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Designing a model of strategic partnership between the vocational skills development system and industry: case study in Vietnam

Abstract

The relationship between Technical Vocational Education Training (TVET) providers and industry is a crucial component of skills development training programmes. This study aims to explore the multifaceted nature of this relationship in Vietnam using an explanatory sequential design. The initial phase involved a questionnaire administered to 162 manufacturing company managers, followed by semi-structured interviews with 36 selected managers. Additionally, interviews were conducted with 18 TVET provider managers, 6 policy makers, and 7 association representatives, providing a comprehensive perspective.

The study findings indicate two key points: firstly, there is a significant demand for skilled labour in manufacturing industries. Secondly, there is a lack of alignment among stakeholders involved in the process of skills development. Locality has emerged as a powerful variable in facilitating a closer relationship between the two parties. In response to this, the proposed Locality-Public-Private Partnership (LPPP) model prioritizes and emphasizes the crucial role of locality in strengthening this relationship.

***Keywords**: Relationship, TVET provider, industry, LPPP model, Vietnam*

1 Introduction

The relationship between Technical and Vocational Education and Training (TVET) providers and industry plays a critical role in addressing skill gaps, enhancing training outcomes, and facilitating learners' exposure to practical, real-world experience. This crucial partnership is an integral part of the curriculum for vocational skills development training programmes in all TVET providers. In the Vietnamese context, however, it appears to face significant obstacles in fostering harmonious and fruitful interaction between the two parties (GDVT 2018).

Since 1986 and the introduction of Vietnam's open door policy, the country has witnessed rapid economic growth. Its burgeoning manufacturing sector attracts considerable foreign direct investment. A strategy to develop effective partnerships between TVET providers and industry has become imperative in this thriving environment. In the light of stakeholders' diverse perspectives, this relationship has yet to be explored comprehensively. Many of the studies to date have focused primarily on supply (TVET providers) and demand (industries) respectively (GDVT 2018). Research exploring the views of various key stakeholders, such

as employers, educators, experts, associations, local authorities, and policymakers, is scarce. This study, therefore, seeks to illuminate the perspectives of significant actors who are closely linked to the TVET sector and to identify models for successful relationships that can drive skills development in Vietnam. Unravelling stakeholders' viewpoints will open avenues to understanding the potential of strategic partnerships in workforce development. Obstacles can be identified and targeted interventions proposed.

The relationship between TVET providers and industry is important for several reasons. Firstly, collaboration between TVET providers and industries facilitates work-based learning opportunities such as internships and apprenticeships. These experiential endeavours provide students with invaluable practical experience and the opportunity to apply their learning in real-world contexts (Biemans et al. 2009). The second aspect pertains to quality assurance. Industry representatives actively participate in quality assurance processes for TVET which encompass the development of occupational standards, student assessment, and programme accreditation. This collaborative involvement ensures that TVET programs align with industry needs and standards (GDVT 2018). Lastly, the inclusion of industry input enriches the process of TVET policy making. Industries can offer valuable insights into current and future skills requirements and contribute to the formulation of policies that respond effectively to labour market changes (Grollmann & Rauner 2007).

This study's primary objectives are to explore various key stakeholders' perspectives on the strategic partnership between the TVET system and industry and to identify best practices for fostering this relationship. The study strives to answer two critical research questions:

1. What are the perceptions of key stakeholders, including employers, educators, experts, associations, local authorities, and policymakers, regarding the strategic partnership between TVET providers and manufacturing industries in Vietnam?
2. What models can best enhance this relationship to serve skills development in Vietnam?

By investigating these research objectives, this study seeks to add to the existing body of knowledge, inform policy decisions, and support the continuous enhancement of the TVET system in Vietnam. Insights gleaned from this study will offer valuable recommendations to graduates, helping them to respond to the evolving needs of the job market, thereby contributing to the nation's economic growth.

2 Literature review

2.1 Theoretical frameworks

The theoretical framework of the relationship between TVET providers and industries encompasses several key concepts that guide the understanding of this dynamic partnership. Three prominent theoretical perspectives in this field are the "demand-driven" or "employer-led" model, the partnership model, and the school-based model.

The theoretical framework of a “demand driven" TVET system underscores the active involvement of industries in shaping TVET policies and programmes (Deissinger et al. 2017). In this concept, industries play a central role in determining the skills and competencies required by the labour market. They provide valuable insights into current and future skill demands, job requirements, and industry trends. TVET providers align their curriculum and training offerings with industry needs, ensuring that learners acquire the relevant skills and knowledge that are sought after by employers. This approach enhances the employability of TVET graduates and increases the likelihood of successful workforce integration.

