

# RECOMMENDATIONS TOWARDS IMPROVING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING IN MALAYSIA

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**UNIVERSITI  
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*International Institute of  
Public Policy and Management*

# **RECOMMENDATIONS TOWARDS IMPROVING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING IN MALAYSIA**

**2022**

Edited by:  
Nadya Subramaniam & Robin Bush



**The Asia Foundation**

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This is an independent study managed by The Asia Foundation. The findings, interpretations and conclusions do not necessarily represent the views of The Asia Foundation or its funders.

# GLOSSARY

ACRONYM	DEFINITION
AGR	Auditor General's Report 2019 Series 2
AKEPT	<i>Akademi Kepimpinan Pendidikan Tinggi</i> (Higher Education Leadership Academy)
ARSVOT	<i>Persatuan Penyelidik Latihan Kemahiran &amp; Vokasional</i> (Association for Researchers of Skills and Vocational Training)
BEM	Board of Engineers Malaysia
B40	Bottom 40% of the nation's household income earners
CIAST	Centre for Instructor and Advanced Skill Training
COPTPA	Code of Practice for TVET Programme Accreditation
COVID-19	Coronavirus Disease 2019
DFAT	Australian Department of Foreign Affairs and Trade
DKM	<i>Diploma Kemahiran Malaysia</i> (Malaysian Skills Diploma)
DLKM	<i>Diploma Lanjutan Kemahiran Malaysia</i> (Malaysian Advanced Skills Diploma)
DSD	Department of Skills Development
DVM	<i>Diploma Vokasional Malaysia</i> (Malaysian Vocational Diploma)
EPU	Economic Planning Unit
EXCEL	Experiential Learning and Competency-Based Education Landscape
GDVT	German Dual Vocational Training
GMI	German-Malaysian Institute
HRDF	Human Resource Development Fund
ILP	<i>Institut Latihan Perindustrian</i> (Industrial Training Institute)
INPUMA	International Institute of Public Policy and Management
INTAN	<i>Institut Tadbiran Awam Negara</i> (National Institute of Public Administration)
IR 4.0	The Fourth Industrial Revolution

<b>ACRONYM</b>	<b>DEFINITION</b>
<b>JPA</b>	<i>Jabatan Perkhidmatan Awam</i> (Public Service Department)
<b>MARA</b>	<i>Majlis Amanah Rakyat</i> (Council of Trust for the People)
<b>MBOT</b>	Malaysia Board of Technologists
<b>MOE</b>	Ministry of Education
<b>MOHE</b>	Ministry of Higher Education
<b>MOHR</b>	Ministry of Human Resources
<b>MPMA</b>	Malaysian Plastics Manufacturers Association
<b>MQA</b>	Malaysian Qualifications Agency
<b>MOF</b>	Malaysian Qualifications Framework
<b>MTUN</b>	Malaysian Technical Universities Network
<b>MTVET</b>	<i>Majlis Pendidikan dan Latihan Teknikal dan Vokasional Negara</i> (National TVET Council)
<b>NOSS</b>	National Occupational Skills Standard
<b>PSDC</b>	Penang Skills Development Centre
<b>PTPK</b>	<i>Perbadanan Tabung Pembangunan Kemahiran</i> (Skills Development Fund Corporation)
<b>SETARA</b>	<i>Sistem Penarafan Institusi Pengajian Tinggi</i> (Rating System for Malaysian Higher Education Institutions)
<b>SISC+</b>	School Improvement Specialist Coach Plus
<b>SKM</b>	<i>Sijil Kemahiran Malaysia</i> (Malaysia Skills Certificate)
<b>SLDN</b>	<i>Sistem Latihan Dual Nasional</i> (National Dual Training System)
<b>SOP</b>	Standard Operating Procedures
<b>SVM</b>	<i>Sijil Vokasional Malaysia</i> (Malaysian Vocational Certificate)
<b>SWOT</b>	Strengths, Weaknesses, Opportunities, and Threats
<b>TVET</b>	Technical and Vocational Education and Training
<b>UNESCO</b>	United Nations Educational, Scientific and Cultural Organization
<b>UNEVOC</b>	United Nations International Centre for Technical and Vocational Education
<b>VET</b>	Vocational Education and Training



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# EXECUTIVE SUMMARY

**Technical and Vocational Education and Training (TVET) is increasingly viewed by governments in both developed and developing countries as a driving force for national socio-economic development. Over the past six decades, TVET has been a major factor contributing to Malaysia's economic growth. Through the TVET system, thousands of Malaysians have developed essential skills, leading to careers in both the public and private sectors. In recent years, institutional, legal and regulatory reforms and substantial public investments have been made to help upgrade the country's TVET ecosystem. Yet, despite these improvements, major weaknesses remain. Malaysia needs to move quickly to upgrade its TVET capacity, increasing both the numbers and quality of TVET graduates in order to remain competitive in a rapidly evolving global economy increasingly shaped by advancing technology.**

This study was commissioned by The Asia Foundation as part of a broader initiative intended to support development of Malaysia's TVET ecosystem. It is intended to be of use to both the Malaysian Government as it develops and administers its TVET policies, and to the Australian Government as it considers areas of potential partnership with Malaysia, aimed at supporting the country's economic competitiveness and accelerating robust and inclusive growth.

The research methods comprised of a combination of desk research, interviews, and fieldwork, capped by a policy lab. The policy lab was a one-day session that brought together various stakeholders in the TVET ecosystem, including participants from key ministries, institutes, and industry. This diverse group of stakeholders reviewed and discussed the primary challenges in the system, and brainstormed solutions that could address key weaknesses. On the whole, these efforts confirmed the emerging consensus and commitment among TVET stakeholders at the national level on the urgent need for upgrading the Malaysian TVET ecosystem.

An important development that took place as the research got underway was the formation of the *Majlis Pendidikan dan Latihan Teknikal dan Vokasional Negara* (National TVET Council, MTVET).

The MTVET was established as a mechanism intended to improve coordination amongst stakeholders. The highest level of this council, chaired by the Prime Minister, is advised by five focus groups concentrating on Governance, Industry, Quality Assurance, Funding and Branding. Since the MTVET is likely to become an important institutional mechanism in helping to upgrade the TVET ecosystem over the next few years, the presentation of the results of the study have been arranged in this report to align with the work of the five focus groups.

Additionally, the release of the Auditor General's Report as well as the 12th Malaysia Plan in September 2021 have further prioritised areas for immediate attention in order to achieve the aspirations placed upon the national TVET ecosystem.

TVET in Malaysia exists as an ecosystem, in which a complex network of stakeholders both affects, and is affected by, TVET. The numerous interactions among the various stakeholders (government, industry, academia, society) create the outcomes of TVET (teaching, learning, assessment, accreditation, Research & Development, mobility, outreach, partnerships, branding, facilities, etc.).

## Research Findings

**Structural Deficiencies** - Malaysia's TVET ecosystem enjoys sustained support and commitment by the national government. However, the system is constrained by the multiple, sometimes overlapping, mandates and jurisdictions of the many ministries involved in the governance of TVET, and this reduces the smooth functioning of the ecosystem.

**Weaknesses in Quality Assurance Frameworks** - Another critical challenge involves inefficiencies in the quality assurance framework with accreditation of programmes falling under two separate entities, and articulation pathways only up to the undergraduate (bachelor's) degree level. These issues will be at least partially addressed through the new Code of Practice for TVET Programme Accreditation (COPTPA), which has recently been introduced.

**Minimal Linkages with Industry** - Close cooperation between TVET providers and industry is generally critical for a well-functioning TVET system. However, while there is general consensus in Malaysia that TVET needs to be demand-driven, industry participation varies widely across geographical areas and among different TVET providers. To ensure that the system delivers qualified ready-to-work graduates, industry needs to be more actively and robustly engaged in helping to shape curriculum and course delivery as well as in monitoring and evaluation.

**Absence of Performance-based Funding** - Government funding not being tied directly to performance is a dampener on efforts for continuous improvement in the TVET landscape. Given the current funding mechanism, there is no impetus for public TVET institutions to innovate, either through improving their industry engagement or by updating their teaching practices.

**Poor Public Perception** - Finally, as in many Asian countries, TVET has traditionally been viewed negatively by Malaysian youth and parents in comparison to a university degree. Although there is a trend of increasing value placed on TVET, there needs to be concerted efforts to improve TVET's branding in order to boost the number and quality of TVET applicants.

## Recommendations

First, the TVET **governance framework needs to be rationalised**, including streamlining to reduce bureaucracy. Greater autonomy is needed at the state and regional levels. Second, **greater cooperation with industry is essential** to ensure that the TVET system is more demand-driven, including ensuring that industry is sufficiently engaged when curriculum is designed and updated. Third, the **TVET curriculum needs to be reviewed** to incorporate non-technical components, namely entrepreneurship skills and professional skills such as collaboration, problem solving, etc. Fourth, to strengthen TVET supply capacity and ensure familiarity with and incorporation of emerging technologies into training, **teaching staff and management of TVET institutions should be required to participate in regular professional development** that emphasises industry exposure and leadership development. Fifth, **funding mechanisms will need to be adjusted to be more correlated to performance**, considering indicators including industry engagement and staff development at the institute level, to ensure motivation for continuous improvement. Sixth, in parallel with the above measures, **TVET needs to undergo a major rebranding** to support an image of TVET as a good education and career development pathway. This will need to involve targeted marketing campaigns and recognition of TVET graduates as fully certified professionals.

This research has been implemented at a time when the COVID-19 pandemic has severely impacted the Malaysian economy and society. Over the next year or two, recovery, including job creation, will be Malaysia's highest priority. We would emphasise that, in its commitment to improving the TVET ecosystem, Malaysia will be addressing both the immediate need for generating sustainable employment, while at the same time meeting the longer-term need to create the well-trained, skilled technical and vocational workforce essential for competing in the emerging global economy, and realising the national aspirations outlined in the Shared Prosperity Vision 2030.

# PART 1: INTRODUCTION



## 1.1 Introduction

The study is part of a reform initiative funded by the Australian Department of Foreign Affairs and Trade (DFAT) to strengthen Malaysia's Technical and Vocational Education and Training system. This study was conducted by the International Institute of Public Policy and Management (INPUMA) – hereinafter referred to as the Research Team, listed in **Appendix A**.

This study aims to examine and evaluate the efficacy of the Malaysian TVET ecosystem with special focus on the strategies and initiatives by the various lead organisations to realise national TVET objectives. The study will also submit recommendations for the future direction of TVET in Malaysia.

### The key objectives of the study are to:

- i. Detail the current status of the Malaysian TVET ecosystem and identify issues, challenges, and gaps in the implementation of policies and programmes; and
- ii. Recommend initiatives and actions to improve the Malaysian TVET landscape based on the findings and conclusions of this study.

