

► Research Brief

February 2024

Rapid assessment of upskilling and reskilling needs In Viet Nam's textiles and garments and automotive sectors

- ▶ A rapid upskilling and reskilling needs assessments conducted in two key sectors of the Vietnamese economy (textiles and garments, and automotive manufacturing), revealed that digitalization, the 4IR, and regulatory and legislative changes are among key factors affecting these industries, with a greater impact on FDI enterprises.
- ▶ Occupations being redefined (in terms of changing task content), include key occupations for each sector requiring sector-specific technical skills (e.g. sewing or embroidery machine operators and tailors, in the textiles and garments sector, and electrical engineering technicians, electronics technicians, mechanical engineers in the automotive sector); while jobs becoming less relevant or disappearing are mainly in clerical occupations (e.g., stock and data entry clerks).
- ▶ Emerging occupations in both sectors include digital marketing and online business strategies; additionally, for textiles and garments, occupations related to 3D printing, IOT and other 4IR technologies.
- ▶ Although more than half of employers in both sectors feel that their workers are generally well prepared, approximately two-thirds believe their employees would benefit from upskilling and reskilling, with skills needing improvement spanning transversal, 'soft skills' and job-specific technical skills.
- ▶ Achievements of the activity included the promotion of public-private collaboration and social dialogue around skills, and the improved capacity of national partners to undertake skills assessment activities that would contribute to evidence-based demand-driven TVET provision.
- ▶ Key challenges and lessons learned included the limits of online surveys and how to mitigate the risk of low response rates; the importance of establishing a clear pathway for findings to inform supply-side policies, and of continued efforts to strengthen the capacity of lead units/ institutions responsible for skills needs anticipation; and the need for institutionalizing coordination and implementation processes.

Background and context

The Fourth Industrial Revolution (4IR) and other megatrends are having a significant impact on labour markets worldwide, presenting both challenges and opportunities. Skills development systems play a crucial role in mitigating negative impacts and ensuring that societies and individuals can manage and succeed in a rapidly evolving labour market environment. In the context of a just transition, and as technological change reshapes business processes, occupational structures, and the task content of occupations, there will be a continuous need for reskilling and upskilling of the workforce, ensuring that displaced workers can be redeployed to other growing sectors and occupations.

Against this backdrop, the Prime Minister of Viet Nam approved in August 2021 a national Program on training and retraining needs to meet the requirements of the 4IR. Following the Minister of Labor, Invalids and Social Affairs

(MoLISA)' Decision No. 1447/QD-LDTBXH dated 22 December 2021 and the Directorate of Vocational Education and Training (DVET)'s Director General Decision No. 645/QD-TCGDNN, dated 30 December 2021, on the implementation of the Program, the National Institute for Vocational Education and training (NIVT) was assigned the task of assessing training and retraining needs for sectors and occupations affected by the 4IR.

To support the NIVT in fulfilling this mandate, the ILO's Regional Office for Asia and the Pacific (ILO-ROAP) and the Deutsche Gesellschaft für Internationale Zusammenarbeit's Regional Cooperation for the Development of Technical and Vocational Education and Training (GIZ-RECOTVET) provided support for implementing rapid upskilling and reskilling needs assessments in two key sectors of the Vietnamese economy: textiles and garments, and automotive manufacturing. This activity, linked to the regional development cooperation project "Strengthening Labour

Market Information Systems in ASEAN Member States for Better Skills and Employment Policies” and funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), was implemented between September 2022 and December 2023.

Methodological approach

Objectives and key principles

The rapid assessment aims to identify reskilling and upskilling needs in specific industries and occupations and among relevant target groups affected by changes associated with the 4IR and the future of work, to inform supply-side policies, including technical and vocational education and training (TVET) design and delivery, and mobilize follow-up action.

The implemented approach is designed to provide national and sector level stakeholders with labour market information and analysis that is of high quality and relevance, within a relatively limited timeframe, and is one that may be replicated across sectors, implemented sustainably, and adapted to changing needs over time. The key principles of the approach are summarized in Box 1.

