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# Unlocking the Earning Potential of TVET Graduates

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# Khazanah Research Institute

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## Executive Summary

This working paper is part of KRI's series of research for the Graduate Tracer and Employability (GTSE) project. The objective of this article is to provide a brief overview of TVET education in Malaysia and present the employment outcomes of its fresh graduates derived from analyses of the Graduate Tracer Study (GTS) 2010 to 2020 data collected by the Ministry of Higher Education (MOHE). The key takeaways are as follows:

### 1. Outcomes of TVET graduates have improved over the years.

- The GTS data, a survey that basically tracks graduates' status upon graduation, shows that the graduate employability rate (GE)<sup>1</sup> of TVET graduates has increased from 65.5% in 2010 to 87.6% in 2020 and it has exceeded that of non-TVET graduates since 2012.
- Among graduates considered as "employable", 75.6% of TVET graduates were already working shortly after completing their studies, in contrast to only 64.0% of non-TVET graduates, on average between 2010 and 2020.
- Unemployment rates have declined considerably despite staying at double-digits. The percentage of TVET graduates who were not able to secure employment after completing their study went down to 12.4% in 2020, from 34.5% in 2010. The rates are also lower compared to non-TVET graduates since 2012.

### 2. TVET and non-TVET graduates face differing circumstances upon graduation.

- Graduates' status after attaining a diploma qualification differs between TVET and non-TVET graduates. 63.3% of TVET diploma holders chose to work while 34.9% of non-TVET diploma holders chose to pursue further education or training. Higher working share among TVET graduates could be attributed to the hands-on experience and practical training that they receive, providing them with an edge over those with academic qualifications alone.
- At the same time, it could also be due to limited options for them to pursue a degree. Broadening opportunities for further studies could enhance outcomes as the study found that graduates' pay level is strongly linked with their qualification level.

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<sup>1</sup> GE is one of the main key performance indicators for higher education. It includes graduates who are already working shortly after completing their studies, those who are furthering their study as well as those that are participating in upskilling/reskilling programmes.

- Regardless of education track, most unemployed graduates attribute their situation to the competitive labour market.
- While "awaiting further study offers/results" is the second highest reason cited by TVET graduates, non-TVET graduates often cited "rest or vacation". This underscores the desire among unemployed TVET graduates—who are predominantly diploma holders—to continue learning and enhancing their skills before stepping into employment.

### **3. TVET graduates have unique earning potential.**

- Recognising the ongoing concern regarding the low and stagnant starting salary for fresh graduates with the majority earning below RM2,000, this study examines the earning potential of TVET graduates by exploring scenarios that may result in earnings beyond RM2,000
- Firstly, graduates' pay level is strongly linked with their qualification level with degree holders exhibiting greater percentages of earning higher. This implies that encouraging graduates to further their studies at higher levels could improve their earning potentials to some extent.
- Potential of TVET graduates involved in self-employment could be unleashed further to produce higher returns. The percentage of self-employed TVET graduates earning more than RM5,000 is much higher compared to their peers who work in full-time employment, with a greater number of them are diploma holders.
- Data also indicates that these self-employed TVET graduates are typically involved in manufacturing and construction activities, compared to non-TVET graduates who are more involved in sales and services activities. This underscores the potential of skill-based education in driving entrepreneurship to generate more job opportunities in industrial activities.

### **4. Strategies to support graduates earning higher incomes are imperative.**

- Evidently, TVET is performing better than in the past and is becoming more important in providing the manpower needed for economic and social development.
- Efforts on the supply side to address several challenges faced by the sector such as in terms of quality assurance, governance and misperception have contributed to the positive outcomes.
- The focus moving forward should also be given on the demand side especially on finding strategies to support graduates in earning higher incomes, thus providing a better return on education investment.
- Stronger collaboration between TVET institutions and the industry in shaping the curriculum and training delivery is critical so that this workforce can meet the needs of the industries.

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## 1. Introduction

The Technical and Vocational Education and Training (TVET) sector continues to get attention from the government with the Prime Minister announcing several initiatives under the Budget 2023 to unleash TVET's potential further<sup>2</sup>. It was highlighted in the recent budget speech that despite substantial allocations on TVET (RM6.7 billion for 2023), the graduates continue to earn salaries that do not commensurate with their qualifications. Data shows that only slightly over 10% of TVET graduates earn more than RM2,000 monthly as employments were concentrated at the low to medium skill level<sup>3</sup>.