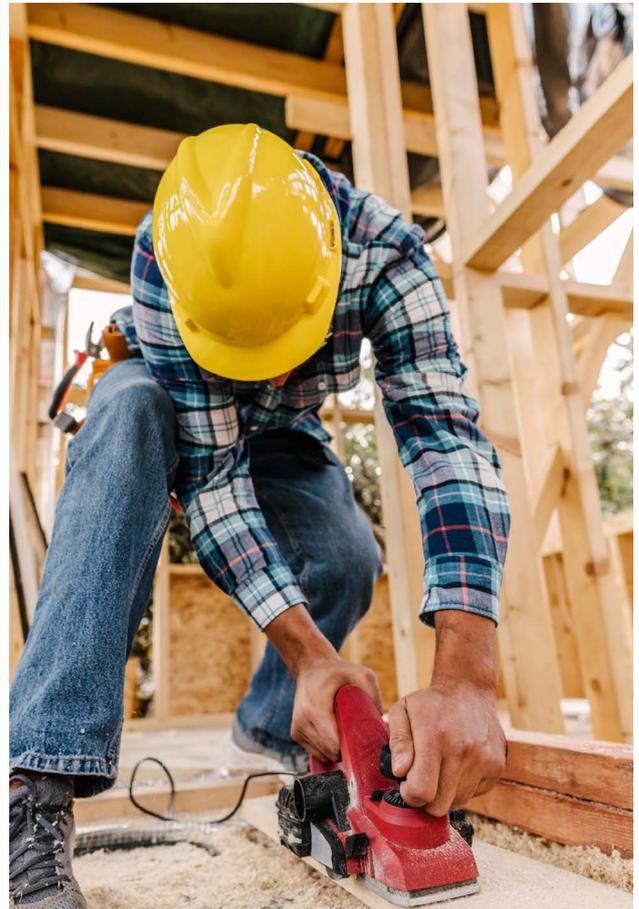


Image Source: Freepik

### This report is divided into three parts:

#### Part 1

Describes the background of the study including the problem statement and methodology employed.

#### Part 2

Draws on available literature to create a conceptual framework and summarises the findings from this research to provide an overview of the challenges faced in five key aspects of the TVET ecosystem in Malaysia:

- Governance;
- Industry;
- Quality Assurance;
- Funding; and
- Branding.

#### Part 3

Highlights key takeaways, provides recommendations to improve the Malaysian TVET ecosystem and concludes the report.

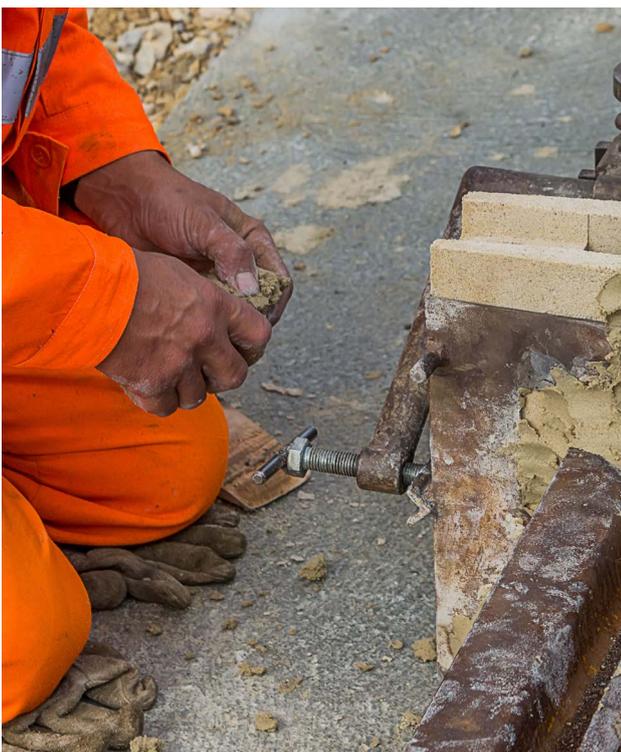


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## 1.2 Problem Statement

This study employs the following definition for TVET as defined by the Ministry of Education Malaysia:

**“TVET is an education and training process with an occupational direction and a major emphasis on industry practices. It aims to produce a competent workforce in specific fields. The scope of TVET should be based on recognised employment standards, with an emphasis on practical components, psychomotor skills and exposure to training in the industry.”**

A vibrant and effective TVET system has a central role in creating a well-trained workforce of both developed and developing countries. For Malaysia to position itself for the rapidly emerging Fourth Industrial Revolution (IR 4.0), it will need a well-trained technical workforce with skill sets that are needed in the new economy. TVET programmes are a key mechanism for bolstering Malaysia’s human capital in order to become a more inclusive, innovation-driven economy. TVET has been recognised as a ‘game changer’<sup>2</sup> in Malaysia’s development since the 11th Malaysia Plan (2016-2020) and there have been efforts to improve governance, industry engagement and branding. The nation’s TVET system has undergone remarkable transformation in recent years, but despite its successes, TVET is still saddled with numerous weaknesses and has not achieved the desired objective of producing sufficient skilled workers or being a preferred education pathway for most Malaysians.

The Auditor General’s Report released in September 2021 highlighted that the TVET system did not manage to reach the goals set out in the 11th Malaysia Plan, as it only produced 53% of the TVET graduates required by the country in that time period.<sup>3</sup>

Given the changing economic and technological environments, Malaysia must ensure its skills development system is relevant, quality-based, adaptive, and cost-effective. Previous approaches need to be re-examined and adjusted.

Recognising the need to revamp the TVET ecosystem in Malaysia, the government recently announced the establishment of the *Majlis Pendidikan Teknikal dan Latihan Vokasional Negara* (National TVET Council, MTVET) in December 2020. This council has three main strategic goals, namely integrated and coordinated governance, industry-driven TVET, and TVET shaping the future.<sup>4</sup> Five key areas have been identified by the council to be of specific interest in achieving its three goals: Governance, Industry, Quality Assurance, Funding and Branding.

The 12th Malaysia Plan identified three main objectives (Regenerating the Economy; Strengthening Security, Prosperity and Inclusivity; and Boosting Sustainability), with four policy catalysts that will ensure the achievement of these objectives. The strengthening of the TVET system has been recognised as a vital part within the first policy catalyst: Developing Future Talent.<sup>5</sup> Simultaneously, the Auditor General’s Report pointed out that the choice of auditing the TVET sector was due to the importance of the TVET workforce to the growing economy, and the planned continued high government expenditure required to create this high-skilled workforce.<sup>6</sup> There is therefore renewed vigour to address the shortcomings of the TVET ecosystem, in order to realise the 12th Malaysia Plan’s goals of revamping TVET such that it is able to support the demands of the new economy.

<sup>1</sup> Ministry of Education (2021)

<sup>2</sup> Economic Planning Unit (2015)

<sup>3,6</sup> National Audit Department (2021)

<sup>4</sup> Ahmad (2021)

<sup>5</sup> Economic Planning Unit (2021)

## 1.3 Methodology

The data collection methods employed in this study are summarised in **Figure 1** and further explained as follows.

 **Figure 1: Data Collection Methods**

Primary Data
Semi-guided Interviews
Site Visits
Policy Labs

Secondary Data
Academic Journals
Reports
Policy Documents
Presentation Slides
News Articles

### 1.3.1 Desktop Research

Desktop research guided the preliminary investigation on the Malaysian TVET ecosystem. Secondary data was collected through an extensive literature and document review. The secondary data includes statistics, annual reports, guidelines, and policy documents acquired from the Ministry of Education (MOE), Ministry of Higher Education (MOHE), the Department of Skills Development (DSD), and directly from the TVET training providers, where available. They also include course listings and marketing materials, journal articles, writings, newspaper articles, and reports by other relevant parties concerning Malaysia's TVET ecosystem. Reports from international organisations were also used to benchmark TVET systems and best practices from other countries.

### 1.3.2 Semi-guided Interviews

Guided by findings from the literature, the Research Team formulated questions for key stakeholder interviews. The key stakeholders interviewed online included individuals from the:

- i. Ministry of Education (MOE);
- ii. Ministry of Human Resources (MOHR);
- iii. *Pejabat Pendidikan Daerah* (District Education Office, PPD) *Hulu Langat*;
- iv. Penang Skills Development Centre (PSDC);

as well as representatives from industry and private TVET institutes. See **Appendix B** for a list of all interviews conducted.



**Figure 2: TVET Training Providers Interviewed during Fieldwork**

## Northern Region

**Kedah**  
Ministry of Human Resources



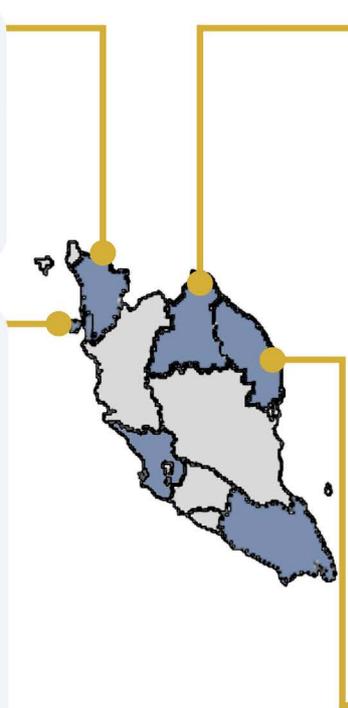
**Penang**  
Ministry of Human Resources



Ministry of Rural Development



Ministry of Education

## East Coast

**Kelantan**  
Ministry of Higher Education



Ministry of Rural Development



Ministry of Human Resources



**Terengganu**  
Ministry of Higher Education



### 1.3.3 Fieldwork

Abiding by strict COVID-19 Standard Operating Procedures (SOPs), the Research Team conducted fieldwork in the northern region (Penang and Kedah) and the East Coast (Kelantan and Terengganu) as outlined in **Figure 2** above. These site visits were focused on observing and comparing private and public TVET training providers' facilities, learning processes, and graduate employability. See **Appendix C** for a list of all site visits conducted.

### 1.3.4 Policy Lab

The objective of the policy lab was to validate and expand on the findings from the previous phases of data collection. The session served as a platform for collective participation by key stakeholders and industry experts to re-diagnose the core issues and challenges to develop a sharper consensus on the priority constraints in the TVET ecosystem. **Figure 3** that follows illustrates the stakeholders involved in the policy lab. See **Appendix D** for a list of policy lab participants.

