 2014, the descriptive statistics seem to indicate that the sampled SMEs earned more revenue (after a decline in 2010 and 2011), exported higher amounts, hired a larger workforce and paid them better (both the average number of workers and the labour cost per surveyed worker increased), and owned a larger number of assets. However, this increase in size is not necessarily reflected in the increase in the value-added generated by the firms since the overall increase over the surveyed time frame is quite variable. Also, these increases might be due to attrition, whereby less productive and less competitive firms exit the market over subsequent survey waves. While the survey tries to re-interview firms for each subsequent sample, there is a certain level of attrition (see table 6.2). Brandt et al. (2016) calculate the survival rates between the 2011 and 2013 surveys to be 90.6 per cent, and 91.3 per cent between the 2013 and 2015 surveys. Therefore, it is likely that some firms ceased to exist at the same time as others stopped responding to the questionnaires.

► Table 6.2 Attrition of firms in sample

	2011	2013	2015
Total number of firms	2 512	2 542	2 647
Number from previous samples	n.a.	2 058	2 138
Number of new firms not in previous samples	n.a.	484	509
Attrition number	n.a.	454	858
Attrition rate	n.a.	18%	34%

n.a. = not applicable.

The SME survey also comprised a questionnaire that surveyed workers within the firms already included in the database. This survey took a maximum of seven workers from a randomly selected list of enterprises and asked them about *worker-level variables*. These biennial worker-level data contain information on the characteristics of workers such as gender, age, education level, type of labour contract (for example, formal written), coverage by social protection and information related to OSH measures (table 6.3). A total of 848 unique firms is represented in this dataset, with an average of around 574 firms included in each period, and around 1,464 unique workers were interviewed per period.²¹

In order to analyse the relationship between labour market outcomes and trade, this chapter first focuses on the relationship of exports and imports with labour demand using the enterprise-level data. Then, based on the worker-level data, it explores the dimensions of decent work related to formal employment, social protection and OSH, through specific indicators.

Formal employment

The presence of a *written contract* is often used to account for formal employment, and the lack of it is a component of the ILO definition of informality.²² The worker with a contract is protected by the law under the terms of the contract but might not necessarily be covered by social

21 The number of firms interviewed was 597 in 2011, 600 in 2013, and 524 in 2015. The number of workers interviewed was 1,478 in 2011, 1,571 in 2013 and 1,342 in 2015.

22 Social protection coverage is also an indicator for formal employment (Galli and Kucera 2008; Marcouiller, Ruiz de Castilla and Woodruff 1995; Saavedra and Chong 1999). However, as all those who have written contracts are not covered by social protection, a distinction is made here.

protection.²³ The variable constructed for the purpose of this study takes the value of 1 if the worker has a formal labour contract, 0 otherwise.²⁴

Social protection

Social protection, as defined by the ILO, covers a range of contingencies.²⁵ Three of its components – health insurance, unemployment insurance and sick leave – are used separately as proxies in this study, due to their relevance and data availability.²⁶ Moreover, as ILO (2021g) indicates, protection against these three risks has gained increased relevance during the pandemic. The variables created for the purpose of this study take the value of 1 if the worker is entitled to a specific insurance (health, unemployment or sick leave), 0 otherwise.²⁷

Occupational safety and health

The provision of training on OSH gives some information about OSH measures undertaken by the enterprises.²⁸ The indicator takes the value of 1 if the workers are trained on OSH in the enterprise, 0 otherwise.

► **Table 6.3** Descriptive statistics for employee-level data at the firm level

	2011	2013	2015
Formal contract (% of total)	46.9	50.1	54.0
Provision of training (% of total)	51.0	38.1	28.7
Health insurance (% of total)	35.2	42.6	47.9
Unemployment insurance (% of total)	28.0	34.1	41.0
Sick leave (% of total)	38.0	41.4	52.6

23 In 2019, 61 per cent of salaried workers had written contracts while only 54 per cent of them were covered by social protection.

24 The precise question in the questionnaire is “Do you have a formal (written down) labour contract?”.

25 These include benefits for medical care, maternity, invalidity, survivors, unemployment, employment injury, family and old age (see [the comprehensive definition of the indicator](#)).

26 The precise question in the questionnaire is “Does your employer provide, either directly or through the Social Insurance Fund, any of the following benefits (according to regulations)?”. The benefits listed are sick leave, maternity leave, old age pension, accident compensation, survival benefits, health insurance, unemployment insurance and annual paid leave.