To incentivise private sector employers to increase salaries for new graduates, a RM600 wage top up will be provided for three months to 17,000 TVET graduates via Social Security Organisation (SOCSO), with an allocation of RM45 million from the government. A minimum salary of RM3,000 is proposed considering TVET graduates are trained workforce that could drive higher productivity<sup>4</sup>, as well to prevent them from migrating abroad<sup>5</sup> in search of higher pay. Meanwhile, to improve graduate employability, public and private sector cooperation will be strengthened to ensure graduates that are produced would be able to meet the needs of the industries. Under a pilot project, selected TVET institutions would be taken over by private companies, especially among government linked companies (GLCs), so that training can be more tailored hence reducing the need to retrain their fresh hires<sup>6</sup>.

Prior to this, the Minister of Higher Education, Datuk Seri Mohamed Khaled Nordin has also highlighted that a major overhaul would be done to the TVET programmes to strengthen the ecosystem towards producing more skilled and technologically competent students<sup>7</sup>.

These are in line with the 12th Malaysia Plan (12MP) which has identified TVET as the 10<sup>th</sup> "game changer" that could ensure the availability of skilled technical workers to help the country brace through various technological disruptions brought by the Industrial Revolution 4.0 (4IR)<sup>8</sup>.

TVET is also recognised as an important pillar to Malaysia's socioeconomic development that could address the issues of dependency on foreign workers, low compensation of employees and student dropouts<sup>9</sup>. The 12MP outlined several plans to improve TVET attractiveness and delivery quality including offering more 4IR related courses and improving TVET accreditation so that more qualified graduates will be recognised as professionals. A ranking system for TVET institutions will also be introduced whereby the allocation of funds will be based on a number of components including employability, graduate wage levels, industrial engagement and the implementation of

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<sup>2</sup> MOF (2023)

<sup>3</sup> Mohd Amirul Rafiq Abu Rahim and Shazrul Ariff Suhaimi (2022)

<sup>4</sup> The Star (2023)

<sup>5</sup> Zamir Akmal Zambri (2023)

<sup>6</sup> MOF (2023)

<sup>7</sup> Bernama (2023)

<sup>8</sup> 12thMP, EPU (2021), page 1-17

<sup>9</sup> Ibid, page 7

social initiatives in rural areas. The policy consequently set the target that at least 55% of Sijil Pelajaran Malaysia (SPM) school leavers would join this education path<sup>10</sup>.

The objective of this paper is two-fold. The first part provides a brief overview of the TVET education in Malaysia, outlining the main challenges it faces and the interventions that have been undertaken so far. The second part presents analyses of the employment related data of TVET's fresh graduates. It discusses several positive outcomes and the potential of this education track in promoting graduates' economic security and social mobility.

## 2. Overview of TVET education in Malaysia

Historically, TVET development in Malaysia began before the country gained its independence and gradually evolved from a small-scale, non-systematic system to a large-scale and more systematic system. TVET in Malaysia could be traced back to the British colonial period with the initial purpose of training youths in Malaya (mostly Indian and Chinese immigrants) to become labourers for the construction and maintenance of transportation lines including roads and railways through apprenticeship at workshops<sup>11, 12</sup>. On the back of the education system reform after independence, several important education reports such as the Razak Report (1956) and the Rahman Talib Report (1960) were instrumental in the establishment of the early TVET institutions including Dewan Latehan RIDA in 1956 (later known as MARA College in 1965) and the first polytechnic, Ungku Omar Polytechnic in 1969<sup>13</sup>. These institutions were built with the aim of producing skilled manpower at a semi-professional level in technical and commercial fields<sup>14</sup>.

Over the years, TVET education has increasingly been recognised as an important educational component of lifelong learning with a strong emphasis on industry practices. As of 2020, Malaysia has 1,295 TVET institutions, consisting of 633 private institutions, 640 public institutions under 11 ministries and another 22 state-owned institutions<sup>15</sup>. Additionally, the National Dual Training System (or Sistem Latihan Dual Nasional, SLDN) operated through collaboration between companies and training institutions also provides another alternative for students interested in skill-based education. One unique aspect of SLDN is the emphasis on industry participation who are actively involved in the training process such that the skill acquired are relevant to the current needs of the industry and the labour market.

