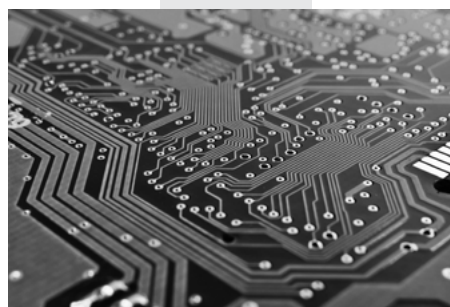
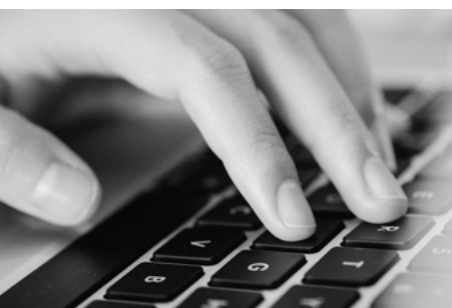


SUMMARY REPORT

ENTERPRISES' PARTICIPATION STATUS IN VIETNAM

in Improving Labor Competencies for Industry 4.0

and Implications for Public-Private Partnership



VCCI

SAMSUNG





The summary report “Enterprises’ participation status in Vietnam in improving labor competencies for Industry 4.0 and implications for public-private partnership” is conducted by the Enterprise Development Foundation - Vietnam Chamber of Commerce and Industry in September 2021, within the Samsung Vietnam’s Multi-stakeholder Forum 2021 (MSF 2021).

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1. INTRODUCTION

The 4th Industrial Revolution has brought about great changes in manufacturing methods of businesses. This results from quick application of digital technology. Therefore, employees are in need of being equipped with new skills in appropriate with those manufacturing methods in the context of the 4th Industrial Revolution (Industry 4.0). Then, one of alarming requirements for all countries is establishing training and re-training strategies for the workforce. In order to serve this purpose, besides the engagement of the state authorities and vocational institutions, enterprises also play an increasingly important role. As a matter of fact, from training perspective, the involvement of enterprises as employers not only contributes to the reduction of the state's burden of facilities, but also

helps direct and train skills suitable for the market's demands, meeting the demand of Industry 4.0.

Based on the literature review and survey results from more than 400 enterprises, this study consolidated different labor competency frameworks for Industry 4.0, evaluated the reality of labor quality to meet the demand of Industry 4.0 and provided a picture of Vietnamese enterprises' participation in improving labor competence serving Industry 4.0. The researched enterprises were assessed based on 3 criterion namely size (large as well as medium and small enterprises), business area (manufacturing and non-manufacturing) and participation in global value chain (GVC).

2. COMPETENCY FRAMEWORK TO MEET THE DEMAND OF INDUSTRY 4.0

The investigation into present studies on competency framework for Industry 4.0 showed that the skill frame for Industry 4.0 would not replace current skills. Instead, many new skills will be added. In fact, there are skills which have always been significant (communication, team work, management, etc.); and there are new ones directly related to Industry 4.0 (digital skills).

This study evaluated the reality of labor's competence and enterprises' participation in improving skills for the workforce based on the competency frame by Maisiri et al. (2019), which focused on two main groups of skills, so-called *technical skills* (technological, programming and digital skills) and *soft skills* (logical thinking, social and interpersonal skills).

3. LABOR QUALITY

IN ENTERPRISES IN VIETNAM

SERVING INDUSTRY 4.0

Although there are 4/5 enterprises having known and 1/2 enterprises having paid attention to typical technologies for Industry 4.0, only 1/5 of the surveyed enterprises having implemented these technologies. Large enterprises and those getting involved in GVC usually notice high technology more than small and medium enterprises who are not participating in GVC, especially in the areas of network security, big data, system integration and remote control. On the one hand, this has revealed advantages and activeness of large enterprises and those participating in GVC when they accessed to technologies of Industry 4.0. On the other hand, this reality exposes an arising question about how to support small and medium enterprises in gradually getting access to new technologies to adapt to development tendency of Industry 4.0.

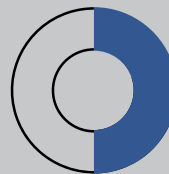
There were 1/2 of surveyed enterprises having not prepared their workforce for the context of Industry 4.0, 39.4% of those only having made plan for labor training, only 11.8% of the researched enterprises having built up plan for workforce improvement but having done nothing for this goal and 6% of those having had plan and implementing with certain specific results. This demonstrated slow preparation of enterprises in planning workforce for Industry 4.0, especially small and medium enterprises and those not participating in GVC.

There were 1/2 of researched enterprises saying that their employees having met the demand of Industry 4.0 (at medium level) and 8.2% of enterprises realizing that their labor having committed to different drawbacks in confronting Industry 4.0.