The "partnership theoretical framework" emphasizes the importance of collaboration, communication, and mutual trust between TVET providers and industries (Billett 2011). It recognizes that both parties have unique expertise and perspectives to contribute, and their cooperation is essential for achieving shared goals. It also promotes active engagement and dialogue between TVET providers and industries in curriculum development, programme design, and evaluation processes. Through effective collaboration, TVET providers gain a deeper understanding of industry needs, ensuring the relevance and responsiveness of their training programmes. Industries, in turn, contribute to the design and delivery of TVET programmes, sharing their practical insights, providing work-based learning opportunities, and enhancing the quality of skills development. This framework recognizes the significance of ongoing communication and feedback mechanisms between TVET providers and industries.

The school-based theoretical framework focuses on the integration of TVET within the school setting, aiming to provide a skilled labour workforce to industries (Karmel et al. 2018). In this framework, TVET programmes are offered within the traditional school system, allowing students to acquire industry-specific skills while completing their academic studies. It recognizes the importance of preparing students for the world of work and addresses the skills gap that exists between the education system and industry needs. Vocational education within schools offers students the opportunity to develop practical skills and knowledge that align with industry requirements, thereby enhancing their employability upon graduation.

Collaboration between educational institutions and industries sees industry representatives contributing to curriculum development, providing industry insights, and offering work-based learning opportunities such as internships or apprenticeships (Karmel et al. 2018). By integrating vocational education into the school curriculum, students can gain a strong foundation in both academic subjects and practical skills, creating a well-rounded workforce that meets the demands of various industries.

The school-based theoretical framework aims to bridge the gap between education and industry by providing students with the necessary skills and competencies needed for entry level positions in specific sectors. It offers a pathway for students to acquire industry-specific qualifications while completing their academic studies, enabling a smooth transition from school to the workforce.

2.2 Partnership models between TVET providers and industry

2.2.1 Dual System Model

The dual system is widely implemented in countries like Germany, Austria, and Switzerland. It is characterized by a close and effective partnership between TVET institutions and industries. The dual system provides students with a combination of theoretical education in vocational schools and practical training within companies, enabling them to acquire the skills and knowledge necessary for specific occupations. This relationship is characterized by four main features. Firstly, the dual system combines theoretical education in vocational schools with practical training within companies. Students divide their time between classroom instruction and on-the-job training, typically attending vocational schools for a few days a week, while spending the remaining time in the workplace. Secondly, the dual system operates under specific legal regulations that delineate the responsibilities and obligations of educational institutions and participating companies. These laws define the designated places for education and training, as well as the rights and responsibilities of apprentices and employers. Thirdly, the relationship between TVET providers and companies is formalized through contracts and cooperative arrangements. The active involvement of both parties ensures a coordinated approach to training, with schools imparting theoretical knowledge and companies providing opportunities for practical skills development. Lastly, the dual system focuses on preparing students for specific occupations, aligning their training with industry needs. The curriculum is meticulously designed to equip students with the skills and knowledge required in their chosen field, thereby enhancing their employability prospects. Students enrolled in this model alternate between classroom-based learning and on the job training, often through apprenticeships. Industry partners actively contribute to the development of curricula and assessments to ensure that the skills taught are aligned with the demands of the labour market (Hoeckel & Schwartz 2010).

2.2.2 Sectoral Training Model

The sectoral training model focuses on developing programmes tailored to the specific skill requirements of particular industries or sectors. There are additional contextual details and features in this model: (1) Sectoral training organizations play a crucial role. Often funded and governed by industry representatives, they collaborate closely with TVET providers (such as vocational schools or training institutions) to design and deliver training programmes that align with industry needs and standards; (2) Industry is placed at the centre of programme design and delivery. The involvement of industry representatives ensures that training programmes are relevant, up to date, and responsive to the evolving skill requirements of specific sectors. This industry-driven approach helps to bridge the gap between the education system and the needs of employers; (3) Programmes developed under the sectoral training model are customized to meet the unique skill demands of particular industries or sectors. The training content, curriculum, and delivery methods are tailored to address the specific technical, practical, and professional skills required for success in those sectors; (4) Sectoral training organizations collaborate with TVET providers to establish and

uphold industry standards within the training programmes. This includes ensuring that the curriculum reflects the latest industry practices, incorporating industry-recognized certifications or qualifications, and implementing quality assurance mechanisms to maintain programme quality; (5) Sectoral training organizations often receive financial support from industry stakeholders, government bodies, or public-private partnerships. This funding helps to sustain and enhance the training programmes, ensuring their alignment with industry needs and providing resources for ongoing development and improvement. The sectoral training model is observed in various countries, such as the United Kingdom and Australia, where sector-specific training initiatives are implemented to address the skills requirements of industries or sectors that are vital to their economies. The model's emphasis on collaboration with industry, customization to sector-specific needs, and the involvement of sectoral training organizations contribute to its effectiveness in providing targeted training solutions that meet industry demands. By aligning training programmes with industry standards, the employability of VET graduates is enhanced, thus supporting economic growth within specific sectors or industries (Cedefop 2015).