As there are many TVET institutions offering courses at the certificate and diploma levels, the Malaysian Technical University Network (MTUN) was formed in 2007 to provide a greater pathway for TVET certificate and diploma holders to pursue degrees and higher qualifications<sup>16</sup>. The

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<sup>10</sup> Ibid, page 1-17

<sup>11</sup> Chang (n.d.)

<sup>12</sup> Trimmer (2014)

<sup>13</sup> Ibid.

<sup>14</sup> 1stMP, EPU (1966)

<sup>15</sup> MOHE (2022); page 10

<sup>16</sup> MTUN is a result of the conversion of four university colleges to university status in 2006-2007. The four universities under this network are the Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Teknikal Malaysia Melaka (UTeM), Universiti Malaysia Pahang (UMP), and Universiti Malaysia Perlis (UniMAP).

education system under MTUN is known for its practical orientation, specialisation in high technology and industry-based training, as well as its emphasis on problem-centred teaching, experiential and action-based learning<sup>17</sup>.

#### **Box 1: Defining TVET**

There is no universally accepted definition of TVET. One unique characteristic of TVET education is the combination of practical training and technical knowledge in its educational tradition. In 2002, the United Nations Educational, Scientific and Cultural Organization (UNESCO) defined TVET as the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life<sup>18</sup>. Under the same definition, TVET is also known as Occupational Education (OE), Professional and Vocational Education (PVE), Career and Technical Education (CTE), Workforce Education (WE), Workplace Education (WE), and others in different countries and regions<sup>19</sup>.

In 2015, UNESCO further refined the definition, stating TVET as comprising of education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods<sup>20</sup>. As part of lifelong learning, TVET learning could take place at the secondary, post-secondary and tertiary levels; and includes work-based learning, continuous training and professional development which may lead to qualification and accreditation. It also includes a wide range of skills development opportunities attuned to both national and local contexts<sup>21</sup>.

In Malaysia, the Code of Practice for TVET Programme Accreditation (COPTPA) defined TVET as an education and training process that has an occupational direction, with a major emphasis on industry practices<sup>22</sup>. It aims to produce a competent workforce in related fields for the achievement of the nation's socioeconomic objectives. As practical experience is an important component in TVET, since 2004, the on-the-job training-based structure has been systematically organised under the National Dual Training System (SLDN), in which some students undergoing a TVET-recognised course would spend 70-80% of their practical training at the industry, and another 20-30% of their theory or academic learning at the training center or TVET institution<sup>23</sup>.

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<sup>17</sup> MTUN (n.d.)

<sup>18</sup> UNESCO (2001), page 28

<sup>19</sup> MOHE (2017)

<sup>20</sup> UNESCO (2016), page 5

<sup>21</sup> Ibid.

<sup>22</sup> MQA (2021), page 2

<sup>23</sup> JPK (n.d.)



### 3. Key challenges of TVET in Malaysia and policy responses

Although TVET has existed in Malaysia for several decades, it is still not a mainstream education pathway among Malaysian students as it is considered a less prestigious study option than the academic stream<sup>24</sup>. As a result, the government has continuously implemented several policies and initiatives to improve the TVET ecosystem to attract more talent to join this education path.

Several challenges of TVET have been highlighted from the 10th to the 12th Malaysia Plan, surrounding the issues of public misperception, quality assurance of the programmes and instructors<sup>25</sup> as well as fragmented governance and lack of coordination<sup>26</sup>. First, the public's misperception of TVET continues to be one of its greatest challenges and is cited as one of the reasons for falling short of the 11th Malaysia Plan's target of achieving 225,000 SPM leavers joining TVET programmes by 2020<sup>27</sup>. The public believes that TVET is an option of last resort for weak students<sup>28</sup> and TVET graduates earn low pay because the practical skills they learn are normally more applicable to 3D (dirty, dangerous, and demeaning) jobs such as construction, plantation and automotive maintenance as compared to white-collar jobs. This factor has influenced students' choices to join TVET programmes, particularly the high-performing ones. In 2016, the Malaysia Board of Technologists (MBOT) was established as a measure to address the issue while providing opportunities for TVET graduates to obtain professional recognition that will be accepted by both the local and global industries<sup>29</sup>.