► Box 1. Key principles

- **sectoral approach**, with an initial focus on 2 or 3 sectors/ subsectors; implementation can be easily expanded across all economic sectors
- using **multiple labour market information (LMI) sources in a complementary way**: leveraging existing sources of LMI and developing additional tools and approaches to supplement and enrich available data, including employers’ and target group surveys.
- **fostering stakeholders and social partners engagement and collaboration** throughout the process; the approach should contribute to the strengthening of social dialogue on skills, bringing together tripartite representatives at the sectoral level.
- **ownership, capacity building and sustainability**: national ownership by, and provision of capacity building to, a lead agency for institutionalization and long-term sustainability.

The approach generally follows the *ILO’s Guidelines on Rapid Assessment of reskilling and upskilling needs in response to the COVID-19 crisis*¹ adapted and enhanced to reflect needs arising from changes due to the 4IR, green transition and other factors associated with the future of work. The approach also draws upon and complements

other ILO tools and approaches to skills anticipation and matching, including the *Skills for Trade and Economic Development (STED)*, particularly the *Rapid STED* approach.² The rapid assessment approach is a mixed-methods approach that combines a survey-based methodology with the analysis of data from the labour force survey (LFS) and other sources, sectoral analyses, and key informant interviews/ focus group discussions.

Governance and institutional arrangements

The rapid assessment activity was implemented by the NIVT, mandated by the DVET to assess training and retraining needs, along with the Viet Nam Chamber of Commerce and Industry (VCCI), with support from the ILO and GIZ-RECOTVET. Industry associations, unions, and training schools were regularly consulted throughout the process, for inputs and validation for the sector selection report, survey questionnaires, and analytical reports.

► Box 2. Sector selection criteria

- **Economic contribution and growth potential**. Sector’s contribution to gross value added and exports, and its growth potential as indicated by recent trends.
- **Employment and decent work creation potential**. Sector with high potential for generating quality employment and particularly decent work with its multiple aspects, including for women and youth.
- **TVET-level skill intensity and potential for being affected by 4IR technologies**. Sector where the occupational structure includes a large share of skills generally supplied by TVET, and where a large share of jobs is at risk from automation and/or 4IR technologies.
- **Cross-cutting issues**. There should be scope for investing in skills to contribute to improving the quality of jobs in the sector, and to contribute towards cross-cutting objectives (e.g., greening the economy and improving opportunities for priority groups such as women, youth, people with disabilities, ethnic minorities, and migrants).
- **Ownership and engagement of partners**. Sector identified in national plans and strategies as priority sector; where social partners express a strong interest in participating/ cooperating with the process.
- **Seeking synergies/avoiding duplication**. Sector that has not been/ is not currently the subject of related assessments.

¹ https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_752822.pdf

² https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_751499.pdf

Main steps and timeline

The methodological approach implemented in Viet Nam involved three main stages:

Stage 1. Desk review and sector selection (September-October 2022). A first step involved a review of literature, including government strategies and priorities, and preliminary data analysis, to select the sectors or subsectors for the rapid assessment, using predefined sector selection criteria (see Box 2) and corresponding indicators, for which data is collected and analysed. The rationale for the sector/ subsector selection was then elaborated and summarized in a sector selection report. Out of the short-listed sectors, two sectors were selected, and defined at the 2-digit Vietnam Standard Industrial Classification System 2018 (VSIC) level, as per Table 1.

► **Table 1. Selected sectors/subsectors**

	VSIC code
Textiles and Garments	
Manufacture of textiles	13
Manufacture of wearing apparel	14
Automotive	
Manufacture of motor vehicles, trailers and semi-trailers	29

Stage 2. Data collection and analysis (November 2022 – September 2023). Building upon the initial analysis of data from available LMI sources (primarily from the Labour Force Survey) undertaken for the sector selection, a brief overview of the labour market situation and recent trends in the selected sectors was prepared. Additionally, an enterprise survey, a target group survey, and a TVET institute survey were developed and implemented online, to gather complementary information on upskilling and reskilling needs.