2.2.3 Centralized Model

The centralized model is characterized by the government's predominant role of in the design and implementation of TVET programmes, whilst direct involvement from industry partners is limited (Busemeyer & Trampusch 2012). There are six main features of the centralized model. (1) The government assumes a dominant role in the planning, development, and administration of TVET programmes, exercising strong control over the design of curricula, the allocation of resources, and the implementation of policies and regulations related to vocational education and training. (2) Compared to other models, industry partners are less involved in the design and implementation of TVET programmes here. While industry needs and labour market demands are considered during the programme development process, the level of collaboration and interaction with industry representatives tends to be limited in the centralized model. (3) The aim is to meet the skill demands of the labour market, ensuring that training programmes equip learners with the necessary skills and competencies required for employment. However, responsiveness to rapidly changing industry needs may be constrained in comparison to models with closer industry collaboration. (4) The model is more commonly observed in countries where central government exercises significant control over education policy and decision-making processes. Countries such as France often exhibit characteristics of the centralized model, with the government playing a central role in shaping TVET policies and implementing standardized approaches across the nation. (5) The centralized model emphasizes standardization and quality assurance mechanisms. The government establishes guidelines, regulations, and standards to ensure consistency and quality in the delivery of TVET programmes. Assessments and certifications may be centralized to maintain consistency and provide recognition of skills acquired through training. (6) In the centralized model, the government is responsible for allocating resources, including funding and infrastructure, to support the provision of TVET programmes.

Centralized control allows for strategic resource allocation based on national priorities and objectives.

2.2.4 Local Partnership Model

The local partnership model emphasizes collaboration between TVET providers, local industries, and government agencies to tailor education and training programmes to the specific needs of regional labour markets (Lassnigg 2016). It includes the following features: (1) The local partnership model fosters collaboration and engagement among TVET institutions, local businesses, and government agencies. These stakeholders work together to develop strategies for skills development, aligning training programmes with the needs of the local labour market; (2) Education and training programmes are customized and adapted to meet the specific needs and demands of the regional labour markets. The curriculum, content, and delivery methods are designed in collaboration with local industries to ensure their relevance and effectiveness; (3) Unique characteristics and dynamics of the regional labour market are taken into account, addressing specific skills gaps and shortages in local industries. Training programmes are calibrated to meet the demand for skilled workers in the region; (4) Beyond skills development, the local partnership model also focuses on addressing local economic development challenges. By actively involving local businesses, TVET institutions, and government agencies, the model seeks to contribute to the overall economic growth and competitiveness of the region; (5) Stakeholders collaborate to optimize resource utilization. TVET institutions, local businesses, and government agencies share expertise, infrastructure, and resources to enhance training programmes' effectiveness and efficiency; (6) The model promotes flexibility and adaptability in responding to evolving labour market needs. By maintaining close ties with local industries, training programmes can be adapted quickly to address emerging skill requirements and industry trends. TVET systems can respond to the needs of local industries and the labour market through collaboration and the tailoring of education and training programmes. By aligning skills development with regional economic priorities, this model supports local economic growth, enhances employment opportunities, and contributes to the overall development of the region.

2.3 Empirical studies on the relationship between TVET providers and industry

This section outlines various studies on the relationship between TVET providers and industries.

According to Grollmann and Rauner (2014), the collaboration between industry and educational institutions in curriculum development is a complex process that involves multiple stages, including needs analysis, curriculum design, and implementation. The authors emphasize the importance of effective communication, mutual understanding, and shared goals. They further highlight that industry involvement in curriculum development brings real-world relevance and up-to-date knowledge to vocational education programmes, thereby ensuring the alignment of skills with industry needs and enhancing graduates' employability.

A 2020 report from Asian Development Bank (ADB) identifies three key findings in relation to the issue of the relationship between TVET providers and industries. Firstly, there is a misalignment between the supply of vocational education and training (VET) graduates and the demand for skilled workers in the labour market. The authors emphasize the need to improve the quality and relevance of VET programmes in line with industry needs (ADB 2020). Secondly, industry engagement in the VET system is crucial in order to identify skill requirements and for the provision of work-based learning opportunities, thus enhancing the employability of VET graduates (ADB 2020). Lastly, the authors highlight that effective collaboration between TVET providers and industries, through initiatives such as internships, apprenticeships, and joint curriculum development, can bridge the gap between the skills acquired in education and those demanded by the labour market (ADB 2020).

Loo and Chai's 2016 study emphasized the importance of collaboration between vocational education institutions and industries, particularly through internships and industrial training. Collaboration was found to be essential for the development of graduates' practical skills, enhancing their employability, and establishing stronger connections between education and the workplace (Loo & Chai 2016).

Several key findings emerged in the 2019 study conducted by Duong and Nguyen. Firstly, work-based learning opportunities such as internships and apprenticeships were found to play a significant role in bridging the gap between education and industry. These opportunities provide students with practical skills and exposure to the industry, ultimately enhancing their employability prospects (ETF 2013). Secondly, the study identified challenges in the relationship between vocational education and industry in Vietnam. These challenges included limited industry participation, inadequate resources for practical training, and the need for continuous professional development for vocational trainers (ETF 2013).