27 Paid sick leave covers entitlement for both workers and their children.

28 The precise question for this indicator in the questionnaire is “Have you received training on occupational health and safety at your workplace?”.

	2011	2013	2015
Female employees (% of total)	41.7	41.6	41.1
Married (% of total)	74.2	76.9	80.4
Age	34.2	34.8	36.8
Education	1.6	1.6	1.7

Note: Education is coded from 1 to 3 with the following coding: 1 = Up to high school; 2 = Above high school/technical college; 3 = College/university.

Table 6.3 contains a description of worker-related indicators aggregated at the firm level by year. It can be seen from the table that, for the firms within the sample, the percentage of workers with written formal contracts increased steadily, which might suggest that there was an increase in formality among the employees within the sampled firms. However, the provision of training on OSH decreased, which could point towards a worsening of OSH standards within the firms in the survey. On a more positive note, there are hints of an increase in the coverage of social security, with a rise in health and unemployment insurance and sick leave. The percentage of female workers in the firms remained steady but both the age and educational attainment of workers show gradual increases. Section 6.4 investigates the possible relations between these changes and increased trade participation of firms in Viet Nam.

► 6.4 Empirical strategy

One of the major challenges when studying the impact of trade on labour markets with firm-level data is addressing the fact that the majority of firms do not export and those that do so have particular characteristics that make them engage in trade. This situation leads to a selection bias and to endogeneity issues, as the decision of firms to export may influence their labour market outcomes. One of the techniques that is used in the literature to mitigate these issues is the Heckman selection model (Heckman 1979). This methodology assumes that there is a latent function which determines the selection of firms into exports and the outcome (being an exporter) is observed only when the criterion defined in the selection equation is met.

The model is hence composed of two equations. First, a selection equation which shows whether a firm engages in trade:

$$exp_i = \begin{cases} 1 & \text{if } exp_i^* = aX + e > 0 \\ 0 & \text{if } exp_i^* = aX + e \leq 0 \end{cases} \quad [1]$$

This equation is estimated through a probit model for both the labour demand and the labour market outcome specifications. It includes the logarithms of value-added, age and assets, as these characteristics are likely to determine why an enterprise engages in exports. The estimates from this selection equation are used to calculate inverse Mills ratios, which can be thought of as sample selectivity correction terms. Inverse Mills ratios are then included in the main response equation (second equation) in order to control for the correlation between a firm's decision to export and the effect of its exports on the labour demand or labour market outcomes. Using the Mills ratios established in the selection equation, two different specifications are used for labour demand [2] and labour market outcomes [3] at the second stage.

6.4.1 Labour demand

One of the oft-used empirical methodologies which tie labour demand to trade is through an augmented Cobb-Douglas production function, with cost minimization and/or profit maximization conditions. In a Cobb-Douglas function, production is considered an outcome of labour and capital, and trade is taken into account through its impact on technology.²⁹ More specifically, both imports and exports are presumed to play a direct role in the technological progress parameter in this framework, with exporters more likely to have knowledge of capital goods and importers more likely to acquire them. Using this framework, a reduced form log-linearized version of a labour demand function can be derived. In line with this literature, and based on the available variables in the enterprise data, this chapter adopts an estimation equation for labour demand as follows:

$$\begin{aligned} \log(labour)_{it} &: \beta_1 + \beta_2 T_{it} + \beta_3 \log(assets)_{it} \\ &= \beta_4 \log(value-added)_{it} + \beta_5 Mills\ Ratio_{it} + \partial + \gamma + \varepsilon_{it} \end{aligned}$$

where

$\log(labour)$ is the log of the total number of workers in a firm;

²⁹ The empirical framework in this paper is similar to that used by Mouelhi (2007) and Njikam (2014).

T is the transformed value of direct exports or percentage of direct imports;³⁰

$\log(\text{assets})$ is the log of total assets;

$\log(\text{value-added})$ is the log of (revenue – cost);

γ represents the province-level controls;

∂ represents the year-level controls;

i is a firm in time t .

The trade variable corresponds to either the value of total exports for the final product of the enterprise or to imports represented through the percentage of machinery and equipment which is procured from foreign suppliers, as opposed to domestic sources, such as households, state enterprises and state agencies.