The second challenge hampering TVET from progressing is a lack of qualified TVET instructors. According to the Malaysia Education Blueprint, 43% of TVET instructors at vocational colleges have a Malaysian Competency Certificate (MCC) of Level 2 or lower, and only 0.4% have an MCC of Level 4 or higher<sup>30</sup>, denoting that the teaching staff experience and qualifications are insufficient to ensure the quality and quantity of current and future TVET graduates. As a response, the eProfiling system was established in 2016 to identify TVET instructors' skills and competencies in order to develop an effective training roadmap<sup>31</sup>. Meanwhile, as qualified professionals with work experience are reluctant to serve as TVET instructors, industry experts and retired industry practitioners were encouraged to serve as TVET instructors by offering attractive remuneration packages<sup>32</sup>.

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<sup>24</sup> UNESCO (2019)

<sup>25</sup> 10thMP, EPU (2010), page 234

<sup>26</sup> 11thMP, EPU (2015), page 146

<sup>27</sup> 12thMP, EPU (2021), page 355

<sup>28</sup> UNESCO (2019), page 17

<sup>29</sup> 11thMP, EPU (2015), page 149

<sup>30</sup> MOHE (2012)

<sup>31</sup> 12thMP, EPU (2021)

<sup>32</sup> 11thMP, EPU (2015)

The third challenge is the uncoordinated governance of TVET education in Malaysia. The underlying issue rooted from, first, the various TVET providers from the public sector (both at the federal and state levels), as well as from the private sector, operating independently with varying standards and capacities. While substantial fiscal allocation has been allocated annually on TVET (for example, RM 6.7 billion under Budget 2023), cost efficacy has been compromised due to fragmentation and redundancies as resources need to be allocated to various ministries and agencies that operate TVET institutions<sup>33</sup>.

Second, the existence of two distinct accreditation bodies, namely the Malaysian Qualifications Agency (MQA) and the Department of Skills Development (DSD), have also resulted in disparities in standards, rating systems, and TVET programme quality<sup>34</sup>. To address this issue, the Malaysian Qualifications Framework (MQF) was enforced in 2011 to set qualification standards for all qualifications in the “academic” and “training (TVET)” sectors, combining MQA and DSD. The Code of Practice for TVET Programme Accreditation (COPTPA) was introduced in 2019 and 2020 to operationalise the single quality assurance system for the TVET programme to be in line with the academic sector<sup>35</sup>. The 12MP have also outlined steps to revamp TVET governance systems by setting up a national TVET council to minimise programme duplication, coordinate and integrate different TVET governing systems<sup>36</sup> thus harmonising and standardising the TVET system.

In short, notable efforts have been undertaken by the government throughout the years to resolve the challenges faced by Malaysia’s TVET education with varying levels of success. Essentially, the initiatives outlined in the Malaysia Education Blueprint 2013-2025 and the 12th Malaysia Plan (12MP) need to be accelerated to ensure TVET meets its objective of fulfilling the country’s workforce needs in the short and long term.

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<sup>33</sup> Fauwaz Abdul Aziz and Nadya Subramaniam (2023)

<sup>34</sup> MEA (2019)

<sup>35</sup> MQA (2019)

<sup>36</sup> 12thMP, EPU (2021)

## 4. Labour market outcomes of TVET graduates

This section seeks to examine the achievement of TVET education in developing a skilled workforce during the last decade and the labour market outcomes of TVET graduates. The analysis in this section utilises the Graduate Tracer Study (GTS) data collected by the MOHE from 2010 to 2020. The survey is conducted annually on graduates from Malaysian public and private higher education institutions to determine their employment status and destination upon study completion<sup>37</sup>.

As the survey covers the status of graduating students at various levels and age groups, the analysis in this paper will focus on those aged 15 to 30 years, given the unique challenges faced by the young workforce. Graduate outcomes are assessed by looking at the employment status upon graduation and the earning levels (for those who managed to land a job upon graduation). Comparative analyses are also made between graduates with technical and vocational education and training (“TVET”) and the rest (“non-TVET”) to decipher the outcomes between the two groups.

It should be highlighted that following the classification adopted by the MOHE, TVET in the context of the analyses in this paper refers to graduates with the certificate, diploma and bachelor’s degree qualifications from the public technical and vocational institutions namely: (1) the four technical public universities (Malaysian Technical University Network, MTUN), (2) polytechnics, (3) community colleges, and (4) other public vocational colleges and skill training institutes<sup>38</sup>.