► **Table 2. Survey responses**

	Textiles and Garments	Automotive
Employers	73	39
Target Group (Employees and TVET graduates)	509	388
TVET Institutions	17	24

To increase the sample size constrained by low response rates, and complement the information gathered through

the surveys, the NIVT and VCCI undertook field visits to employers in July and August 2023.³ The final sample size for each survey is presented in Table 2.

Stage 3. Finalization and dissemination (October – December 2023). Survey results were integrated with findings from the other sources of data into a draft rapid assessment report. Initial findings were presented to key stakeholders for their inputs and validation during a workshop organised by the VCCI on December 7th, 2023, after which the rapid assessment report was finalized.

Main findings

Sector characteristics: enterprise size, ownership structure and export orientation

In Viet Nam’s textiles and garments sector, the wearing apparel (garments) subsector has relatively larger enterprises (including some of 1000+ employees) than textile enterprises, and has a higher share of FDI enterprises. Many FDI garment enterprises produce for export only while other non-state-owned produce for both international and domestic markets.

In the automotive sector, automotive manufacturing firms also include very large firms of over 1000 and even some over 5000 employees, with high share of FDI enterprises, compared to ‘other automotive’ enterprises (engaged in sales, repair, distribution). Most automotive manufacturing enterprises serve both an international and domestic market, while ‘other automotive’ firms serve primarily a domestic market.

Occupational structure and workforce characteristics

The major occupational groups in both sectors are crafts and related trades occupations and plant and machinery operators and assemblers, both of which are associated with TVET-level skills. Differences between the two sectors include a larger share of female employees in garments and textiles in comparison with the automotive sector. Another difference is with respect to contractual arrangements where many workers in garments and textiles are on fixed-term contracts, whereas the share of fixed-term contracts is quite limited among automotive employees.

³ This required mobilizing additional funding, which was made possible due to synergies with the ILO’s ‘Future of work in textiles and clothing sector’ project, funded by the Government of Japan.

In the garment and textile sector, there is some evidence of skills mismatch whereby large share of employees identify themselves as unskilled or low-skilled elementary workers, while being in occupations usually requiring TVET level skills. This is reflected in recruitment practices in the sector, whereby, in addition to recruiting workers who are fully trained and ready to work, most enterprises in the garment and textile sector hire workers who already have some experience, but provide them with on-the-job training, while automotive enterprises are more likely to recruit trainees and apprentices.

Change drivers, trends and their impacts on enterprises and workers

For Viet Nam’s garment and textiles enterprises, digitalization, 4IR and public health concerns (e.g. pandemics) are major factors impacting the sector. Additionally, changes in brands regulations and standards are a major concern for FDI enterprises. In automotive, while digitalization, 4IR and legislative or regulatory changes affect all enterprises, this is particularly so for FDI enterprises.

In both sectors, change in consumer preferences is more of a concern for non-state enterprises, while changing global patterns of trade and investment are more important for FDI enterprises. Climate change and environmental concerns are highlighted by approximately a quarter of enterprises in both sectors, with a higher share among FDI enterprises.

As a results of these changes, enterprises in both sectors are having to adopt new technology, purchase new equipment; increase efficiency, productivity,

competitiveness and reduce costs (particularly for FDI enterprises).

Textiles and garments enterprises also highlight the need to diversify customer base, expand to different market, shift market segment; while automotive enterprises also emphasize the need to improve quality of product or service. Additionally, more than 70% of automotive FDI enterprises, and more than 40% of GT FDI enterprises highlighted the need to make production process more green and more sustainable. Finally, more than half of textile and garment enterprises and approximately half of automotive enterprises identify the need to retrain and reskill their workforce as a result of ongoing changes, with a higher share of enterprises identifying this need among FDI enterprises in both sectors.

These trends are having impacts on workers as well, affecting the sectors’ key occupational groups the most: In textiles and garments, more than half of crafts and related trades workers are using new production processes. In automotive, more than 70 per cent of workers in the important plant and machine operators and assemblers occupational group reported having a wider range of tasks, using new machinery and equipment, new digital or communication technologies and new production processes.