6.4.2 Labour market outcomes

In the case of labour market outcomes, worker-related variables are integrated in the equation:

$$LMO_{jits} = \beta_1 + \delta_2 T_{it} + \beta_3 \log(\text{assets})_{it} + \beta_4 \log(\text{value-added})_{it} + \beta_5 \text{gender}_{jit} + \beta_6 \text{age}_{jit} + \beta_7 \text{education}_{jit} + \beta_8 \text{Mills Ratio}_{it} + \partial + \gamma + \varepsilon_{it}$$

where

LMO represents the labour market outcomes (that is, written labour contract, training on OSH, health insurance, unemployment insurance and sick leave);

T is the transformed value of direct exports or percentage of direct imports;

$\log(\text{assets})$ is the log of total assets;

age is the age of worker;

education is the education level of worker;

gender is expressed as 1 if female;

γ represents the province-level controls;

∂ represents the year-level controls;

j is an individual in firm i in time t and based in the province s .

³⁰ The main trade variables are transformed using an IHST – these are exports and the percentage of direct imports of raw materials and machinery/equipment, due to them being right-skewed with a large number of zero values.

In each case, tests were carried out to inspect the distribution of the variables and their correlations. Furthermore, variance inflation factor tests were used to decide which variables to include in the regression as firm covariates. The year and province controls were incorporated in order to account for time-invariant effects of the year and province.

► 6.5 Results

The results for equation [2], which investigates the relationship between trade (imports and exports) and the labour demand, are shown in table 6.4. Panel (a) shows the results for exports and panel (b) for imports.

► **Table 6.4** Panel regression results for labour demand

Variables	(a) Exports	(b) Imports
	Log of labour	Log of labour
Exports (IHST)	0.020*** -0.004	
Direct imports (% of total) (IHST)		0.047*** (0.012)
Log of assets	0.043*** -0.011	0.042*** -0.012
Log of value-added	0.401*** -0.023	0.400*** -0.024
Constant	-3.825*** -0.364	-3.816*** -0.423
Observations	15 053	15 053
Number of firms	3 497	3 497
Province controls	Yes	Yes
Year controls	Yes	Yes

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. IHST = inverse hyperbolic sine transformation. Bootstrapped standard errors in parentheses.

It can be seen from table 6.4 that an increase in both exports and imports is associated with a rise in employment in SMEs.³¹ This is in line with studies which find a positive impact of imports and exports on employment in Viet Nam (Le et al. 2022) and would support the idea that engagement in international trade contributes to the growth of SMEs. A positive relationship between labour demand and other firm characteristics, such as the total value of assets and value-added, has also been identified. This would also support the literature which suggests that exporting and importing firms are larger in size and more productive (Bernard, Redding and Schott 2007).

The results of the coefficients for labour market outcome equation [3] are presented in table 6.5. The table shows that exporting has a positive and significant relationship with the presence of written formal contracts, and social protection coverage through insurance for healthcare, unemployment and sick leave.

► **Table 6.5 Regression results for labour market outcomes**

Variables	(1) Formal contract	(2) Health insurance	(3) Unemployment insurance	(4) Sick leave insurance	(5) Provision of OSH training
Exports	0.0185* (0.0104)	0.0325*** (0.00882)	0.0349*** (0.00656)	0.0290*** (0.00779)	0.00307 (0.00587)
Log of value-added	1.012***	1.195***	1.090***	0.604***	0.510***
Log of assets	(0.0605) 0.0902***	(0.0782) 0.157***	(0.0747) 0.127***	(0.0628) 0.103***	(0.0475) 0.0597***
Female	(0.0225) 0.168***	(0.0199) 0.182***	(0.0272) 0.134**	(0.0254) 0.0158	(0.0211) -0.0876**
Education	0.350*** (0.0353)	0.296*** (0.0335)	0.264*** (0.0277)	0.271*** (0.0307)	-0.0785*** (0.0267)
Age	-0.0156*** (0.00295)	-0.0139*** (0.00407)	-0.00901*** (0.00343)	-0.00242 (0.00256)	-0.00329 (0.00220)
Constant	-14.82*** (0.814)	-19.36*** (0.974)	-17.81*** (1.015)	-10.16*** (0.813)	-7.110*** (0.623)
Observations	4 319	4 259	4 255	4 253	4 318
Province controls	Yes	Yes	Yes	Yes	Yes
Year controls	Yes	Yes	Yes	Yes	Yes