## Figure 3: Policy Lab Participants

### Policy Lab: Supporting the Growth and Improvement of Malaysia's Technical and Vocational Education and Training (TVET) 16 Participants

7 Government Agencies  
2 Professional Bodies

2 TVET Training Providers  
1 Industry Practitioner

**GMI**  
GERMAN-MALAYSIAN INSTITUTE  
*Training for Advanced Technology*



**MBOT**  
LEMBAGA TEKNOLOGI MALAYSIA  
MALAYSIA BOARD OF TECHNOLOGY



**MQA**  
Agensi Kelayakan Malaysia  
Malaysian Qualifications Agency



MINISTRY OF EDUCATION MALAYSIA



Persatuan Penyelidik Latihan Kemahiran dan Vokasional  
Association for Researcher of Skills and Vocational Training (ARSVOT)  
Thought :: Innovative :: Respond :: Applied



MINISTRY OF HIGHER EDUCATION

**GAMUDA**

**SLDN**



Image Source: International Institute of Public Policy and Management

# **PART 2: ASSESSING MALAYSIA'S CURRENT TVET ECOSYSTEM**



This section provides the findings of this study, outlining various aspects of Malaysia's TVET ecosystem based on the available literature, feedback from site interviews as well as the policy lab session. The insights drawn from this discussion will be used as a basis in the formulation of recommendations for the way forward for TVET in Malaysia.

## 2.1 Literature Review and Conceptual Framework for Malaysia's TVET

A large range of TVET models can be found worldwide, but regardless of the structure of the systems, it can be seen that they often involve multiple stakeholders with differing interests. The relationships between inputs, outputs and final outcomes to national employment are complex, and often influenced by a variety of underlying factors.<sup>7</sup> In order to maintain the delicate balance of this system, some countries choose to implement strong government-led coordination policies to better align inputs with outputs, or specifically, supply with demand.<sup>8</sup>

The three core elements that need to be managed in order to create a well-functioning TVET system are:

- i. The strategic dimension, which sets the direction for workforce development that is aligned with the economic objectives of the economy;
- ii. System oversight in terms of the regulatory framework and governance of the system, the policies and practices that support the operational functions of the system in terms of the quality of TVET and the pathways for skills upgrading; and
- iii. Service delivery, which is concerned with results-based management of public and private TVET institutions to ensure the provision of relevant skills development programmes.<sup>9</sup>

For the system to perform efficiently, a free flow of feedback and information between the three dimensions is required using common standards to minimise duplication and fragmentation in the delivery of education and training services.<sup>10</sup>

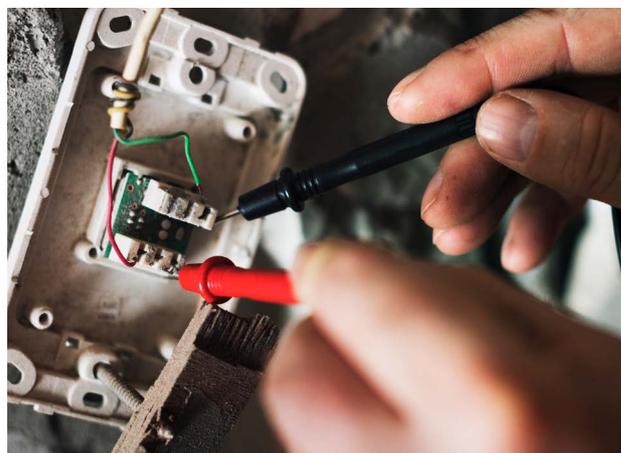


Image Source: Freepik

A vibrant TVET system requires the alignment of four essential components - skills, education, knowledge, and innovation - to produce a self-reinforcing virtuous cycle of growth and development.<sup>11</sup> Connecting these four components fundamentally addresses the development of human resources at the organisational, regional, and national levels. TVET is seen as the central lynchpin for linking these components with workforce, economic and social development at the national levels.<sup>12</sup>

Success in TVET, according to an Asian Development Bank report, requires, among others, a policy and strategic framework, effective institutional coordination, and quality training service provision from accredited training programmes as well as public and private service providers.<sup>13</sup> It also necessitates public awareness and outreach activities to raise the image of technical and vocational education and training (TVET) and enhance participation in skill training programmes. Linkages with employers and public-private partnerships are critical in ensuring quality and relevance of training to increase employment.

<sup>7</sup> Tripney et al. (2013)

<sup>8</sup> Robalino & Almeida (2012)

<sup>9</sup> World Bank (2013)

<sup>10</sup> Barrow & King (2005) in Cheong & Lee (2016)

<sup>11</sup> Toner (2011)

<sup>12</sup> Garmise (2009); Harper-Anderson (2008); Heyns & Needham (2004) and King & Palmer (2010) in Alagaraja et al. (2014)

<sup>13</sup> Asian Development Bank (2017)

**TVET exists in an ecosystem which is comprised of a complex network of stakeholders that affects, and is affected by, TVET delivery. The TVET ecosystem involves numerous interactions with the various stakeholders (government, industry, academia, society) and integration of several components (teaching, learning, assessment, accreditation, Research & Development, mobility, outreach, partnerships, branding, facilities, etc.). The stakeholders, comprised of both public and private entities, at the federal, state and local level, all have competing interests, priorities, and influence. Thus, it is appropriate to conceptualise the TVET ecosystem as a system with multiple feedback loops rather than a process where stakeholders are linked linearly.<sup>14</sup>**

Based on the literature review, a basic conceptual framework has been identified for the purpose of this report, as explained above.

The importance of managing the TVET ecosystem becomes all the more evident since the output of the system, the graduates, feed directly into the industries that are pivotal for Malaysia's sustainable growth. Information contributions from all elements of the TVET ecosystem are vital. Effective learning in TVET is not entirely the result of formal teaching and learning in classrooms but is also derived from the teaching organisation's internal and external environment, including among other things, its relationships with parents, community, local industry establishments, state and local government, and regulatory bodies.

These manifold relationships suggest that the degree of cooperation and coherence within the TVET ecosystem can have a sizable impact on its performance that is far greater than any single institution acting in isolation. These interactions underscore the importance of an operating environment that promotes a flow of ideas, resources, engagement, and mobility. Accordingly, the role of government is increasingly seen as not only to provide resources for human resource development, training, and public sector research but also as having responsibility for removing impediments to the flow of knowledge and people within the system, as

well as monitoring and evaluating programmes and initiatives. Additionally, the government is expected to facilitate the development of partnerships, provide supporting services and infrastructure, incentivise industry's participation, as well as internationalise activities.

In summary, an effective TVET ecosystem for Malaysia will require focused attention and coordination across a broad front. This includes not only improved policies for TVET, but, more importantly, execution of these policies as well as innovations in policy making itself.

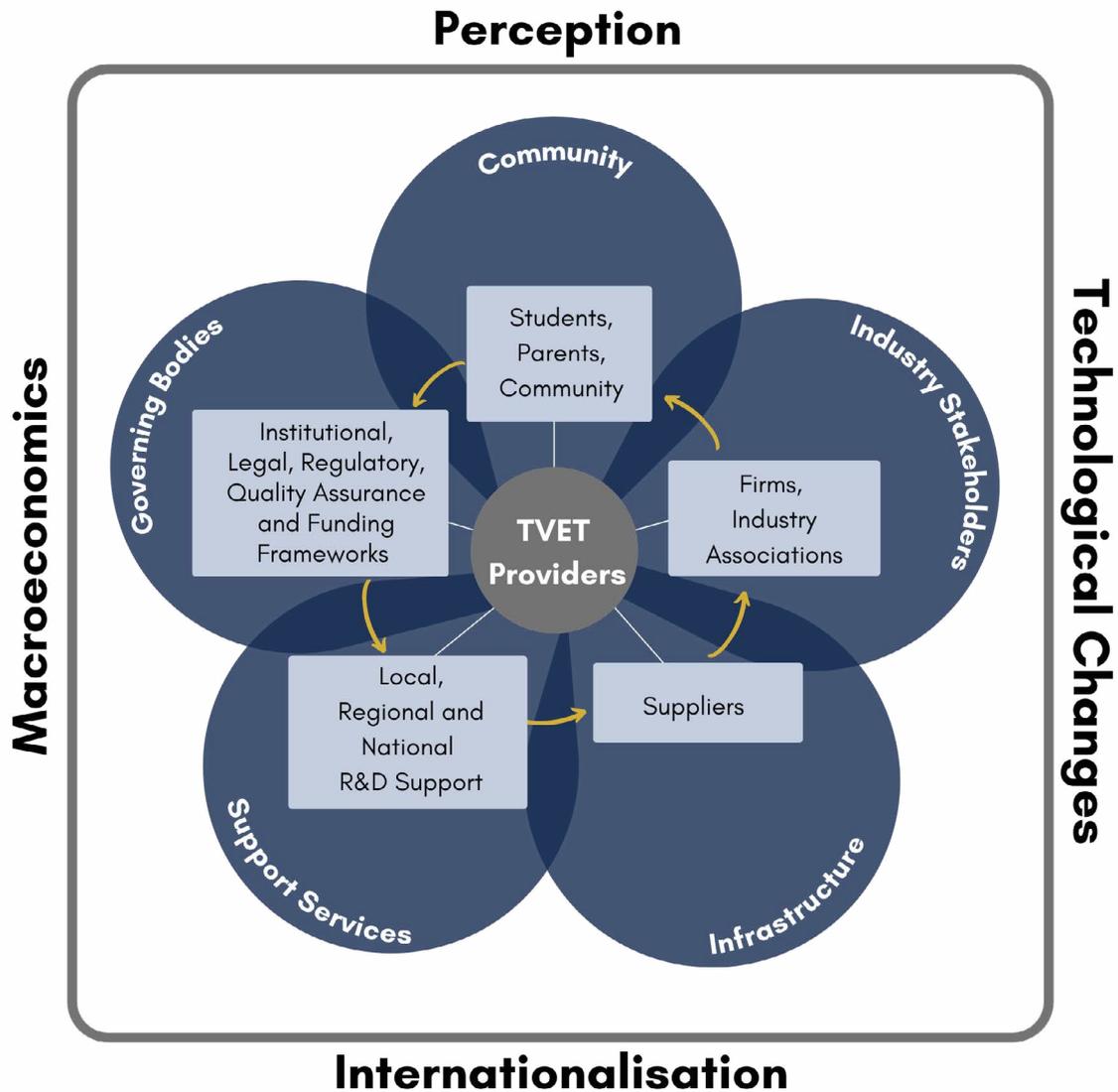
**Figure 4** highlights the interactions among the key functions of the TVET ecosystem. In addition to forces within the ecosystem, there are also external factors that affect the TVET landscape more indirectly. These include public perception, macroeconomics, technological changes and internationalisation.

The Malaysian TVET ecosystem is particularly complex, with eleven ministries involved, multiple typologies of providers, and a complicated regulatory environment. For a snapshot of the Malaysian TVET ecosystem please see **Figure 5** which follows.