Occupational and skills demand

The rapid assessment allowed gathering important insights on changing occupational and skills demand in both sectors, as a result of these changes, as summarized in Table 3.

► **Table 3. Key insights on labour and skills demand due to 4IR and future-of-work related changes**

	Textiles and Garments	Automotive
Occupations being redefined (Changing task content)	Many crafts and related trades, and machine operators occupations (e.g., sewing or embroidery machine operator, tailors, etc.)	Mainly professional occupations (e.g., electrical engineering technicians, electronics technicians, mechanical engineers, etc.)
Occupations becoming less relevant/ disappearing	Mainly clerical occupations (e.g., stock and data entry clerks)	
	(in approximately 25% of surveyed enterprises).	(in approximately 40% of surveyed enterprises).
Occupations with reduced demand	Reduced demand for some key occupations (sewers, tailors, sewing machine operators) linked to labour-substituting technology.	Mainly clerical occupations
Emerging occupations	Occupations related to 3D printing, IoT and other 4IR technologies; occupations in digital marketing and online business strategies.	Occupations related to programming and operating robots; occupations in digital marketing and online business strategies.
Current workforce preparedness Workers’ perspective:	Average skills self-assessment scores are 6.9/10, lowest among crafts and related trades (6.3/10) and plant and machine operators and assemblers (6.5/10); little difference between men and women.	Average skills self-assessment scores 7.4/10, lowest among plant and machine operators and assemblers (6.3/10); overall average score of men (7.6) is higher than for women (6.8), and particularly among plant and machine operators and assemblers.

Employers' perspective:	Approximately 60% of employers believe their workers are generally well-prepared for changes affecting their workplace;	55% of employers believe their workers are generally well-prepared for changes affecting their workplace;	
Upskilling and reskilling needs:	around two thirds of enterprises believe that workers in some occupations would benefit from retraining and improving their skills, specifically for the occupations identified as being redefined.		
	Skills needing most improvement	Transversal, 'soft' skills, and job-specific technical skills (including operating machinery and equipment).	
	Skills most 'in-demand'	Knowledge and practice of occupational safety and health; organizing, planning and scheduling work and activities; teamwork; analyzing and evaluating information and data; skills for green jobs and sustainability; and technical skills (operating machinery).	Use of digital tools to control machinery and equipment; knowledge and practice of occupational safety and health; organizing, planning and scheduling work and activities; teamwork; analyzing and evaluating information and data; skills for green jobs and sustainability; and technical skills (automotive assembly and manufacturing).
Recruitment needs in the coming years	Mixed findings, with recruitment needs identified in some of the occupations where employment has been on the decline, suggesting changing skills requirements in key occupations (e.g., sewing machine operators), which is resulting in existing or anticipated skills mismatch.	High demand among many enterprises of workers such as metal core and mould makers, welders, and metal cutters. These workers have technical skills that are transferable across industries.	

Access to training

At least 70% of enterprises in both sectors provide training to their workers to respond to changes to their jobs/tasks. This usually involves on-the-job training at the enterprise, but there are also employers who provide training in cooperation with TVET institutions. Less commonly, workers are sent to TVET institutes for training. In most cases, employers cover training costs, and in a few cases, there is cost sharing between employers and employees.

The possibility of participating in training is perceived as being quite high by over 70% of workers in the textiles and garments sector, and approximately 58% of workers in the automotive sector. Interestingly, women in both sectors were somewhat more likely than men to consider their ability to access training as either 'quite likely' or 'very likely'.

Employees confirm that the most likely type/location of training available to them is at the enterprise (58% for textiles and garments workers, and 64% for automotive workers). Additionally, 40% of textiles and garments workers and 28% of automotive workers state that they can access training at VET institutions.

Recent training patterns

In the textiles and garments sector, 47% of surveyed workers recently had on-the-job training funded by employers, and 28% had training at TVET institution, also funded by employer. For garments workers (wearing

apparel subsector), recent training most corresponded to intermediate level TVET, while for textiles workers, it often involved skills development courses of less than 3 months. The most common course was garment technology followed by fashion apparel and fashion design for garments workers; and fibre technology followed by garment technology for textiles workers.