Note: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

31 The results are robust to changing the selection equation to account for importers instead of exporters.

6.5.1 Formal employment

Exports and imports increase the likelihood of SMEs offering written labour contracts to their workers in Viet Nam. Given the prevalence of informal employment in the country, this is an important finding, as it shows that trade can contribute to formalization of workers. Another result from the regressions is that the probability of having a written contract is higher for women compared with men in SMEs. This is in line with the findings of the labour force surveys in Viet Nam, in which women were found to have more formal contracts (see section 6.2). Finally, there is a positive relationship between formal contracts and education, but a negative one with age. Indeed, younger and higher educated workers are more likely to have formal written contracts. This is in line with the findings of McCaig and Pavcnik (2018), who also showed that young and educated workers had a higher chance of moving out of informality due to increased trade. However, it should be noted that firms might be resorting to short-term written contracts for seasonal labour, which would negate many of the benefits which come with having an employment contract. Therefore, it is also important to investigate the duration of contracts in future studies. In terms of firm characteristics, assets and value-added are positively correlated with written contracts. This is expected, as larger firms, even within the sample of SMEs, are more likely to offer contracts at a higher rate than smaller firms. Furthermore, assets and total value-added are often considered proxies for firm size.

6.5.2 Social protection

Exports increase the probability of firms offering a greater number of social security policies, in this case health insurance, unemployment insurance and sick leave benefits. This could be due to the international pressure and scrutiny which come with engagement in trade but also to the participation of firms in specific programmes, such as Better Work, which aim to improve conditions in the labour market. While we do not have any data on whether the enterprises surveyed were part of the Better Work programme, there is some evidence that firms that are tend to comply more with labour standards. Furthermore, there seems to be a significant and positive relationship between gender and social security coverage, with women workers more likely to be covered. This follows the finding that women tend to have more formal contracts. However, it should be noted that many women tend to drop out of the labour market and wage employment due to care duties (maternity and family) in Viet Nam. While they might be well covered by social security when younger, their careers tend to be short, which is illustrated by the low coverage by pension schemes (ILO 2021e). Finally, the age of workers has a

significant negative relationship with social security, while the education level of workers seems to have a positive correlation. This could stem from the fact that firms offer better working conditions to higher educated workers in the first place. However, it could also mean that higher skilled workers are more likely to be aware of, demand and participate in social security programmes offered by firms and the State.

6.5.3 Occupational safety and health

The estimated results do not show any significant relationship between exporting and training on OSH. However, training does have a significant negative relationship with gender. This is likely to reflect the fact that SMEs in the survey are less ready to offer OSH training if their workforce has a higher proportion of women. This might be attributable to the fact that women are often less likely to perform jobs which require OSH training, such as routine jobs in manufacturing enterprises. Besides, the same could be said of workers with a higher level of education, as they are also less likely to perform roles or tasks which require mandatory training.

► 6.6 Conclusion

Trade and labour market patterns have changed significantly in Viet Nam over the last decades. Exports and imports of the country have increased spectacularly and working conditions have consequently improved. While the link between the two phenomena has rarely been explored, increasing exports and imports can have significant effects on labour beyond employment creation, like on workers' rights and working conditions. This relationship has gained renewed attention, especially in the wake of trade agreements with comprehensive labour provisions that Viet Nam signed in the last years (including the CPTPP and EU–Viet Nam Free Trade Agreement).

In order to investigate the relationship between trade and labour in Viet Nam, this chapter used data from a firm- and worker-level survey conducted biennially from 2011 to 2015. In addition to employment creation, it explored the impact of exports and imports on other aspects of decent work, such as informality, social protection and OSH. The focus was on SMEs, which constitute the vast majority of firms in Viet Nam (around 96 per cent), employing 47 per cent of the labour force and contributing to 36 per cent of national value-added in 2016 (OECD 2021).

Regarding the econometric strategy, the chapter adopted the Heckman selection model in order to account for the selection bias and endogeneity arising from the fact that only a small number of SMEs engage in trade. On the one hand, the results showed that increased exports and imports by SMEs were associated with a higher probability of increased labour demand as well as better outcomes in terms of formal contracts and social protection coverage. This finding has significant consequences for policymaking, as it shows that measures promoting the trade participation of SMEs can also lead to gains in employment and in the working conditions of workers. Generally, multinational enterprises, which are the main actors of international trade, are found to offer better conditions. On the other hand, this study highlights that trade can have important distributional effects in terms of labour market outcomes, even among SMEs. This also requires particular attention from policymakers to ensure that the benefits of trade are more evenly distributed. It is worth noting that while participation in trade was found to contribute to better conditions in firms during the period that this chapter studied, the significant improvements in social protection coverage that were observed in the last decade coincided with changes in social and health laws in the country. This shows the importance of policies at the national level to improve working conditions, going beyond the impact of firm-level characteristics.