In terms of students' rights during internships, Ana Dammert, Jose Galdo, and Dean Yang (2018) revealed several findings. Firstly, they found that the quality of internships significantly impacts the career paths of young individuals (Dammert et al. 2018). Secondly, internships that provide meaningful tasks and responsibilities have a positive effect on future employment outcomes (Dammert et al. 2018). Lastly, inadequate internship conditions such as low pay, long working hours, and lack of mentorship can hinder the career development of interns (Dammert et al. 2018).

Another study by Charikleia Tziraki and David Eddy Spicer (2020) emphasized the importance of learners' rights during internships. They found that learners' rights are crucial for a positive internship experience and optimal learning outcomes (Tziraki & Spicer 2020). Additionally, effective supervision and support from mentors were found to contribute to learners' satisfaction and skill development during internships (Tziraki & Spicer 2020). Internship programmes that prioritize learner rights and well-being foster a sense of fairness and professionalism (Tziraki & Spicer 2020).

3 Methodology

In order to achieve the research objectives and answer the research questions, an explanatory sequential design, incorporating both quantitative and qualitative methods, was utilized. This approach enables researchers to gain a deeper understanding of complex social phenomena. According to Creswell (2014), there are three key reasons for using mixed methods in social research. Firstly, mixed methods allow for complementarity, where quantitative and qualitative data provide different perspectives on a research topic. Secondly, they enable triangulation, where multiple data sources are used to corroborate findings and enhance the validity of the research. Lastly, mixed methods enhance understanding by providing a comprehensive and nuanced perspective on complex social phenomena.

This research project has two main phases. Phase one examines whether TVET programmes in Vietnam contribute to transformation and inclusive growth at the company level and whether TVET programmes focusing on higher occupational levels are more important in this regard. Do specific programmes emerge as particularly important in this context? Which factors enable effective contributions – or the converse? Particular attention is paid to the interrelationship between TVET programmes and industrial strategies. Phase two focuses on formal TVET programmes identified by employers (during the first phase) as relevant to their needs. Specific features that make these programmes valuable are explored, as are important contextual factors, including those which emerged in the first phase – company embeddedness in global value chains or the relationship between TVET provision and sectorial industrial policy, for example.

In the first phase, data was sourced from a questionnaire based on a 4-point Likert scale. The survey featured questions such as: "**Please assess if the pre-employment TVET programmes have contributed to meeting company skills needs".** The response options were: (1) No, not at all; (2) Yes, somewhat; (3) Yes, significantly; and (4) Don't know.

A total of 162 manufacturing company managers participated randomly in the survey. The selection process for the companies in the study followed specific criteria. Firstly, companies with more than 50 employees were chosen to target medium and large-sized organizations. Secondly, preference was given to companies engaged in local manufacturing activities to ensure that they were not solely distributors. The questions were primarily qualitative and open-ended, such as: "Could you please describe the relationship between industrial policy and skills strategy?" A limited number of quantitative 5-point Likert scale questions were also included. Statements such as "Private sector demand has a significant influence on the type and focus of the training programme" could be answered with the following options: "Agree, Somewhat agree, Somewhat disagree, Disagree, Don't know". The sample comprised 36 of the company managers, covering companies who reported growth as well as others who did not, in order to maximise contrast.

In phase two, data was collected from interviews with 18 TVET providers, 7 employer associations, and 6 relevant central and local government policy makers. This helped to

understand the nature of industrial TVET provision (including different types of formal TVET provision, as well as the relationship between formal and informal provision, linkages to broader industrial and economic policies and the relevance of global value chains for training programmes).

Data collected from the questionnaire and interviews was subjected to thorough statistical analysis. With specific regard to the relationship between TVET providers and industries, statistical analysis was employed to quantify the utilization of TVET programmes for two distinct purposes: recruitment of new employees, referred to as pre-employment training programmes, and their application within the working process, referred to as in-employment training programmes. In addition to quantitative data, qualitative data was analyzed thematically, enabling the identification of key themes pertaining to the issue of the relationship between TVET providers and industries.

4 Findings

4.1 High demand skilled labour workforce

Demographic information: quantitative data was collected from a total of 162 companies (40 electronics companies, 57 garment companies, and 66 food processing companies) operating in three manufacturing industries, namely textile, electronics, and food processing. These companies are located across various regions in Vietnam, encompassing 15 provinces and cities in the North, 14 provinces and cities in the South, and 11 administrative ones in the central region. Respondents comprised individuals holding key positions within the organizations, specifically the head of human resources or members of the company's board of directors. The data reveals that, during the 2012 to 2017 period, there was a significant demand for skilled human resources within manufacturing industries. TVET providers faced challenges in meeting these requirements. Figure 1 illustrates that companies faced difficulties filling all positions: 95.71% of companies had trouble filling operator positions, followed by supervisors (86.5%), technicians (76.68%), and managers (52.14%). The data indicates a clear misalignment between the TVET system and industry in terms of the availability of a skilled labour workforce.