In the automotive sector, about 30% of workers recently had on-the-job-training at the enterprise, and about one third had training at a TVET institution funded by the employer. For workers in the automotive manufacturing subsector, the most common recent training was skills development/vocational training program (1-3 months), and particularly 'automobile maintenance and repair'. Workers in the 'other automotive' subsector were more likely to have recently completed college level training, with courses such as 'automobile production engineering'.

Almost all surveyed TVET institutions indicated that they are implementing measures to help learners better prepare for future labour market demand. The top measures implemented by TVET institutions in both sectors include revising and updating curricula; training of trainers (ToT), investing in new technology, machinery and equipment; training in health and safety at work. Additionally, many VET institutions in the textiles and garments sector also provided training to students in adapting to new work or production processes; while as many as 86% of institutions in the automotive sector provided training in digital technologies and use of digital

tools to control machinery, and 71% provided training in using ‘green’ technologies and processes.

Policy implications and recommendations

TVET institutions perspectives’ are generally aligned with enterprises and workers with respect to the key change drivers for both sectors. In addition to measures already being implemented, most VET institutions believe additional measures are needed to adequately prepare learners for labour market needs including: the development of new training programs, and the inclusion of specific skills in existing programs (e.g. in fashion apparel programs imparting digital skills, and ‘greening skills’ at the intermediate and college levels, and in automobile production engineering courses at various levels: ‘greening skills’ at intermediate level analysis and synthesis skills, use of software to diagnose errors, etc.)

Key recommendations include strengthening coordination between VET institutions and enterprises in training, including by encouraging teachers’ participation in practical learning at enterprises.

Lessons learned: challenges, mitigation strategies and solutions

Limited stakeholder engagement and low survey response rates

Some key challenges are linked to the nature as a methodology for ‘rapid’ assessments, implying that it needs to be conducted under strict time and resource constraints. This necessitated the use of online surveys, with associated challenges in terms of response rates and size and representativeness of survey samples. Mitigation strategies involved reliance on/ leveraging of the networks of the NIVT and VCCI to encourage participation in the surveys; and the implementation of field visits to secure employers’ responses and their support in encouraging their employees to respond to the target group questionnaires.

The missing link from evidence to policy

An important lesson-learned was that evidence – in this case, labour market information regarding upskilling and

reskilling needs – may be necessary, but it is not sufficient for evidence-based policies. Translating findings into policy-relevant content requires additional steps that are rarely integrated in the process. For this, it is crucial to engage with the targeted end-users of the data from the onset and ensure that study findings are ‘usable’ for their purposes. While the communication and coordination with industry associations, employers and TVET schools were greatly facilitated by the efforts of the NIVT and VCCI to utilise their networks, the activity would have benefited from stronger engagement of unions and worker representatives and of other DVET departments involved in translating findings of the study into their policies. Nevertheless, the NIVT-VCCI partnership in the implementation of the study has constituted an impressive good practice example of public-private partnership to improve TVET.

Capacity building, institutionalization, and sustainability

The activity has provided for an important opportunity to transfer knowledge and skills and develop the national lead agency capacity. The ILO project team provided seven capacity building sessions to the NIVT in the course of the activity, in addition to continuous technical guidance and follow-up, essentially supporting the NIVT in a ‘learning by doing’ process, which proved highly effective. A related challenge that may need to be addressed in future iterations of this activity is the limited time availability and diverse capacity development needs of other key stakeholders (e.g., employer or worker groups) to effectively engage in the process.

Beyond capacity development however, a key factor for sustainability is that the coordination mechanisms that sustain the process must be institutionalized through formal agreements or partnerships, specifically: a) the mechanisms to obtain data and inputs from key stakeholders, b) mechanisms for stakeholder engagement in the activities (e.g., through the establishment of sector skills councils), and c) mechanisms for the translation of results into policy-relevant findings, taking into account diverse mandates and policy needs. For the latter point in particular, further collaboration between the NIVT and other DVET departments is critical.

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