Finally, the conclusions of the study should be interpreted with caution as some limitations exist in the empirical analysis. First, the dataset is not fully representative of the universe of SMEs, nor of exporting firms in Viet Nam. A more representative sample of these categories would allow for a more accurate assessment of the impacts of trade on labour demand and decent work outcomes in the country. Second, tracking of individuals over time is not possible with the data used. Therefore, many worker-level outcomes cannot be directly observed. This also precludes the possibility of analysing worker transitions between occupations and sectors. A longitudinal survey following workers over time would provide better insights into worker-level impacts. Third, since the data collection method is a survey, it suffers from the associated shortcomings, such as response bias and attrition. The availability and use of administrative data could provide richer, more accurate insights into the relationships investigated in this chapter. Finally, the data collected by the survey often do not use fully harmonized classifications for education, occupation, skills or industrial sectors. A focus on harmonizing the data collection strategy could improve the analysis of this survey in terms of its external validity, and its comparability to other countries.

► References

- Acemoglu, Daron, and David Autor. 2011. "Skills, Tasks and Technologies: Implications for Employment and Earnings". In *Handbook of Labor Economics*, edited by O. Ashenfelter and D. Card, 1043–1171. Amsterdam: Elsevier.
- Attanasio, Orazio, Pinelopi Goldberg, and Nina Pavcnik. 2004. "Trade Reforms and Wage Inequality in Colombia". *Journal of Development Economics* 74 (2): 331–366.
- Bernard, Andrew, Stephen Redding, and Peter Schott. 2007. "Comparative Advantage and Heterogeneous Firms". *Review of Economic Studies* 74: 31–66.
- Brandt, Kasper, John Rand, Smriti Sharma, Finn Tarp, and Neda Trifković. 2016. *Characteristics of the Vietnamese Business Environment: Evidence from a SME Survey in 2015*. Helsinki: United Nations University World Institute for Development Economics Research (UNU-WIDER).
- Choi, Bo-Young, and Thuy Linh Nguyen. 2021. *Trade Diversion Effects of the US–China Trade War on Vietnam*. Social Science Research Network (SSRN).
- Desai, Raj, and Nita Rudra. 2019. "Trade, Poverty, and Social Protection in Developing Countries". *European Journal of Political Economy* 60: 101744.
- Frankel, Jeffrey, and David Romer. 2009. "Does Trade Cause Growth?" In *Global Trade*, edited by John J. Kirton, 255–276. London: Routledge.
- Frederick, Stacey, Gladys Lopez-Acevedo, Raymond Robertson, and Mexico Vergara Bahena. 2021. *From Jobs to Careers: Apparel Exports and Career Paths for Women in Developing Countries*. Washington, DC: World Bank.
- Fukase, Emiko. 2013. "Export Liberalization, Job Creation, and the Skill Premium: Evidence from the US–Vietnam Bilateral Trade Agreement (BTA)". *World Development* 41: 317–337.
- Galli, Rossana, and David Kucera. 2008. *Gender, Informality and Employment Adjustment in Latin America*. ILO.
- Goldberg, Pinelopi Koujianou, and Nina Pavcnik. 2003. "The Response of the Informal Sector to Trade Liberalization". *Journal of Development Economics* 72 (2): 463–496.
- . 2007. "Distributional Effects of Globalization in Developing Countries", National Bureau of Economic Research Working Paper No. 12885.