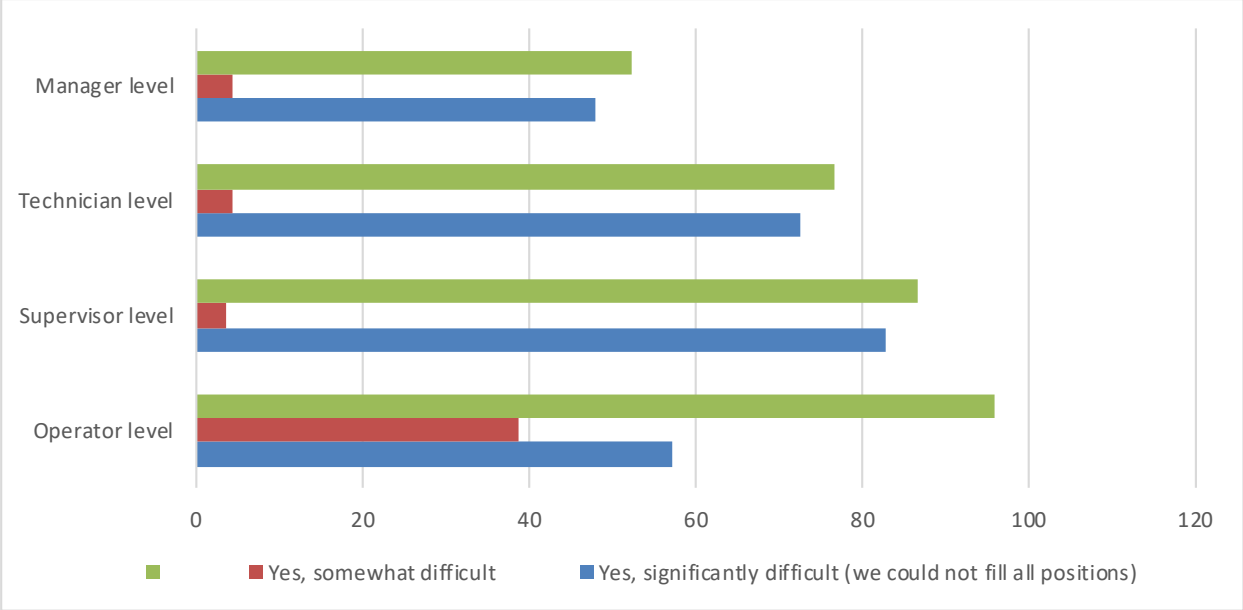

Figure 1: Hard to fill roles in the skilled labour workforce (Survey/questionnaire data)

4.2 Misalignment among key stakeholders

The high demand for skilled workers has led to involvement from key stakeholders in the skills development process. Central and local governments have provided legal documents and guidelines at macro and meso levels, while TVET providers and industries play a direct role at the micro level in providing the skilled labour workforce for industries. However, misalignment among these stakeholders becomes apparent when implementing skills development policies and industrial policies, as shown by quantitative and qualitative data.

4.2.1 Quantitative data reveals misalignment

The survey revealed varying perceptions of the effectiveness of pre-employment and in-employment training programmes in three different industries. In the garment industry, in-employment training programmes scored a significant 74.30% among the companies surveyed, while only 12.98% attributed the same level of significance to pre-employment TVET programmes. Electronics industry respondents rated in-employment training programmes at 51.80% in terms of the significance of their contribution. Pre-employment TVET programmes scored a mere 12.98%. The food processing industry rated in-employment training programmes' significant contribution at 70.90%, compared to 21.77% for pre-employment programmes.

Overall, out of the 1599 TVET programmes evaluated across the three industries, a mere 17.08% were deemed to contribute significantly to company growth through pre-employment training programmes, whereas the rate for in-employment training programmes was significantly higher at 66.37%, a ratio of almost 1:4.

The findings indicate that companies in the three industries generally have a positive perception of the quality of TVET in-employment programmes. whilst expressing doubts about the quality of pre-employment training programmes as provided by TVET providers.

Table 1: **The effective contribution of training programmes: pre-employment and in-employment** (Data taken from questionnaire)