Therefore, the analyses consider TVET graduates from public TVET institutions only, excluding those under the SLDN and private institutions. In contrast, non-TVET graduates in this study refer to the remaining graduates who have completed their education in public universities (excluding MTUN) and private institutions. Although some of these institutions may offer technical courses, they are not classified as “TVET” under the MOHE’s GTS current definition<sup>39</sup>.

In this regard, it is important for the government to consider reclassifying TVET education at the programme level. The current classification, which only takes into account those from public TVET institutions and universities, would have undercounted many others especially those from private higher education institutions.

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<sup>37</sup> Usually held within six to twelve months upon study completion

<sup>38</sup> Private HEIs offering technical/practical courses in nature are not included under this classification.

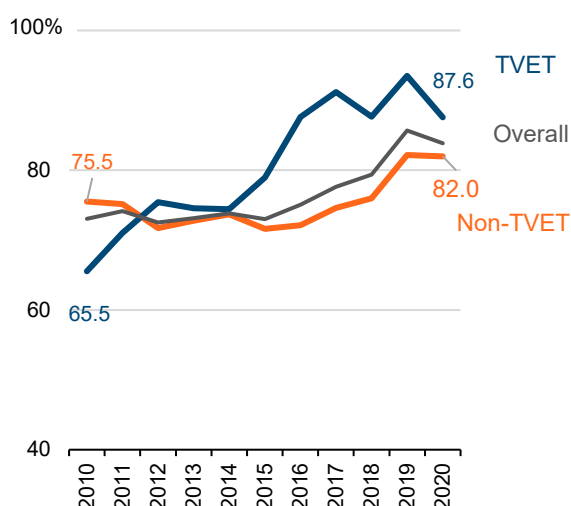
<sup>39</sup> However, under the Code of Practice for TVET Programme Accreditation Second Edition 2020, higher learning institutions could voluntarily apply to convert the status of academic programmes that have received MQA accreditation to TVET status. It is believed that this process would facilitate the TVET classification at the programme level in the future, instead of current classification which is at the institution level.

Since 2012, the employability rate of TVET graduates has exceeded that of non-TVET graduates.

One of the indicators used by the MOHE to measure the graduates’ labour market outcomes is the graduate employability (GE) rate, one of the main key performance indicators (KPIs) of higher education. It tracks graduates’ status upon graduation, usually around six to twelve months after study completion<sup>40</sup>. Based on this measure, a positive outcome can be observed with the GTS data which showed that the employability rate of TVET graduates had increased from 65.5% in 2010 to 87.6% in 2020 (Figure 1). Furthermore, the figure also shows that TVET graduates had been outperforming non-TVET graduates since 2012.

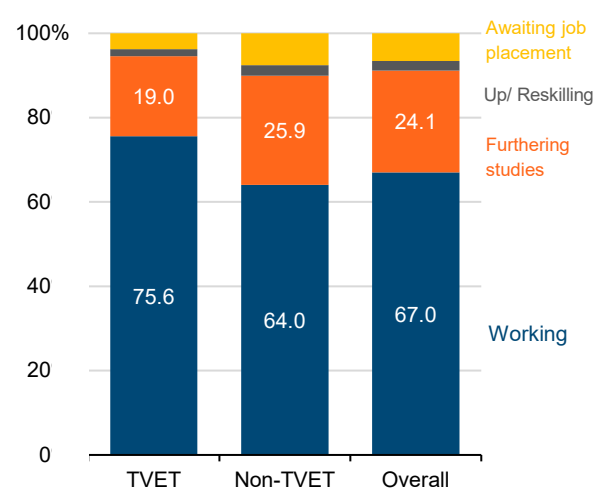
Undeniably, the graduate employability rate seems to be a reliable indicator that implies the government’s continuous efforts to improve TVET education have enhanced the employment outcomes of fresh TVET graduates over the years. This includes initiatives to improve the quality of teaching, widen the learning pathways for students, as well as streamline the accreditation system<sup>41</sup>. Additionally, low-impact programmes that are not in demand by industries were also eliminated to address the low employability issue<sup>42</sup>.

**Figure 1: Employability rate, TVET vs non-TVET, 2010 – 2020**



Source: MOHE (various years), authors’ calculations

**Figure 2: Status of employable graduates, TVET vs non-TVET, average of 2010 – 2020**



Source: MOHE (various years), authors’ calculations

However, it should be highlighted that “employability” does not equate to “being employed”. This is because the graduate employability rate is computed by the MOHE based on GTS data to comprise graduates with the following four statuses (1) working, (2) furthering their studies, (3) up/reskilling, and (4) awaiting for job placement within six months after completing their studies.