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<sup>14</sup>Definition by International Institute of Public Policy and Management (2021)

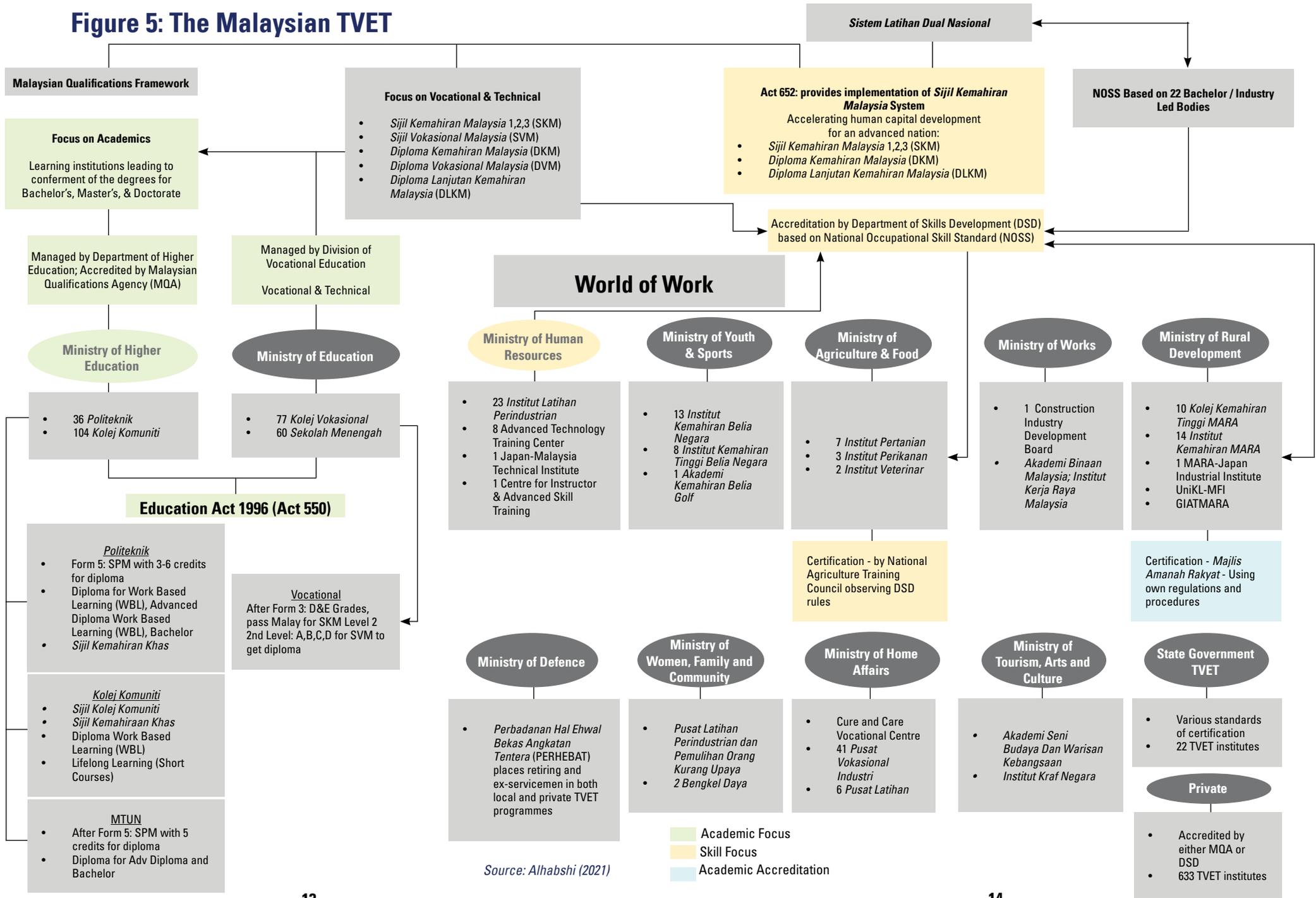
**Figure 4: Stakeholders and Inputs that Form the TVET Ecosystem**



**The ministries that participate in TVET are:**

- i. Ministry of Higher Education
- ii. Ministry of Education
- iii. Ministry of Human Resources
- iv. Ministry of Youth and Sports
- v. Ministry of Agriculture and Food Industries
- vi. Ministry of Works
- vii. Ministry of Rural Development
- viii. Ministry of Defence
- ix. Ministry of Home Affairs
- x. Ministry of Tourism, Arts and Culture
- xi. Ministry of Women, Family and Community Development

**Figure 5: The Malaysian TVET**



Source: Alhabshi (2021)

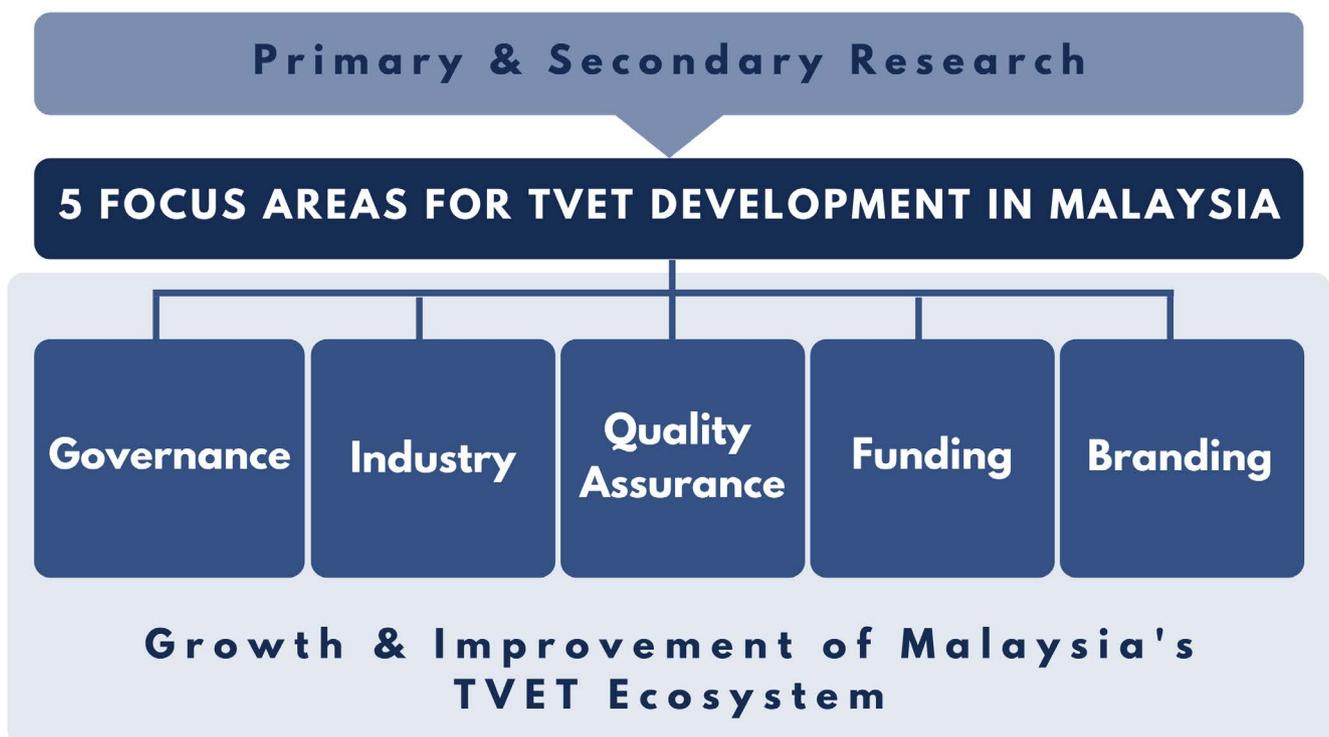


Image Source: Freepik

## 2.2 Findings of Study

The primary and secondary data collected will be presented within five focus areas that have been identified to affect the development of TVET. This is in line with the focus groups which make up the National TVET Council (MTVET): Governance, Industry, Quality Assurance, Funding, and Branding. Based on the findings of this research, the current situation, challenges, and suggestions for improvement have been distilled for each of the focus areas. **Figure 6** below summarises the presentation of findings within the five focus areas within the MTVET.

 **Figure 6: Summary of Presentation of Research Findings**





## 2.2.1 Governance

The governance landscape of TVET in Malaysia involves eleven ministries, and although that provides benefits in terms of breadth, there are definite challenges due to this governance structure. Challenges and suggestions for improvement that emerged from the literature review and primary research are presented below.

### Governance – Summary of Current Situation, Challenges and Suggestions for Improvement

<b>GOVERNANCE</b>
<b>Current Situation</b>
<ul style="list-style-type: none"> <li>• There was an increased focus on TVET as a vital component to Malaysia’s continued growth in the 11th Malaysian Plan (2016-2020). The 11th Plan Mid-Term Report has emphasised the importance of quality offerings from the TVET system and making TVET a preferred educational pathway. More recently, the government has announced multiple measures aimed at enhancing the implementation of TVET in Malaysia, including the establishment of the <i>Majlis Pendidikan Teknikal dan Latihan Vokasional Negara</i> (National TVET Council, MTVET), designed to strengthen the country’s TVET ecosystem.</li> <li>• The Ministry of Education, Ministry of Higher Education and Ministry of Human Resources are the key ministries involved in governing TVET, but other ministries involved include the Ministry of Youth and Sports, Ministry of Agriculture and Food Industries, Ministry of Works and Ministry of Rural and Regional Development.</li> <li>• Each ministry operates independently with different standards for capacity planning and curriculum development.</li> </ul>
<b>Challenges</b>
<ul style="list-style-type: none"> <li>• Overall, the main challenge facing the governance of TVET in Malaysia is the obvious lack of a lead agency in championing the national TVET agenda.</li> <li>• With many ministries, each trying to offer a wide variety of courses, there is a duplication of offerings, which is especially apparent in situations where there are TVET institutes from differing ministries within close proximity.</li> <li>• Although the National Occupational Skills Standard (NOSS) is available, some ministries prefer to operate independently and keep their existing standards.</li> <li>• There is a lack of a sound information management system across all ministries involved.</li> <li>• The role of state governments, district/town councils and the Economic Corridors in engaging with TVET providers is not apparent.</li> </ul>
<b>Suggestions for Improvement</b>
<ul style="list-style-type: none"> <li>• Further overall audit of the TVET ecosystem covering all ministries to identify how the governance system could be streamlined.<sup>15</sup></li> <li>• Rationalise the institutional framework to reduce the number of agencies engaged in managing TVET as well as to ensure focus on Malaysia’s skills development efforts that align with national socio-economic priorities.</li> <li>• Improve strategic collaboration across ministries and support of industry with the newly formed MTVET.</li> <li>• Assign shared responsibility and give more autonomy to states, districts and Economic Corridors.</li> <li>• Promote a whole of government and whole of society approach to forging partnerships to strengthen the TVET ecosystem.</li> <li>• Increase inter-ministry data sharing to support effective decision-making.</li> </ul>

## 2.2.2 Industry

Without a doubt, the main private partners within the TVET ecosystem are industry players, thus, in this section, issues surrounding industry partnerships will be the main focus.