	Pre-employment programmes			In-employment programmes		
Sector/position	No contri-bution	Small con-tribution	Significant contribu-tion	No contri-bution	Small con-tribution	Significant contribu-tion
Garment	1.66 %	85.36 %	**12.98 %**	-	25.70 %	**74.30 %**
General worker	-	-	-	-	-	1.12 %
Operator	1.38 %	24.59 %	1.38 %	-	3.35 %	8.94 %
Supervisor	0.28 %	24.59 %	2.76 %	-	10.61 %	23.46 %
Technician	-	19.34 %	3.87 %	-	8.94 %	22.91 %
High-level manager	-	16.85 %	4.97 %	-	2.79 %	17.88 %
Electronics	-	85.81 %	**14.19 %**	-	48.20 %	**51.80 %**
General worker	-	-	-		-	
Operator	-	26.30 %	1.38 %	-	3.60 %	8.63 %
Supervisor	-	24.91 %	2.42 %	-	17.99 %	10.07 %
Technician	-	19.72 %	4.84 %	-	16.55 %	18.71 %
High-level manager	-	14.88 %	5.54 %	-	10.07 %	14.39 %
Food processing	0.40 %	77.82 %	**21.77 %**	-	29.10 %	**70.90 %**
General worker	-	-	-	-	-	-
Operator	0.40 %	20.97 %	3.43 %	-	3.73 %	7.46 %
Supervisor	-	20.16 %	6.85 %	-	6.72 %	7.46 %
Technician	-	18.35 %	6.05 %	-	14.18 %	20.90 %
High-level manager	-	18.35 %	5.44 %	-	4.48 %	35.07 %
Total: 1599 training programmes	0.69 %	82.21 %	**17.08 %**	0 %	33.62 %	**66.37 %**

4.2.2 Qualitative data confirms misalignment

Interviews with TVET provider managers, policy makers, and association representatives, substantiated a misalignment among key actors in the skills development process.

4.2.3 TVET managers' perception of skills development and manufacturing industry policies

All 18 TVET provider managers interviewed on skills development and industrial development policies contended that there was no direct relationship between them and training programmes.

"We do not rely on those strategies to build TVET programmes." (TVET provider manager A, page 18)

"We don't rely on skills and industrial development strategies when designing training programmes." (TVET provider manager B; page 23)

The second point highlights the importance of promptly addressing societal and industrial demands in training programme design. All 18 TVET provider managers agreed that responding immediately to the needs of society and industries is essential when designing training programmes, rather than relying on skills and industrial development policies.

"Training programmes are primarily designed by taking into account the requirements of society and companies." (TVET provider manager E, page 20)

"Schools are autonomous entities now and we are operating in the real world, so we need to meet the requirements of society and industries immediately. If not, schools cannot function properly and they will lose students. We must be mindful of what society and industries require." (TVET provider manager F; page 21)

4.2.4 Associations' perception of skills development and manufacturing industrial policies

Seven association representatives were interviewed regarding the relationship between skills development and industrial development policies. All considered these policies to have minimal influence on the types of training programmes in TVET design.

"In practical terms, skills strategy and industrial policy have little influence on the types of training." (Association representative B, page 20)

"These strategies are far too generalized. They do not influence decisions on types of training or the scope of training programmes. TVET programme design is based on the requirements of the labour market. The two policies have almost no effect." (Association representative D, page 17)

TVET programme design is predominantly based on requirements of society and companies, not the aforementioned policies. All 7 association representatives were in agreement on this point.

"Training programmes are mainly based on the immediate requirements of society and companies. The non-formal and informal training programmes in particular deal with these immediate requirements." (Association representative C, page 25)

"Currently, TVET providers design TVET programmes based on the needs of society and businesses. Those 2 strategies are reference points for building a training programme, to learn more about the future of Vietnam's economy. Businesses are involved in TVET training for less than 3 months, so the training programmes are structured largely on the basis of the demands from partners and society." (Association representative A, page 22)

4.2.5 Policy makers' perception of skills development and manufacturing industrial policies

All six policy makers shared the view that skills development strategies and manufacturing industrial strategies were independent of each other, each having different goals.

"We need development in the mechanical engineering industry. This strategy is the backbone of the economy. It triggers all other industries to follow. We have manufacturing strategies for garments (textiles), electronics and food processing. We also have a skills development strategy. But these two strategies are independent of each other. There is no direct relationship." (Policy maker A, page 18)

"...the goals of both strategies are different. The skills development strategy is for all aspects of the TVET system. The seafood processing development strategy focuses on the development of the entire fisheries sector, including seafood processing. So there is no relationship." (Policy maker C, page 24)

All stakeholders recognized that skills and industrial development policies operate at the macro level, whereas the design requirements of TVET programmes based on industry and societal needs are at the micro level.

"Both strategies appear to operate on the macro level for TVET providers and industries, whilst industrial and societal requirements are on the micro level, with input data as the foundation for design and development of training programmes." (Policy maker D, page 20)

"When designing TVET programmes, TVET providers don't rely on skills and industrial development strategies. These operate on the macro level. They design training programmes based on the requirements of society and companies." (Policy maker B, page 26)

In conclusion, the responses of the four key stakeholders on the relationship between TVET providers and industry reveals several significant issues. Quantitative data from companies indicates a clear mismatch between the skills labour workforce provided by TVET institutions and the needs of industry, both in terms of quantity and quality.

Qualitative data gathered from TVET provider managers, association representatives, and policy makers further highlights the lack of coordination between skills development policies and industrial development policies. These policies are viewed as independent entities operating at the macro level, with little alignment between them. The design of TVET programmes by providers is primarily driven by societal and industry requirements, a micro-level approach. There is a significant mismatch in programme design, exacerbating the gap between TVET offerings and industry needs.