In terms of the overall workforce, the skills that enterprises value the most are social skills and



only 1/5 of the surveyed enterprises having implemented typical technologies for Industry 4.0



1/2 of surveyed enterprises having not prepared their workforce for the context of Industry 4.0

personal skills, followed by thinking skills and technology skills, and finalized by digital and programming skills. This showed that even in the context of Industry 4.0, soft skills still play an important role, followed by technical skills.

Regarding technical labor, the most important skill was stated as basic information technology skill, which should be followed by soft skills and group of skills related to utilize technology. Enterprises evaluate that current responding capability of technical staff has not kept up with essential movement for all skills. Especially, that responding capability is better exposed through application of basic information technology and soft skills rather than other skills related to complex techniques such as simulation, virtual reality, artificial intelligence and digital content creation.



4. REALITY OF TRAINING AND IMPROVING LABOR'S COMPETENCY

There was nearly 80% of enterprises having trained and improved competences of their working staff. In particular, most of them organized self-training mode (73,8%) while minority of them was responsible for training human resource for the society in addition to doing that job for their own sake (5,7%). On the one hand, the huge percentage of enterprises having improved their employees showed that they were active in building up work force in appropriate with their own manufacturing activities. On the other hand, that number also revealed low quality of the human resource which required enterprises to re-train the staff. PCI report in 2020 by VCCI illustrated that on average, there was only 47% of enterprises assessing local vocational training at high quality level.

In terms of training mode, $\frac{3}{4}$ of enterprises held self-training programs, while some established

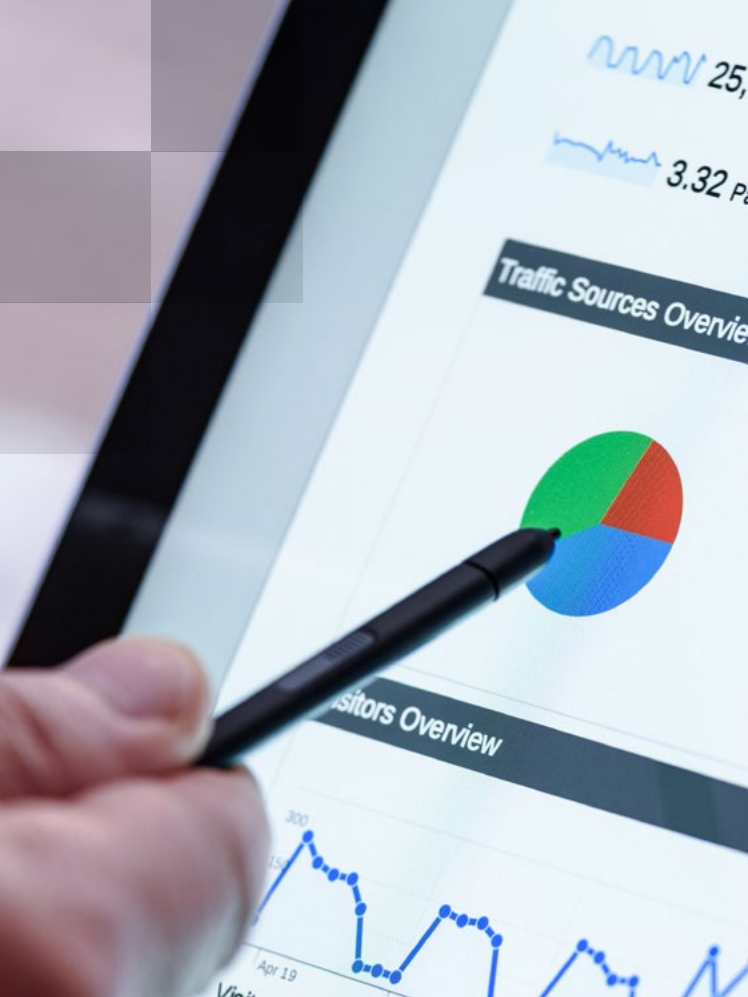
their own training centers to improve the quality of their workforce. More than $\frac{1}{5}$ of enterprises carried out training courses by outsourcing training centers.

The researched enterprises paid their most attention to training and improving available skills of their labor (65,1%), which was followed by their notice to train unskilled labor (57,6%) and new skills for the labor (46,1%). Only 17,6% of enterprises having organized training programs with the aim of improving specialized skills for Industry 4.0. Also, it seems that enterprises appreciated the role of external training centers in training new skills related to Industry 4.0, rather than training unskilled labor and improving available skills. Then, for the latter purposes, enterprises often carried out training by themselves.

5. REALITY OF CO-OPERATION WITH TRAINING INSTITUTIONS TO IMPROVE LABOR'S COMPETENCY

Although the number of enterprises in collaboration with training institutions was limited, $\frac{2}{3}$ of those having experienced this co-operation achieved quite positive results. Large enterprises, manufacturing enterprises or

enterprises participating in GVC often require more cooperation with external training institutions. Nearly 60% of enterprises have not been co-operated with training institutions expressed their wishes to cowork in the future.