<sup>40</sup> The Star (2022)

<sup>41</sup> 10thMP, EPU (2010)

<sup>42</sup> MOHE (2012), page 147

By this definition, employability in this regard includes graduates who have already been employed (not necessarily in a “graduate” job, but in any job), as well as those who are furthering their study and participating in upskilling programmes.

Nevertheless, among graduates considered as “employable”, 75.6% of TVET graduates were already working shortly after graduation, on average between 2010 and 2020. This contrasts with non-TVET graduates where only 64.0% managed to secure a job (Figure 2). Higher working share among TVET graduates could be attributable to the nature of TVET education that train students with specific technical skills demanded by the industry, thus making employment easier for them. Practical training may also be an advantage to them compared to those with academic qualifications alone.

### TVET diploma holders opted to work immediately after completing their studies, while non-TVET graduates chose to pursue further education or training.

Comparing the employment status between diploma<sup>43</sup> and degree<sup>44</sup> holders, the data again shows that TVET graduates at both levels have outperformed non-TVET graduates in terms of the total employability rate. Figure 3 shows that 63.3% of TVET diploma holders were already working after receiving their certification, compared to only 34.9% among non-TVET diploma holders. This indicates that fewer TVET diploma graduates were opting to further their studies or join upskilling programmes compared to non-TVET diploma graduates. The reasons could be linked to the hands-on experience they have gained from the TVET courses, hence contributing to a high employment rate. Furthermore, it could also be due to the TVET approach of supporting graduates to join the industry to work immediately after graduation instead of furthering their academic education<sup>45</sup>.

On the other hand, Figure 3 also shows that more than 40% of non-TVET diploma graduates were continuing their studies or upskilling themselves since they might have more options to do so either at public or private universities. In contrast, there could be limited options for TVET diploma holders to pursue a degree since universities that offer skill-based education at a higher level would only be contained within the four technical universities under the MTUN. Despite the fact that opportunities may be available in other public and private universities, and there exist the Malaysian Qualifications Framework (MQF)—a unified qualification framework that allows graduates to move between skills and academic training qualifications—the shift may not be that straightforward since the pedagogical approach of the two pathways differ significantly<sup>46</sup>.

While the scenarios were slightly varied at the diploma level, the data shows more comparable outcomes between TVET and non-TVET graduates who had furthered their studies at the degree level. Figure 4 indicates that about half of the graduates from both study streams were working upon graduation and roughly 15% furthering their studies.

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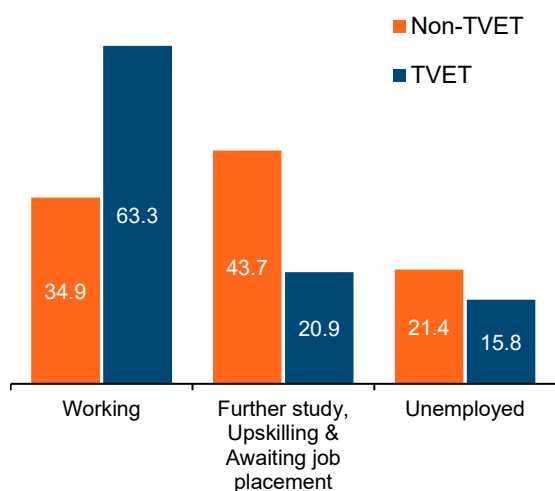
<sup>43</sup> Including pre-bachelor certificate holders

<sup>44</sup> Including advanced diploma

<sup>45</sup> The Asia Foundation (2022)