The government has recognised that enabling industry to fully participate in TVET is vital for the effectiveness of industry-led training programmes, and it is eager to facilitate the strengthening of industry's role in the national TVET agenda (see **Figure 7**).

 **Figure 7: Revitalising Industry's Role in Malaysia's TVET Agenda: Seven Strategies to Shift Industry's Role**



Source: Adapted from Aziz (2019)

## Industry – Summary of Current Situation, Challenges and Suggestions for Improvement

### INDUSTRY

#### Current Situation

- The TVET system is open to collaboration with all stakeholders, especially industry. For example, the Department of Skills Development (DSD) regularly engages with industry to gain input on programmes.
- The *Sistem Latihan Dual Nasional* (National Dual Training System, SLDN) was established to increase collaboration with industry and provide work-ready TVET graduates.
- Individual TVET institutes have engagement with industry, but at differing levels for each institution and programme. Several small private niche TVET institutes, often with parent or partner organisations in industry, do well in providing skilled workers who meet industry needs, thus ensuring their students' employability. Also, these close ties enable them to secure machinery well-aligned with current industry usage, sometimes donated by industry partners, further strengthening their trainees' competency.
- TVET providers that are successful in meeting industry's expectations, like Penang Skills Development Centre (PSDC), attribute their success to high mutual accountability where industry is the main driver of curriculum design and delivery.
- Large scale collaborations with industry have shown success in the past, for example the Malaysian Plastics Manufacturers Association (MPMA) collaboration with the Economic Planning Unit (EPU) in 2012 and 2017 for talent development for the plastics industry, using both local and international expertise.
- Based on the Auditor General's Report, current employer satisfaction with TVET graduates' outcomes is 88.5%.<sup>16</sup>

#### Challenges

- Feedback from industry is that they are seldom invited to collaborate on TVET initiatives.
- Industry does not see a clear return on investment in their collaboration with ministries on TVET thus far, and is especially wary about the complicated bureaucracy involved.
- The mismanagement of collaboration with industry leads to a mismatch between the skills of the TVET graduates and the needs of the industry, causing the employers to have to retrain their fresh hires. This in turn leads to industry being unwilling to offer high salaries to fresh TVET graduates.
- There are reports of a lack of facilities and amenities in public TVET centres due to a lack of importance placed on high-technology teaching environments.
- Most public TVET institutes have not developed a customer-centric mindset as their core operating principle, and therefore do not place enough emphasis on collaboration with industry.

#### Suggestions for Improvement

- Accord industry with a prominent role in steering the national TVET agenda, instead of merely inviting it to collaborate.
- Empower and incentivise the TVET institutions to engage with their stakeholders, especially industry partners.
- Promote innovative approaches to expand partnerships with industry beyond student internships and curriculum development to include, among others, student mentorship, project-based learning and guest lectures.



Image Source: Freepik

### 2.2.3 Quality Assurance

Quality assurance spans both the governance of quality assurance at the national level as well as curriculum design and delivery at the level of individual TVET institutions. A summary of findings related to quality assurance is presented below.

#### Quality Assurance – Summary of Current Situation, Challenges and Suggestions for Improvement

##### QUALITY ASSURANCE

##### Current Situation

- Historically, there were two accreditation bodies responsible for quality assurance of TVET programmes. The Department of Skills Development (DSD) performs accreditation for the skills sector and Malaysian Qualifications Agency (MQA) performs accreditation for the vocational and technical sector, while also being responsible for the academic sector. The Malaysian Qualifications Framework (MQF) combines both these accreditations into one cohesive framework with clear articulations and equivalencies. In the second version of the MQF, approved in 2017, skills, vocational and technical education have been combined under the term TVET, and there are accredited courses up to the undergraduate level.
- In the last two years there have been further efforts to align the framework for TVET through the Code of Practice for TVET Programme Accreditation (COPTPA), which aims to ensure the quality of all TVET programmes, regardless if they are skills, vocational or technical programmes.
- The curriculum framework is outlined in the National Occupational Skills Standards (NOSS), but the actual syllabus for courses is designed at the institute level based on the NOSS.
- Clear frameworks have been established for the approval of any training programme which involves, among others, the inputs from the targeted industry.

## QUALITY ASSURANCE

### Challenges

- Even with the accreditation of TVET as a single pathway under the MQF, there has not been a full integration between the skills education sector (governed by DSD) and vocational and technical sectors (governed by MQA). Furthermore, there are significant differences in perception of quality between programmes, depending on the awarding body.
- Inefficiencies within the quality assurance system has resulted in TVET programmes which should have received full accreditation at this point still operating with partial accreditation.<sup>17</sup>
- There is little sharing of best practices among governing bodies and individual TVET institutes.
- Lack of industry involvement in curriculum design leads to mismatch of skills between TVET graduates and industry needs.
- Although TVET institutes refer to the National Occupational Skills Standards (NOSS), it only provides the competencies required, and not the specific syllabus for each programme. Thus, there exists a large disparity in the outputs of different TVET institutes. This has created a situation where some employers have more trust in the individual TVET institute's internal standards instead of the certification itself.
- Training providers seldom track the employment destination of their graduates, thus are unable to take advantage of employer feedback to improve quality of training.
- Higher level courses (diploma and undergraduate level) often lean towards academics, leaving students short of vital skills needed in industry.
- Life skills and communication proficiency (in English) has been reported by industry to be lacking among TVET graduates.<sup>18</sup>
- There is difficulty for institutes to secure suitably qualified instructors to lead niche courses.
- There is a significant quality variation among TVET instructors, caused by the lack of upskilling to meet changing industry needs. There is also a need for further professional development for these instructors to improve their pedagogical and management skills to grow within their field. Additionally, this lack of career progression pathways deters high quality candidates from joining as instructors.
- The data management system for assessing staff competency and professional development needs improvement as it is not widely used, and neither is it able to store more than one year's worth of data.<sup>19</sup>
- Although articulation pathways exist, students still struggle to transition from skills training to academic stream higher education.
- The Malaysia Technical University Network (MTUN) provides opportunities for TVET students to pursue tertiary education through specific Bachelor of Technology (BTech.) programmes. However, these courses are limited to a few disciplines and have only graduated about 200 graduates since inception.

### Suggestions for Improvement

- Set up a single quality assurance system for TVET, as recommended in the mid-term review of the 11th Malaysian Plan, to strengthen the overall quality of the graduates and subsequently, to mainstream TVET pathways comparable to academic pathways. The Code of Practice for TVET Programme Accreditation (COPTPA) was developed to operationalise the single quality assurance system for TVET programmes.
- Undertake a TVET rating exercise, as planned, on all TVET providers to enhance the overall management of TVET besides providing feedback to the public on the quality of the TVET providers. A review of all approved TVET courses based on established protocols and end-user (industry) participation is planned, although the tool for performing this review (e.g. balanced scorecard) has not yet been released.
- Perform audit reviews, at appropriate frequency, of selected TVET providers to assess, among others, course alignment with industry requirements.
- Redesign remuneration scheme and training opportunities to attract and retain well-qualified personnel as trainers in TVET institutions.
- Enhance capacity of TVET providers to effect the changes through strategy, leadership, organisational design and training of personnel.

## 2.2.4 Funding

Funding of TVET in Malaysia comes mainly from direct allocations from the government to public TVET institutes via the participating ministries. Alternate funding sources affect mainly the private TVET institutes, who leverage the Human Resources Development Fund (HRDF) and fee-paying students. The table that follows details the findings of the Research Team concerning the funding of TVET in Malaysia.

### Funding – Summary of Current Situation, Challenges and Suggestions for Improvement

<b>FUNDING</b>
<b>Current Situation</b>
<ul style="list-style-type: none"> <li>• TVET is funded by the government through allocations to the Ministry of Education and the Ministry of Human Resources as well as the other ministries whose agencies operate TVET centres. The private TVET institutions are funded through student fees as well as the Human Resources Development Fund (HRDF). The HRDF, under the Ministry of Human Resources, operates as a levy/grant system by which private employers are charged between 0.5-1% of payroll, and training grants are provided in return.</li> <li>• Students pursuing their <i>Sijil Kemahiran Malaysia</i> (Malaysian Skills Certificate, SKM) and <i>Diploma Kemahiran Malaysia</i> (Malaysian Skills Diploma, DKM) and <i>Diploma Lanjutan Kemahiran Malaysia</i> (Malaysian Advanced Skills Diploma, DLKM), regardless of public or private pathways, receive federal funding through a loan covering their tuition fees and an allowance through the <i>Perbadanan Tabung Pembangunan Kemahiran</i> (Skills Development Fund Corporation, PTPK). PTPK was allocated RM1 billion under the 11th Malaysia Plan (2016-2020) to help students from the low-income (B40) group undergo skills training until the diploma level in private institutions.</li> <li>• The <i>Sistem Latihan Dual Nasional</i> (National Dual Training System, SLDN) incentivises trainees with an allowance during training. In this system, the company takes on a large portion of hands-on training, while the TVET institute focuses on theory. Companies that participate can utilise the HRDF for this training, and also qualify for income tax deductions.</li> </ul>
<b>Challenges</b>
<ul style="list-style-type: none"> <li>• Although allocations are large, it is believed that the TVET model is not very cost-effective due to redundancies.</li> <li>• Despite significant public funding allocated to TVET, there is a lack of facilities and amenities in public TVET centres.</li> <li>• Only 10,000 students a year are trained through the SLDN system, thus leaving a large part of the TVET students funded in the traditional system.</li> <li>• Data management on programme and financial performance is an area of concern. Lack of a sound information management system has hampered the government's ability to effectively monitor the allocations given under the PTPK.</li> <li>• A large portion of TVET students are in the lower-income group and allowances provided by PTPK are often insufficient.</li> <li>• Late or non-repayment of loans by graduated students has put financial pressure of PTPK.<sup>20</sup></li> </ul>
<b>Suggestions for Improvement</b>
<ul style="list-style-type: none"> <li>• Explore setting up a TVET system in which both industry and government play integrated and complementary roles, which is likely to be more cost-effective and relevant.</li> <li>• Use funding mechanisms to create alignment of programmes with national priorities, such as the development of capabilities in the emerging and IR 4.0 technologies.</li> <li>• Allocate performance-based funding from the government to spur TVET providers to be more results-driven and collaborative with the local community and industry.</li> <li>• Use fund matching and other schemes to promote engagement with all stakeholders to enhance the relevance and effectiveness of TVET programmes.</li> <li>• Increase efforts to collect loan repayments from graduated students who received PTPK loans during their course of study.<sup>21</sup></li> </ul>

## 2.2.5 Branding

Branding of TVET is closely tied to the overall perception of TVET that exists in the Malaysian community. The current situation, challenges and suggestions for improvement in relation to branding have been compiled below.