As a matter of fact, for the purpose of improving labor quality, enterprises in general, especially large ones in particular, still paid more attention to partnership with those in the same business area or supply chain. This could be explained by the mutual understanding within enterprises about their needs and labor capability in the supply chain. In addition, collaboration based on supporting projects by the State also attracted enterprises because they supposed that the state would hold an important position in promoting co-operation between enterprises and training institutions based on the state's orientation of vocational skills directed by economic development strategy or financial support. Without the support of the State, the percentage of enterprises expecting to co-operate would decrease by 50%. Models of vocational training cooperation with participation of specialized authorities, social organizations or international organizations have not yet developed in Vietnam. This kind of collaboration was more focused by small and medium enterprises.

At present, in regard of co-operation with training institutions, enterprises mostly collaborated with centers and ordered training programs as they wanted, which might be full-time courses or short courses. In general, enterprises did not

intensively involved in the training process, from stages of building up training program, proposing training experts to evaluating training outcomes. Therefore, these specific steps would receive more engagement of enterprises in the future.

Majority of enterprises prioritized immediate benefits such as solving their need for improving labor's capabilities and skills, reducing recruitment cost and training labor competency. Other purposes of enterprises in holding training programs should include carrying out social responsibility and improving their position and image. However, it should be notified that in addition to benefits from the improvement of labor quality, enterprises would have to pay for various costs; among them, the biggest ones should be related to facilities and time. In addition, costs for hiring specialists, lecturers also created a huge amount of spending for enterprises, making them hesitate in deciding to organize training programs.

The first and foremost barrier preventing enterprises from participating in partnership training was the lack of supporting and encouraging policies. Other hindrances were related to essential mechanism for long-term co-operation with training institutions, overlapping status of various managing units and shortage of belief in training capability of training institutions. In regard of internal obstacles, more than a half of the surveyed enterprises shared that due to their simple manufacturing technology, it would be unnecessary for them to improve labor's skills. Another reason for this rejection was high cost of investment. 1/3 enterprises agreed on other reasons linked with the shortage of qualified experts and machines meeting the requirements of training purposes.

Generally, the capacity of enterprises in implementing partnership programs to improve labor competency was at medium level. In particular, their greatest competence was receiving labor having been trained. They were more confident in supporting resources for training purposes rather than making interventions in tasks related to teaching and evaluation. Also, large enterprises and GVC participants were those being assessed at much higher level of all competencies rather than small and medium enterprises and non-GVC participants.

6. IMPLICATIONS FOR POLICY RECOMMENDATIONS RELATED DIFFERENT PARTNERS



Recommendations for the State

Policies being supposed to bring about the most positive changes of enterprises in improving labor quality serving Industry 4.0 purpose included the establishment of standard framework for Industry 4.0 context and design, innovation of training program integrated with contents in Industry 4.0. In addition, enterprises also wished to receive the attention of the State in investing high quality training institutions, key vocational areas as well as changes in management mechanism to help training institutions have more autonomy. At the same time, it would be really essential to invite the third body as an independent partner in accrediting the quality of training centers and ensuring the transparency of ranking information based on given standards. Then, enterprises would have strong basis to choose appropriate partners. Finally, they also expressed expectation that the State would continue its promotion of socialization in vocational training and establishment of connecting channels between enterprises and training institutions.

Recommendations for training institutions

Enterprises supposed that the most crucial solutions for training institutions would be improving their training competence, as well as incorporating labor training activities with the market demand under the orientation of Industry 4.0 to ensure that after being trained, labor could meet the requirements of the market. They also wished that thanks to their co-operation department, training institutions could regularly provide enterprises with information related to training program and timely respond to enterprises' opinions to make adjustments in appropriate with market changes. It is suggested that training institutions should have clear commitment and agreement with enterprises in terms of standard outcome, and assessment rules to ensure labor quality.



Solutions for enterprises

It would be essential for enterprises to build up strategies and allocate resources for training labor. They should also be active in co-operating with training institutions in updating new vocational standards and technology, especially in the context of Industry 4.0. Leaders of enterprises should change their mind about benefits from co-operating with institutions in training labor in order to establish specialized departments for labor quality improvement, which would propose enterprises' labor demand so that training institutions could understand the outcome expectation to prepare suitable programs and limit possibilities of re-training.

Promotion of participation of intermediary organizations

This study revealed that numerous enterprises wished that the business-representing organizations, social and international organizations would organize more conferences and training sessions related to opportunities and challenges of enterprises in the context of Industry 4.0; focusing on importance of preparation for qualified labor; as well as clarification of opportunities, obstacles, benefits and costs of enterprises in co-operation for training purposes. In addition, those organizations should support enterprises in improving their training competence for employees, especially social skills; and updating new models, skills required by international organizations.







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