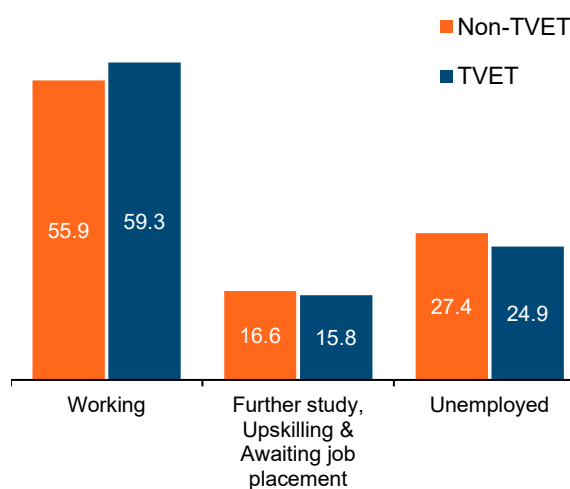
<sup>46</sup> Ibid

**Figure 3: Employability status of diploma holders, non-TVET vs TVET, average of 2010 – 2020 (%)**



Source: MOHE (various years), authors' calculations

**Figure 4: Employability status of degree holders, non-TVET vs TVET, average of 2010 – 2020 (%)**



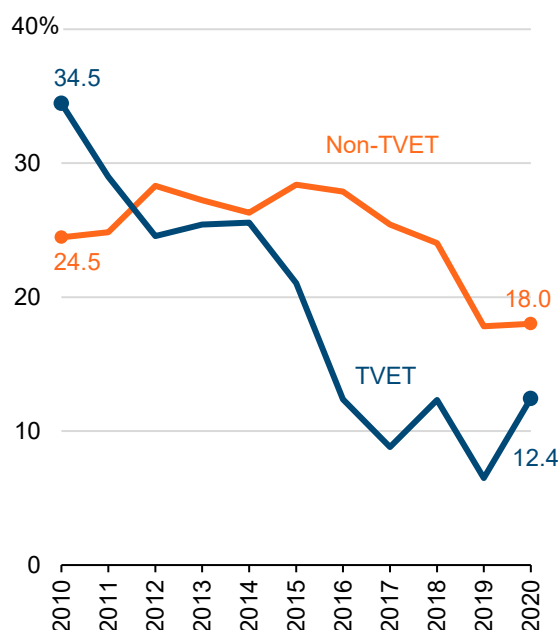
Source: MOHE (various years), authors' calculations

Most unemployed graduates attribute their situation to the competitive labour market. While "awaiting further study offers/results" is the second highest reason cited by TVET graduates, non-TVET graduates often cited "rest or vacation".

Another finding that illustrates the improved outcomes of TVET graduates over the years is in terms of graduate unemployment. Figure 5 shows that in 2010, the unemployment rate for TVET graduates was higher than non-TVET graduates, at 34.5% and 24.5% respectively. However, in 2020, the percentage declined to 12.4% for TVET graduates which was lower than 18.0% for non-TVET graduates.

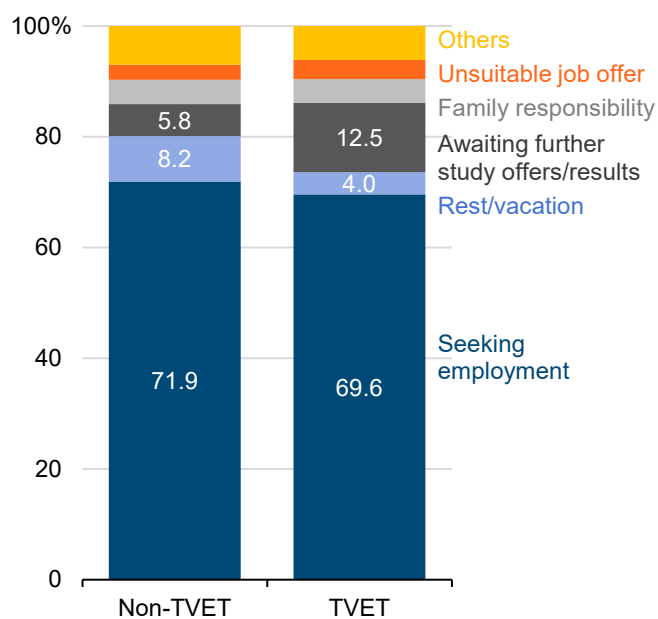
Meanwhile, Figure 6 shows several unemployment reasons cited by non-TVET and TVET graduates. Essentially, both graduates have the same main reason with around 70% citing they were "still seeking employment in this competitive labour market". The second reason is interesting. Among unemployed non-TVET graduates, "to rest or vacation" was the second highest reason not to be working, with 8.2% of them that cited so (compared to only 4.0% of TVET graduates citing the reason). On the other hand, the second highest reason among TVET graduates was "awaiting further study offers/results" (12.5%). This underscores the desire among unemployed TVET graduates—who are predominantly diploma holders—to continue learning and enhancing their skills before stepping into employment.