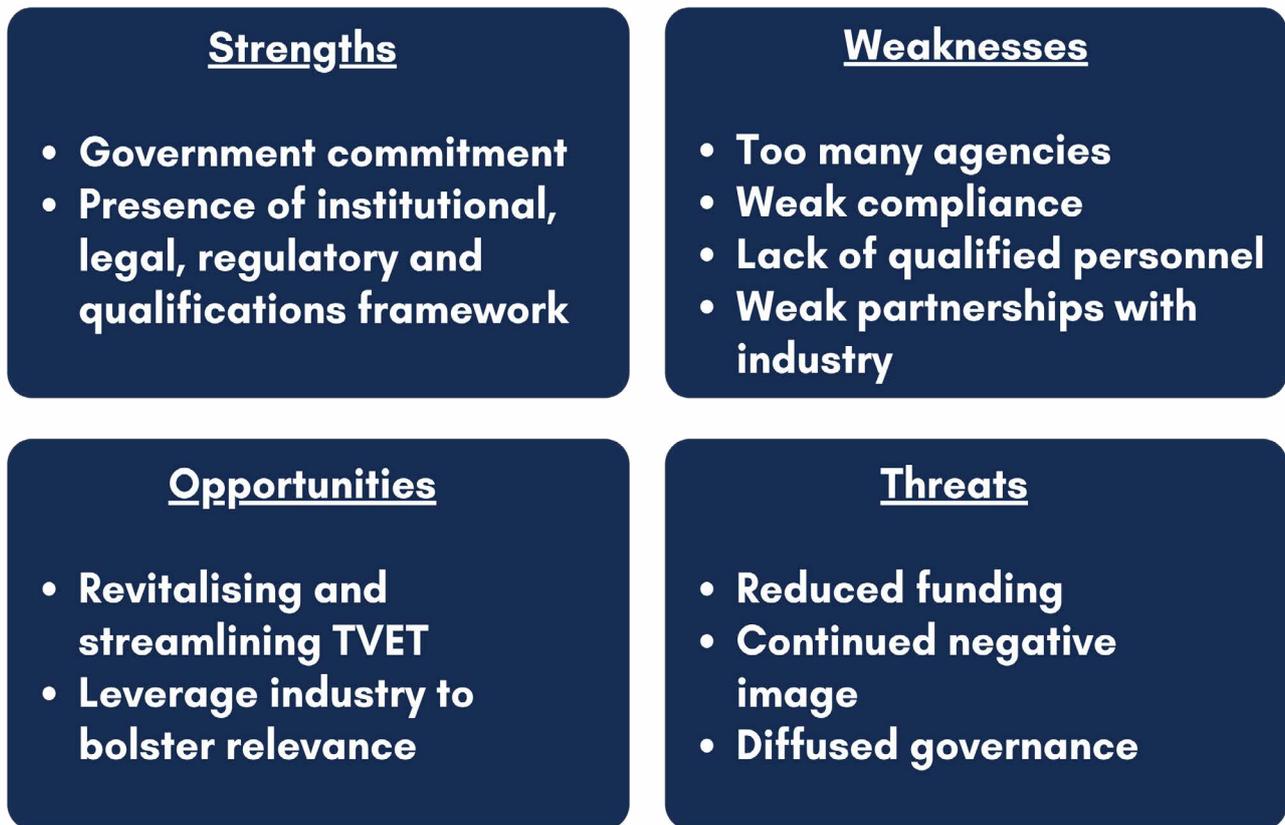
### Branding – Summary of Current Situation, Challenges and Suggestions for Improvement

<b>BRANDING</b>
<b>Current Situation</b>
<ul style="list-style-type: none"> <li>• The lowly image of TVET as compared to academic education is one that is present worldwide, and through the years there have been attempts by the Malaysian Government to mainstream TVET as a pathway of choice. However, there is continued perception that enrolling in TVET leads to lower prestige, earning potential, and job satisfaction.</li> <li>• More than 50% of the enrolment of TVET centres interviewed were students from the B40 segment, further cementing the belief that TVET is for families with fewer options.</li> <li>• There is, however, a positive shift in this perception with recent surveys revealing that young job seekers view TVET as the most useful qualification in getting a good job.<sup>22</sup></li> <li>• Although there are no gender restrictions for TVET enrolment, racial quota systems for enrolment as well as minimum physical entry requirements exist. There are attempts made toward gender equity and social inclusion through special programmes organised by the relevant ministries to encourage TVET participation among female students, disabled students and indigenous people.</li> </ul>
<b>Challenges</b>
<ul style="list-style-type: none"> <li>• The lack of a national TVET branding strategy that cuts across all ministries causes fragmented perception of TVET, with no national TVET identity or brand.</li> <li>• Clear guidelines for the acceptance of a wide range of TVET graduates with the <i>Sijil Kemahiran Malaysia</i> (Malaysian Skills Certificate, SKM) qualification was only outlined by the <i>Jabatan Perkhidmatan Awam</i> (Public Service Department, JPA) in 2011,<sup>23</sup> and thus there has been a lingering perception that there are limited options for TVET graduates as civil servants.</li> <li>• Although there are no gender restrictions in TVET enrolment, the proportion of women is significantly lower except in some niche courses.</li> <li>• Not enough is being done to attract students of minority races to consider a TVET qualification. Non-<i>Bumiputera</i> students (Chinese and Indians) show less interest in participating in TVET programmes as compared to <i>Bumiputera</i> students.</li> <li>• Although there have been efforts made to highlight inclusivity in recent years, public suggestions that TVET programmes are for dropouts and academically underperforming students contribute to the negative perception.</li> <li>• There is a lack of recognition by the government, industry and also Malaysian society of technologists and technicians as professionals.</li> <li>• There is insufficient recognition by the government for winners of national and international skills competitions.</li> </ul>
<b>Suggestions for Improvement</b>
<ul style="list-style-type: none"> <li>• Revamping of the TVET system to be a preferred education pathway must be accompanied by focused, national level, branding initiatives targeted at specific groups, for example, students, parents and industry.</li> <li>• Highlight TVET as a potential incubator for entrepreneurs in order to attract more high-quality students into TVET programmes.</li> <li>• Encourage collaborative community projects at TVET institutes to create linkages with the local community and improve the perception of TVET.</li> <li>• Highlight the participation of TVET trainees in national and international skills competitions through new and traditional media to raise the image of TVET, thus motivating more youths to enrol into TVET programmes.</li> </ul>

<sup>22</sup> Khazanah Research Institute (2018)  
<sup>23</sup> Public Service Department (2011)



 **Figure 8: SWOT Diagram Representing Malaysia's TVET Landscape**



## 2.2.6 Summary

Although overarching institutional, legal, regulatory and quality assurance frameworks exist in Malaysia's TVET ecosystem, they have not been translated to a seamless, cohesive system. There is sustained support by the government for TVET and a growing acceptance of TVET given its transformational potential on poverty alleviation and employment. Also, instructors and students are committed and passionate about TVET. However, despite these positive factors, the nation's TVET system is constrained due to a lack of synergies and shared aspirations among the ecosystem's key players. There are still teething problems in harmonising qualifications frameworks and non-recognition of qualifications despite recent efforts to address them. Based on the discussion above, we can summarise Malaysia's TVET landscape in a Strengths- Weaknesses- Opportunities- Threats (SWOT) diagram as given in **Figure 8** above. This representation provides a useful framework in charting new approaches in promoting a vibrant and effective TVET system for the nation.



# PART 3: KEY TAKEAWAYS AND RECOMMENDATIONS

Four key factors have been identified for the success of TVET systems in general:

- i) Coordinated ecosystem;
- ii) Performance-based government funding and support;
- iii) Parity and mobility between general education and TVET; and
- iv) Sustained industry support.<sup>24</sup>

Despite awareness of the various dimensions underpinning successful TVET development, governments have struggled to address these issues because many transcend multiple ministries. To overcome these difficulties, various governments worldwide have given significant thought to inter-ministerial coordination mechanisms and 'institutional architecture' required to successfully plan, manage, monitor, and evaluate TVET and skills development.<sup>25</sup>

Malaysia faces similar challenges in creating a robust, efficient TVET system. This chapter summarises the key takeaways from this study, and puts forward a number of suggestions which have emerged from both the primary and secondary data collection as possible solutions to address the challenges discussed throughout.

<sup>24</sup> Puckett et al. (2012)

<sup>25</sup> UNESCO-ILO (2018)

## **3.1 Key Takeaways**

### **3.1.1 Structural Deficiencies – despite much support for TVET, Malaysia’s efforts are uncoordinated and diffused**

Over the past five decades, the government has invested substantially in the development of TVET in the country. A number of vocational colleges, community colleges, technical universities and advanced industry training centres have been established to strengthen the nation’s foundation in building a skilled workforce. Funding corporations were established to assist the financing of students’ expenses in TVET institutions and incentives have been given to industry to hire apprentices. The institutional, regulatory, legal and quality assurance frameworks governing the operations of TVET have been created to ensure a well-functioning TVET system. However, despite the political commitment and various initiatives, the nation’s TVET profile is still plagued with weak governance. Far too many organisations are involved in the management of TVET, leading to confusion, lack of clarity, weak enforcement and needless duplication, thereby exacerbating the already poor image of TVET among the key stakeholders (industry, parents, students and community). Given pressures on public funding in coming years, it is imperative to rationalise the number of organisations engaged in TVET operations not only in the context of cost-cutting measures but also to enhance the effectiveness of the governance of TVET. Although the government has recently announced the establishment of a National TVET Council (MTVET) to suggest rationalisation and coordination strategies in the management of TVET, it is still too early to make a fair assessment on the success of this new entity.

### **3.1.2 Minimal Linkages with Industry and Community – lack of community-centric orientation**

Forging linkages with external parties (for example, industry or other government agencies) has not been a priority of most public TVET providers. Many of these providers do not view building linkages with industry or the community as an important part of their undertakings, preferring to focus solely on training students. Accordingly, many of them have not developed capabilities, for example, in initiating approaches to understand industry and community requirements, marketing their facilities and capabilities, as well as forging partnerships. Many government research providers also suffer from this ‘silo orientation’ and are focused on their own mandates. Accordingly, TVET providers need to initiate approaches to link up with parties that can contribute to their programmes. The lack of linkages with industry and other stakeholders have resulted in a mismatch of skills produced by TVET providers that are not in alignment with industry and community requirements.