Overall, these findings underline the need for closer collaboration and integration between TVET providers and industries. Aligning skills development policies with industrial development strategies and addressing the design mismatch in TVET training programmes are crucial steps toward bridging the gap and fostering a more effective relationship between the two parties.

4.3 The factor of locality

Three themes emerged, based on qualitative and quantitative data. Firstly, skills development policies and industry development policies are not related, are independently designed, and have different goals. Secondly, TVET programmes are based predominantly on the requirements of society and industry. Policies on skills development or industry development are only for reference, bearing little impact on the design and development of TVET programmes. The third point is the absence of any local authority role in the process of building, maintaining and developing the relationship between the two parties.

The underlying thread connecting the three points is the factor of locality. This crucial variable plays a significant role in fostering a closer relationship between TVET providers and industry due to the following reasons:

(1) By involving local authorities, who have a deep understanding of the local labour market dynamics and industry needs, the locality factor acts as a bridge connecting TVET providers and industries. Local authorities can facilitate dialogue, collaboration, and partnerships between these key stakeholders, creating a platform for closer interaction, understanding, and cooperation.

(2) Local authorities can gather valuable insights from industries regarding their specific skill requirements, labour market demands, and emerging trends. This information can then be shared with TVET providers to ensure that training programmes are aligned with the current and future needs of local industries. By actively involving local authorities, TVET providers can gain a better understanding of industry expectations, collaborate on curriculum development, and offer work-integrated learning opportunities that meet the demands of the local labour market.

(3) The involvement of local authorities also enables a more responsive and localized approach to skills development. They can develop subsidiary policies, initiatives, and funding mechanisms that support collaboration between TVET providers and industries. This localized approach ensures that training programmes offered by TVET providers are closely aligned with the specific needs and priorities of industries within the locality.

5 The locality-public-private partnership model

Considering both the research findings and the political context in Vietnam, the proposal is to introduce a Locality-Public-Private Partnership (LPPP) model, developed mainly through the Public-Private Partnership (PPP) model.

Firstly, the political context in Vietnam requires the use of the PPP model as the foundation. Government exercises central management and the Communist Party provides comprehensive leadership across all sectors as stated in Article 4 of the 2013 constitution. The TVET sector is no exception to this. Furthermore, the Vietnamese Government grants autonomy to the 63 provinces and cities in the country, empowering them to drive economic development and cultivate a skilled workforce that contributes to overall economic growth.

Secondly, the study reveals a significant misalignment between the micro and macro levels according to all key stakeholders, indicating that the role of the meso level has been undervalued or missing altogether. In this regard, the introduction of the locality factor emerges as a crucial addition, enabling the most appropriate government body to grasp comprehensively the needs and expectations of all parties involved.