- Häggqvist, Henric. 2020. "How Does Globalization Affect the Welfare State? Openness to Trade and Social Spending Patterns in 21 Countries, 1920–2000". *Essays in Economic and Business History* 38 (1): 224–270.
- Harrison, Ann, and Gordon Hanson. 1999. "Who Gains from Trade Reform? Some Remaining Puzzles". *Journal of Development Economics* 59 (1): 125–154.
- Harrison, Ann, John McLaren, and Margaret McMillan. 2011. "Recent Perspectives on Trade and Inequality", World Bank Policy Research Working Paper No. 5754.
- Heckman, James. 1979. "Sample Selection Bias as a Specification Error". *Econometrica* 47 (1): 153–161.
- Hidalgo, César, and Ricardo Hausmann. 2009. "The Building Blocks of Economic Complexity". *Proceedings of the National Academy of Sciences of the United States of America* 106 (26): 10570–10575.
- ILO. 2008. *Measurement of Decent Work: Discussion Paper for the Tripartite Meeting of Experts on the Measurement of Decent Work*. TMEMDW/2008.
- . 2010. *Global Employment Trends*.
- . 2015. *Small and Medium-Sized Enterprises and Decent and Productive Employment Creation*. ILC.104/IV.
- . 2017. *Food and Agriculture Global Value Chains: Drivers and Constraints for Occupational Safety and Health Improvement*.
- . 2019. *Decent Work and Sustainable Development Goals in Viet Nam: Country Profile*.
- . 2021a. *Informal Employment in Viet Nam: Trends and Determinants*.
- . 2021b. *World Social Protection Report 2020–22: Regional Companion Report for Asia and the Pacific*.
- . 2021c. *Trade and Decent Work: Handbook of Assessment Methodologies*.
- . 2021d. *Trade and Decent Work: Indicator Guide*.
- . 2021e. *Adapting Social Insurance to Women's Life Courses: A Gender Impact Assessment of Viet Nam*.
- . 2021f. *Research Brief: Gender and the Labour Market in Viet Nam*.
- . 2021g. *World Social Protection Report 2020–22*.

- Kasahara, Hiroyuki, Yawen Liang, and Joel Rodrigue. 2016. "Does Importing Intermediates Increase the Demand for Skilled Workers? Plant-level Evidence from Indonesia". *Journal of International Economics* 102: 242–261.
- Kazimoto, Paluku. 2014. "Assessment of Challenges Facing Small and Medium Enterprises towards International Marketing Standards: A Case Study of Arusha Region Tanzania". *International Journal of Academic Research in Accounting, Finance and Management Sciences* 4 (2): 303–311.
- Le, Thai-Ha, Tu-Anh Vu-Thanh, Binh Quang Nguyen, and Ha-Chi Le. 2022. "Trade, Foreign Direct Investments and Employment in Vietnam". In *Political, Economic and Social Dimensions of Labour Markets: A Global Insight*, edited by Soon Beng Chew, Lingli Huang and Kai Xiang Kwa, 159–186. Singapore: World Scientific Publishing.
- Marcouiller, Douglas, Veronica Ruiz de Castilla, and Christopher Woodruff. 1995. "Formal Measures of the Informal Sector Wage Gap in Mexico, El Salvador, and Peru", Boston College Working Paper in Economics 294.
- McCaig, Brian, and Nina Pavcnik. 2018. "Export Markets and Labor Allocation in a Low-income Country". *American Economic Review* 108 (7): 1899–1941.
- McManus, Clay, and Georg Schaur. 2016. "The Effects of Import Competition on Worker Health". *Journal of International Economics* 102: 160–172.
- Melitz, Marc. 2003. "The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity". *Econometrica* 71 (6): 1695–1725.
- Meschi, Elena, Erol Taymaz, and Marco Vivarelli. 2016. "Globalization, Technological Change and Labor Demand: A Firm-level Analysis for Turkey". *Review of World Economics* 152 (4): 655–680.
- Mouelhi, Rim Ben Ayed. 2007. "Impact of Trade Liberalization on Firm's Labour Demand by Skill: The Case of Tunisian Manufacturing". *Labour Economics* 14 (3): 539–563.
- Njikam, Ousmanou. 2014. "Trade Reform and Firm-level Labor Demand in Cameroon". *Journal of International Trade and Economic Development* 23 (7): 946–978.
- OECD (Organisation for Economic Co-operation and Development). 2021. *SME and Entrepreneurship Policy in Viet Nam*.
- Ponczek, Vladimir, and Gabriel Ulyssea. 2021. "Enforcement of Labor Regulation and the Labor Market Effects of Trade: Evidence from Brazil", CEPR Discussion Paper No. DP15960. Centre for Economic Policy Research.

Saavedra, Jaime, and Alberto Chong. 1999. "Structural Reform, Institutions and Earnings: Evidence from the Formal and Informal Sectors in Urban Peru". *Journal of Development Studies* 35 (4): 95–116.

Sánchez-Páramo, Carolina, and Norbert Schady. 2003. "Off and Running? Technology, Trade, and the Rising Demand for Skilled Workers in Latin America", World Bank Policy Research Working Paper No. 3015.

WTO (World Trade Organization). 2016. *Trade Finance and SMEs: Bridging the Gaps in Provision*.

———. 2017. *World Trade Report 2017: Trade, Technology and Jobs*.

———. 2019. *World Trade Report 2019: The Future of Services Trade*.