### **3.1.3 System Weaknesses – weak compliance and limited mobility between frameworks**

Two separate qualifications frameworks have been developed to oversee the accreditation of courses from the skills and education sectors. Despite well-developed protocols and standards in both frameworks, some organisations have chosen to adopt their own certification pathways. Such non-compliance can only result in greater confusion to stakeholders as well as a diminished image of TVET as a well-defined education pathway. Similarly, a perennial problem arising from the two different national qualifications frameworks has made it difficult for students to transfer credits from one framework to another. The government has recognised these difficulties and has developed a unified national qualifications framework to promote, among other things, harmonised learning pathways for students/trainees from both the skills and the education sectors. Under this unified qualification framework, the Malaysian Qualifications Framework (MQF), there is a route, on paper, to move between skills and academic training qualifications. However, there is only mapping for the TVET sector up to the undergraduate (bachelor’s) degree level. Also, the

presence of these pathways that allow a graduate of a skills programme access to an academic programme in no way guarantees the success of the student, since the pedagogical approach of the two pathways differ significantly. Concurrently, it is important to keep in mind that the main objective of a TVET programme is to lead the graduate to industry, and not to further academic education.

### **3.1.4 Skills Limitations Among Instructors – weak capabilities and inadequate industry exposure**

A constant theme that emerged from the literature review is the lack of competent and qualified trainers with industry exposure in TVET centres. This is one of the main reasons that training provided by public TVET centres is unable to meet industry requirements. Industry has expressed the view that many trainees from TVET providers have to be extensively retrained given that they are not job-ready. Such deficiencies, if left unattended, will not only frustrate existing trainees, but will also deter many others from joining TVET programmes. Worse still, many in industry may not wish to participate in programmes to train TVET trainees as well as absorb them when they subsequently complete their courses.

### **3.1.5 Inefficient Funding Allocation – funding model not linked to performance**

The past three years have witnessed an increasing budgetary allocation by the government for TVET. While this is a welcome trend, such uninterrupted increase may not be extended forever given increasing pressures on public budgetary resources following the COVID-19 pandemic. Public TVET providers are entirely dependent on the government for their funding. There is a need to reduce such an overdependence and, instead, promote a diverse set of funding through, for example, funding from linkage programmes and rental of facilities. Furthermore, the government, being the main funder of TVET, can do much through its funding muscle to ensure that TVET providers meet specific key performance indicators in alignment with national objectives. Such performance-based funding will spur TVET providers to be more results-driven and collaborative with the local community and industry.

### **3.1.6 Differing Perceptions – generally unfavourable public image, but viewed positively by young jobseekers**

TVET continues to suffer from a poor image in Malaysia due to a combination of reasons, including poor management, perceived association with academic dropouts, and a lack of qualified and competent instructors and trainers. A recent Khazanah Research Institute survey revealed that students and parents usually regard TVET as an inferior educational pathway or a “dead end”, but the same survey shows that once young job seekers and young workers engage in the job market, they viewed TVET as the most useful qualification in getting a good job.<sup>26</sup> This perception disparity will need to be addressed through overall rebranding of the TVET system, with special focus on clearer communication to students and parents of the potential career benefits of a TVET qualification.

### **3.1.7 Ineffective Management Practices – importance of sound management practices and leadership in driving the TVET agenda**

The effectiveness of an organisation depends, in large part, upon the successful management of its programmes and projects. Although there is no precise formula that will assure the success of a programme, attention to factors such as strategic orientation, people, operations, marketing and finances have an enormous impact on the outcomes. Ineffective information management, lack of competent trainers, and minimal partnerships within the TVET ecosystem have been identified as weaknesses within the system. However, the success of some TVET providers in forging collaborations with local industry reveal the successful outcomes that can be achieved through dynamic leadership.

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<sup>26</sup> Khazanah Research Institute (2018)

## 3.2 Recommendations for Improving the TVET Ecosystem

The preceding sections have provided an assessment of the TVET landscape in Malaysia as well as some of the key constraints related to its implementation. These accounts provide a useful basis to frame the recommendations. A number of suggestions emerged from this study as possible strategies to address the challenges discussed earlier and are presented in this section. In light of the recent release of the Auditor General's Report as well as the 12th Malaysia Plan, further analysis is also provided in this section on the areas that are likely to receive concerted efforts for improvement in the immediate future.

### 3.2.1 Rationalise the Governance Framework for an Effective, Accountable and Results-driven TVET System

Malaysia's TVET ecosystem is characterised by far too many organisations and an incomplete qualifications framework, which does not include TVET at postgraduate level. The government has recently announced the establishment of the National TVET Council (MTVET) as an oversight body which will assess both governance and quality assurance to streamline the national TVET agenda. It is vital that the review of the TVET governance and quality framework promotes a more harmonised, responsive, results-driven and accountable TVET system.

#### Recommendations:

Initiate an extensive review of the current TVET ecosystem to enhance its effectiveness of streamlined operations, clarity in governance, adaptivity to new developments, receptiveness to greater industry participation and support of rural and disadvantaged groups. This exercise will, among others, identify specific measures to:

- Streamline the current governance structure of TVET so that it is less bureaucratic, more results-focused and adopts a whole of government and whole of society orientation.

- Promote the participation of state governments and economic corridor implementing agencies in the development of TVET at the state and regional levels.
- Actively facilitate industry (through respective industry councils) to provide standards towards the certification of industry-related TVET courses.
- Strengthen management information systems for TVET to enable more informed analysis and decision-making.
- Promote regular monitoring and evaluation as well as the conducting of tracer studies and audit reports to provide feedback to management on the quality and performance of TVET.
- Enhance the autonomy of TVET providers to enable them to act with agility and flexibility.
- Ensure that participants in TVET courses are drawn from all segments of society to result in a truly inclusive programme.

The recommendation to rationalise the governance framework of TVET is one that was highlighted by all avenues of data collection - the literature review, stakeholder interviews and also the policy lab. The issue of fragmented TVET governance has been identified as a stumbling block which curtailed the progress in TVET during the previous Malaysia Plan. The Auditor General's Report (AGR) only focused on the TVET programmes within the three key ministries, (MOE, MOHE and MOHR) and recommended a further overall audit of the TVET ecosystem. In addition to that, the 12th Malaysia Plan specifically mentions the importance of reorganising the TVET governance framework. The cohesive management of TVET is undoubtedly the single most pivotal issue to address at a national level. Therefore, it is certain that there will be increased efforts in improving the governance framework in the next five years, likely beginning with a further internal assessment of the governance issues, followed by increased inter-ministry data sharing as recommended by the AGR. In response to this, there was an announcement that all the skills-based TVET programmes would be rationalised under the jurisdiction of the Ministry of Human Resources.<sup>27</sup> If well administered, this move will reduce the overlap and streamline the governance becoming an effective first step towards streamlining the overall ecosystem.

<sup>27</sup> New Straits Times (2021)

### 3.2.2 Leverage Partnerships with Industry to Create Demand-driven TVET

This study has revealed that TVET in Malaysia is largely supply-side driven, but in order to achieve the transformational change that is envisioned, the system needs to be more reactive to the changing technology and needs of industry. Therefore, it is necessary that both the federal government and individual institutes engage closely with industry to ensure the quality and employability of graduates of the TVET system. Currently most public TVET providers have only limited engagement with industry, and enhancement of this engagement will boost their relevance and competency.

#### Recommendations:

- As per the first recommendation, engage industry to build accountability into the quality assurance framework, promoting greater industry participation and alignment in TVET.
- Set up a national data management system to collect employer feedback from industry on TVET graduates' performance and industry requirements.
- Incentivise TVET providers to engage in partnerships through performance criteria of annual budgetary exercise.

The findings from the stakeholder engagement in this report show that TVET in Malaysia is largely supply-side driven, and focus must be placed on engaging industry within all levels of TVET, from curriculum development, to instructor placements, and assessment of student outcomes. This report places high importance on this recommendation, believing it to be a catalyst for the TVET system to remain relevant and competent. However, the findings of the Auditor General's Report show that industry engagement is currently at a satisfactory level. Through feedback collected directly from industry, the report showed that 88.5% of employers were satisfied with the graduate outcomes, thus indicating that the current mechanisms of industry engagement are sufficiently effective. Nevertheless, the need to stay relevant with the needs of high-technology industries is vital, and the proposal of an Industrial-Government TVET Coordinating Body<sup>28</sup> will be a step in the right direction to empower industry within the TVET ecosystem.

### 3.2.3 Review Curriculum of TVET Courses to Incorporate Entrepreneurship and Life Skills

A striking feature of the country's TVET landscape is the entrepreneurial mindset of TVET trainees, many of whom have gone on to establish businesses upon graduation, and more can be done to support this. Concurrently, industry has commented that TVET graduates do not have the required social competencies and life skills to succeed in industry, and there has yet to be clear guidelines on how these skills will be better inculcated in TVET trainees.

#### Recommendations:

- Embed entrepreneurship content in appropriate courses as well as establish incubators, where possible, to facilitate translation of entrepreneurial ideas of trainees.
- Collect feedback from employers on required technical and life skills required for graduates in each industry.
- Actively teach and assess life skills through specifically curated modules designed based on industry input and international benchmarks.

The recommendation to review the curriculum of TVET courses to incorporate entrepreneurship and life skills will support the labour market through graduating more robust, adaptable TVET trainees, who could potentially join industries other than the one they were trained for, or even start up their own businesses. These skills are seen as vital in the Fourth Industrial Revolution, and if the TVET system can sufficiently deliver on this promise, graduates will benefit throughout their careers, not just in their first job. The Auditor General's Report indicates a need for improved soft skills, and communication skills (in English) among TVET graduates, as expressed through feedback direct from industry. Thus, a push for a more holistic TVET curriculum can be expected within the timeframe of the 12th Malaysia Plan. These efforts have begun within the Ministry of Higher Education with the recently launched Experiential Learning and Competency-Based Education Landscape (EXCEL) framework which aims to provide industry-driven, community-focused experiential learning for future graduates.<sup>29</sup>

<sup>28</sup> Menon (2021)

<sup>29</sup> The Sun Daily (2021)

### 3.2.4 Elevate Competencies in TVET Teaching and Management Staff

A recurrent theme from the study is the need for professional development among the staff members within the public TVET providers. For instructors, there needs to be a comprehensive professional development system that will enable instructors to stay industry-relevant over time, improve on their pedagogical skills and build leadership abilities for further career growth. At the top management level, the focus of professional development would be to improve management and stakeholder engagement skills, especially the ability to engage with key industry stakeholders.

#### Recommendations:

- Introduce improved and continuous career development pathways to attract and retain TVET instructors, with three overarching aims: maintaining industry relevance, improving pedagogy, developing leadership for career development, led by the Centre for Instructor and Advanced Skill Training (CIAST).
- Develop a collaboration between the *Akademi Kepimpinan Pendidikan Tinggi* (Higher Education Leadership Academy, AKEPT) and the *Institut Tadbiran Awam Negara* (National Institute of Public Administration, INTAN) to design and introduce a module on leadership and management specifically for top management of TVET centres.