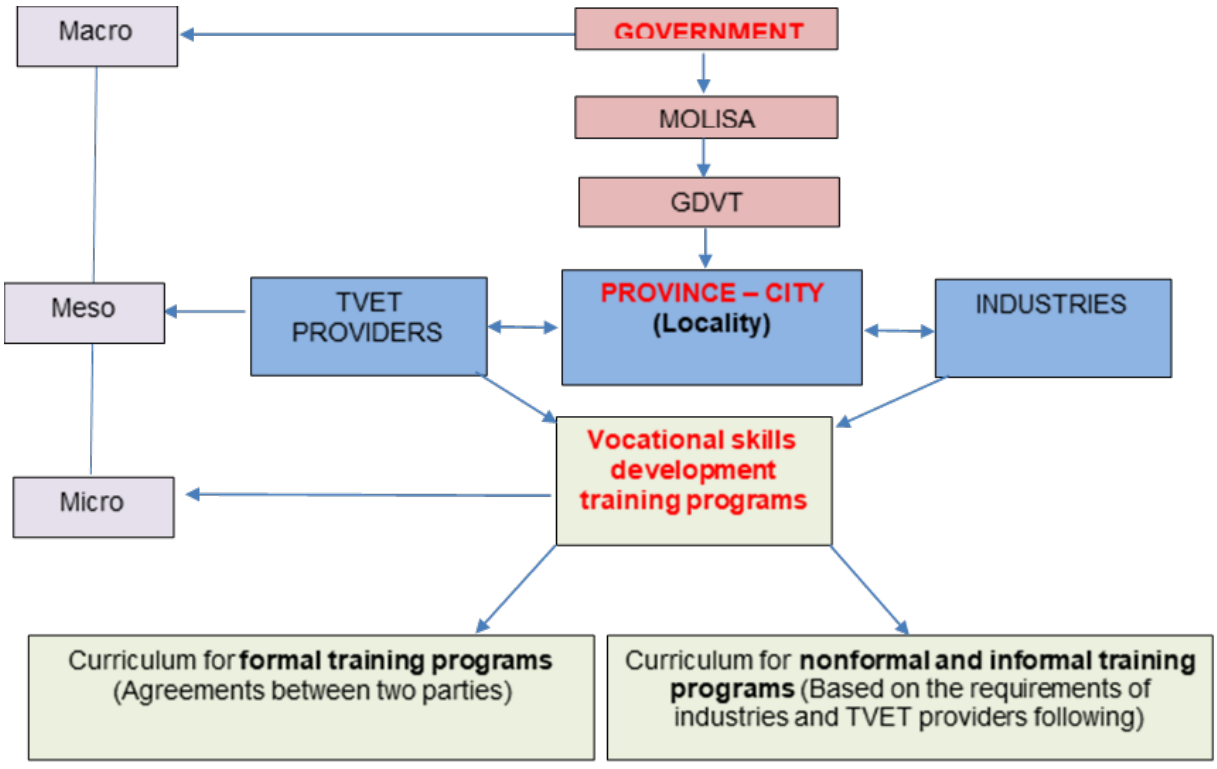

Figure 2: The locality-public-private partnership model

In summary, considering the political context in Vietnam and the research findings, the establishment of a Local Public-Private Partnership (LPPP) model is recommended. This model emphasizes the crucial role of local authorities, who possess a deep understanding of

local dynamics, in effectively addressing the misalignments between the TVET system and industry. By leveraging the locality factor, the LPPP model aims to bridge the gap and foster better collaboration and alignment between the stakeholders involved in the TVET sector and the industrial landscape.

6 Conclusions

Through the evaluations of multiple key stakeholders, this study has illuminated the misalignment that exists in the relationship between TVET providers and industries at both the macro and micro level. The findings reveal a high demand from manufacturing companies for skilled workers, indicating a clear gap between industry needs and the available workforce. Furthermore, the study identifies two common points emerging from key stakeholders, (1) skills development policies and industry development policies are not related, they are independently designed and have different goals, (2) TVET programme design is mainly based on the requirements of society and industry. In addition, the locality emerges as a powerful variable to foster a closer relationship between TVET providers and industry.

The implications of these findings are significant for both the manufacturing sector and broader society. The high demand for skilled labour underlines the importance of addressing the skills gap in order to support the growth and competitiveness of manufacturing companies. Without a sufficiently large and qualified workforce, these companies may face challenges in meeting production targets, expanding their operations, and remaining competitive in the global market. Moreover, the misalignments identified in the study highlight the need for a more integrated approach to skills development and industrial policies.

The proposed LPPP model, which emphasizes the role of local authorities in the Vietnamese context, holds promise for addressing these misalignments. By involving local authorities, who have a deep understanding of the regional labour market dynamics and can collaborate closely with both industry and educational institutions, the LPPP model seeks to bridge the gap between skills development and industrial needs. This collaborative approach has the potential to create a more effective and responsive ecosystem for workforce development, resulting in a better match between the skills of the labour force and the demands of the manufacturing sector.

While this study provides valuable insights, it is important to acknowledge its limitations. Firstly, the research focused specifically on the period from 2012 to 2017, so the findings may not fully capture the current dynamics of the labour market and skills development in the manufacturing sector. Future research should consider updating the analysis to provide a more up-to-date understanding of the situation. Secondly, the study primarily relied on the perspectives of key stakeholders. Additional research methods such as surveys or interviews

with workers and trainees could provide a more comprehensive understanding of the challenges and potential solutions.

The implications of this study are far-reaching. By addressing the misalignments between skills development policies and industrial policies, the proposed LPPP model can contribute to the overall economic development of Vietnam. A more skilled and competent workforce will not only benefit the manufacturing sector but will also have broader societal impacts. It can lead to higher productivity, increased job opportunities, reduced unemployment rates, and improved living standards for individuals and communities. Moreover, an effective and integrated approach to skills development can contribute to sustainable economic growth, enhance competitiveness, and attract foreign investment.

In conclusion, this study highlights the importance of addressing the misalignment in the skilled labour workforce and presents a promising LPPP model to bridge the gap between skills development and industrial needs. The findings and proposed model can have significant implications for the manufacturing sector and Vietnamese society at large, offering the potential for improved economic growth, competitiveness, and overall well-being.

Acknowledgements

This study is part of an ongoing series and is based on research conducted within the "Skills for Industry" project entitled: The contribution of Vocational Skills Development programmes to Industrial Transformation and Inclusive Growth in developing countries. It is funded by the Swiss Agency for Development and Cooperation - Swiss National Science Foundation - Swiss Programme for Research on Global Issues for Development.

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TVET@asia The Online Journal for Technical and Vocational Education and Training in Asia

CITATION:

Dang, V. H. & Nguyen, T. T. (2023). Designing a model of strategic partnership between the vocational skills development system and industry: case study in Vietnam. In: TVET@Asia, issue 21, 1-19. Online: http://tvet-online.asia/21/designing-a-model-of-strategic-partnership-

between-the-vocational-skills-development-system-and-industry-case-study-in-vietnam/ (retrieved 01.08.2023).

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