An important precursor for the quality of TVET graduates is the calibre of the staff in the TVET institutes, specifically the pedagogical and industry relevancy of teaching staff as well as management skills of top administrators. Further to that, comprehensive professional development for TVET institute staff which will facilitate successful career trajectories will attract more quality candidates into this profession. The issue of competency within TVET staff was addressed in the AGR, where both the current state of competency as well as the system of managing staff professional development was found to be in need of improvement. Responses by the ministries within the report acknowledge these shortcomings and therefore there is likely to be considerable effort to improve not only the competency of instructors but also the data management system to monitor this progress.

### 3.2.5 Redesign Funding Allocation Model to Prioritise Performance and High-value Industries

Funding of TVET institutes can be used as a key mechanism to boost performance and increase support for specific high-value programmes, such as those pivotal for the development of the nation in line with IR 4.0. Public TVET institutions rely solely on government funding, but these funds are currently not tied to performance. By adding the element of performance, it could spur innovation and efficiency in these institutions. Additionally, further support to institutes, both public and private, which focus on pivotal high-technology programmes, has the potential to boost the quality and quantity of graduates in these industries.

#### Recommendations:

- Design a balanced scorecard to assess performance of TVET institutes, incorporating metrics such as employer satisfaction, percentage of graduates in high-technology programmes, professional development of staff, etc.
- When allocating funding, take into account the performance level of institutes based on the balanced scorecard.

The aim to utilise funding mechanisms as a method to boost efficiency and performance would mirror, for public TVET institutions, the market forces that force private TVET institutions to remain industry relevant. At this point, there is yet to be a clear, public system of assessing the performance of TVET institutions similar to the *Sistem Penarafan Institusi Pengajian Tinggi* (Rating System for Malaysian Higher Education Institutions, SETARA) for universities. Developing this balanced scorecard is the first step to creating a performance-based funding allocation system. It can be used to partially guide funding allocation decisions, which will create movement in the right direction for increasing high-impact courses, as well as improve industry engagement. This will indirectly boost student enrolment in these high impact courses, as more recognition is given to these courses, and improve graduate-industry alignment as TVET institutes improve engagement with industry.

### 3.2.6 Rebrand TVET to be the Preferred Educational Pathway by Recognising Skills Training

This study has revealed that TVET's reputation in Malaysia has generally been less than satisfactory. Many stakeholders – parents, students, teachers, trainers, industry and even politicians – are of the view that TVET is less prestigious than university education and is meant for those who failed to make the grade in the academic stream. This is partly because the low esteem of skills education places TVET graduates closer in status to the unskilled workforce than graduates from the academic stream. Unless recognition for their value is highlighted, this low level of esteem will continue despite efforts in other areas. Consideration needs to be given to rebranding TVET to reflect the changes that have been recently introduced to enhance as well as to bring new impetus to this sector as being the educational pathway of choice.

#### Recommendations:

- Rebrand TVET as a modern, innovative, dynamic skills acquisition alternative with higher employment and entrepreneurial potentials through all electronic and social media channels.
- Recognise technicians as professionals, not only by the Malaysian Board of Technologists (MBOT) but also by the Board of Engineers Malaysia (BEM).
- Regulate the informal economy of skills-based professions (e.g. plumbing, vehicle repair) through requiring minimum skills qualifications, either through formal TVET programmes or accreditation of prior learning.

The less than prestigious reputation for TVET is a factor that hinders its growth, since it curtails the number of young people choosing a TVET pathway. However, merely rebranding TVET without structural changes within the system will not generate the sustainable growth in the workforce that is needed. Therefore, changes in branding would need to echo the more tangible changes of governance, increased industry engagement (and therefore career prospects) and quality assurance that are planned for the system. At this point in the maturity of the national TVET ecosystem, the branding focus will be on creating a coherent

brand image as well as raising awareness about TVET pathways and success stories. Simultaneously, better industry and government recognition of TVET programmes will boost the overall image of the TVET as a pathway of choice.

### 3.3 Conclusion

This report sets out a number of strategies and recommendations to ensure an effective, accountable, results-driven, and sustainable TVET system for Malaysia. These strategies take cognizance of Malaysia's current strengths and limitations as well as where the country needs to go given the context of the changing landscape within which TVET will operate in the coming years. The recommendations are also in alignment with the government's objective of achieving fair and equitable growth as reflected in Malaysia's Shared Prosperity Vision 2030.

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# APPENDIXES

**APPENDIX A: Members of the Research Team**

**APPENDIX B: List of Interviews Conducted**

**APPENDIX C: List of Site Visits**

**APPENDIX D: List of Policy Lab Participants**

## APPENDIX A: Members of the Research Team

NAME	POSITION WITH RESEARCH TEAM
Professor Dr. Shakila Yacob	Project Leader, Lead Consultant
Dr. Sharifah Mariam Alhabshi	Consultant
Fauwaz Abdul Aziz	Project Officer
Atheerah Azmil	Project Officer
Fatin Nadhinah Tajul Arif	Research Assistant

## APPENDIX B: List of Interviews Conducted

ORGANISATION	NAME OF REPRESENTATIVE(S)	POSITION
Vocational Technical Education and Training Division, Ministry of Education	Dr. Mohammad Hafiz Salleh	Assistant Director TVET Research, Innovation and Information Resources Unit
	Dr. Muhammad Ali Halim Sirat	Assistant Director Cooperation and Industrial Relations Unit
	Pn. Nur Fakhriyyah El-Emin Muhandi	Chief Assistant Director TVET Policy and Planning Unit TVET Planning, Research and Development Sector
	Pn. Hafidzah Omar	Senior Principal Assistant Director TVET Curriculum Sector
	Pn. Rahmah Sa'aid	Chief Assistant Director SVM/DVM Programme Quality Assurance and Recognition Unit
	En. Saiful Nazli	Chief Assistant Director Cooperation and Industrial Relations Unit
District Education Office Hulu Langat, Ministry of Education	Pn. Aeshah Salleh	Director, SISC+ TVET
	En. Ahmad Alfian Ahmad Fauzi	SISC+ TVET
	Pn. Khalidah Adibah Zubir	SISC+ TVET
Department of Skills Development, Ministry of Human Resources	Dr. Rashid Buyong	Deputy Director General of Operations
Centre for Instructor and Advanced Skilled Training, Ministry of Human Resources	Dr. Nurul Amin Badrul	Head of Research and Innovation Unit, Skilled Instructors Development Programme
Penang Skills Development Centre	En. Muhamed Ali Hajah Mydin	Chief Executive Officer
Kulim Advanced Technologies	Tn. Hj. Ahmad Zaidi Mat Zain	Senior Technical Manager
BERJAYA TVET College	Mr. Kanendran T. Arulrajah	President
Tech Terrain College	Ms. Sasha Ratnam	Director, Operations and Development
Geomatika Skill Institute	Mr. Azli Kassim	Marketing Manager

## APPENDIX C: List of Site Visits

ORGANISATION	NAME OF REPRESENTATIVE(S)	POSITION
SLC Auto Academy	Mr. Ooi Lye Oo	Chairman
GIATMARA Tanjung	En. Ismadi	Manager
Sekolah Menengah Pendidikan Khas Vokasional Merbok (Merbok Special Education Vocational Secondary School)	En. Mohd Fuzi Mohd Said	Senior Assistant
Institut Kemahiran Langkasuka (Langkasuka Skills Institute)	Dr. Abdul Jalil Ahmad	Chairman
Politeknik Kuala Terengganu (Kuala Terengganu Polytechnic)	Dr. Haji Mohd Daud Isa	Director
Politeknik Kota Bharu (Kota Bharu Polytechnic)	En. Kamarudin Daud	Director
Kolej Kemahiran Tinggi MARA Pasir Mas (Pasir Mas Higher Skills MARA College)	En. Wan Saiful Baharin Wan Ahmad Marzuki	Deputy Director, Academic
Institut Latihan Perindustrian Kota Bharu (Kota Bahru Industrial Training Institute)	En. Abdullah bin Muhamad	Director

## Research Team's Site Visit to SLC Auto Academy, Penang



Image Source: International Institute of Public Policy and Management

## APPENDIX D: List of Policy Lab Participants

ORGANISATION	NAME OF REPRESENTATIVE(S)	POSITION
Association for Researchers of Skills and Vocational Training (ARSVOT)	Ts. Dr. Zulkifli Mohd Sidi	Chairman
Universiti Kuala Lumpur (UniKL)	Ts. Dr. Nur Azma Amin	Deputy Dean, Academic and Technology
Malaysian Board of Technologists	Tc. Abdul Hafiz Mohamad Nor	Deputy Registrar, Operations
Polytechnic and Community College Division, MOHE	Pn. Ngah Fadzilah Abdul Jalil	Deputy Director, Internationalisation Unit
Policy Planning and Research Division, MOHE	Pn. Baizura Mohd Zainon	Senior Chief Assistant Secretary
Technical and Vocational Education and Training Division, MOE	En. Muhammad Helme Supaat	Chief Assistant Director
German-Malaysian Institute (GMI)	Ts. Dr. Hj. Zakaria Hj. Razak	Head of Section, Strategic Planning & Business Development
German-Malaysian Institute (GMI)	Dr. Rohaya Kamaludin	Head of Section, Manufacturing & Management, Mechanical Engineering Department
Malaysian Qualifications Agency (MQA)	Pn. Mazlinawati Mohamed	Director, Accreditation Division (Literature and Humanities)
Gamuda	En. Mohd Nazri Abdul Muin	Head of Building Unit, Safety, Health and Environment Department
Gamuda	En. Muhammad Fitri Abdullah	Assistant Manager, Safety, Health and Environment
Department of Skills Development, Ministry of Human Resources	En. Shahrul Nizam Kasim	Assistant Director, Standards Management Unit, National Occupational Skills and Standards (NOSS) Division
Department of Skills Development, Ministry of Human Resources	En. Ahmad Supawi Osman	Assistant Director, National Dual Training System (SLDN)
<i>Majlis Amanah Rakyat</i> (Council of Trust for the People), MARA	En. Ammar Mohd Nasir	Assistant Director, Skills and Technical Division
National Anti-Drug Agency	En. Zulkifly bin Zais	Anti-Drug Assistant
Planning and Policy Research Division, MOHE	Cik Khadijah Najwa Kamaron	Assistant Secretary

A blue industrial robotic arm is shown in a factory setting. The arm is positioned in the upper right quadrant of the image, extending towards the center. It has a yellow safety guard on its lower section. The background is a blurred industrial environment with bright light coming from the right side, creating a lens flare effect. The overall scene is a close-up of the robotic arm's joints and components.

**Recognising the importance of a robust Technical and Vocational Education and Training (TVET) landscape in spurring Malaysia's growth, this study critically examines Malaysia's TVET ecosystem focusing on five pillars - Governance, Industry, Quality Assurance, Funding and Branding. Given the analysis, this report proposes six recommendations to realise the goal of creating a national TVET system that will support Malaysia's continued growth.**



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