**Figure 5: Percentage of unemployed graduates, non-TVET versus TVET, 2010 – 2020**



Source: MOHE (various years), authors' calculations

**Figure 6: Reasons for unemployment, non-TVET versus TVET, average of 2010 – 2020**



Source: MOHE (various years), authors' calculations

Graduates' pay level is strongly linked with their qualification level. TVET diploma and degree holders could earn a higher income although the prevalence is still lower than non-TVET.

While the findings related to “employability” has generally been positive for TVET graduates, the statistics are not enough to evaluate their performance in the job market. Another important aspect worth examining is the graduates' ability to generate income (“earning-ability”).

As has been extensively discussed in our previous studies, the starting pay of fresh graduates has been dismal with lackluster growth in the last decade. Every year, at least one-third of our graduates faced overqualification—a situation in which graduates hold positions that do not commensurate with their qualifications. Furthermore, three in four graduates still earn below RM2,000 in 2020 and the shares have remained flat over the last ten years<sup>47</sup>. The situation is even worse for TVET graduates who are predominantly diploma holders with around 90% of them struggling to find jobs that could pay them more than RM2,000 monthly<sup>48</sup>.

Low starting pays aside, we look beyond the RM2,000 pay level and examine the scenario of earning above RM3,000 to see the earning potential of TVET graduates. Undeniably, the percentage of graduates earning at this level is very small—around 4.0–7.5% between 2010 and 2020 for all graduates at the diploma and degree levels, and around 1.0–3.0% for TVET graduates.

<sup>47</sup> Mohd Amirul Rafiq Abu Rahim and Shazrul Ariff Suhaimi (2022)

<sup>48</sup> Hawati Abdul Hamid (2023)

Breaking down the data by qualification, our analysis found that pay levels are closely linked with qualification levels. Correspondingly, the incidence of TVET degree holders earning more than RM3,000 is higher compared to TVET diploma holders.

Figure 7 shows that the percentage of TVET degree holders in the RM3,001-RM5,000 income bracket was around 10.0% in the last three years, rising by around 8.0 percentage points from 1.8% in 2020. This reflects the positive outcome of providing greater opportunities for TVET students to pursue a degree such as those offered by the MTUN. Additionally, our earlier study found that between 2018 and 2019, TVET degree holders demonstrated a greater likelihood of earning a higher income compared to non-TVET degree holders (at 1.3 times odds)<sup>49</sup>. The odds ratio went down to 1.14 in 2020 due to the COVID-19 pandemic which potentially had adversely affected jobs that could not be performed remotely yet were pertinent to TVET graduates.

However, for TVET diploma holders the percentage of earning RM3,001-RM5,000 is much lower—at around 1.0% only, with a very marginal increase over the decade (Figure 8). This is not unique to TVET diploma holders alone as the percentage for non-TVET is also small—at just under 2.0%—since they mostly worked in non-graduate jobs (semi and low skilled)<sup>50</sup>. In this regard, it could be inferred that encouraging graduates to further their studies at higher levels could improve their earning potentials to some extent.

Alas, getting an exceptionally well-paid job is still a far-fetched dream for many fresh graduates. Figure 7 and Figure 8 show that a very small proportion of diploma and degree holders have been able to secure a job that pays more than RM5,000 monthly (less than 0.5%). Additionally, in 2020, the Covid-19 pandemic has reversed the gains that had been achieved a decade earlier.

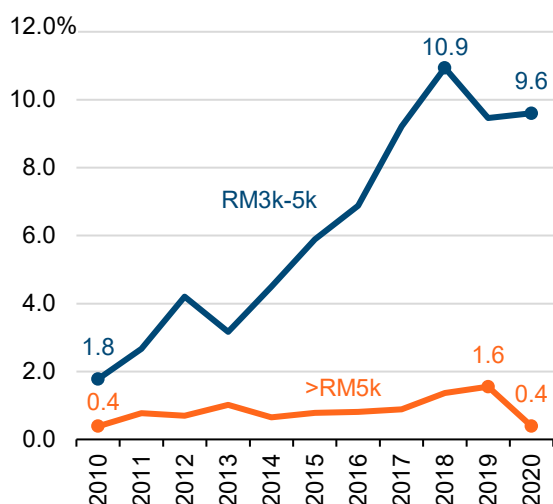
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<sup>49</sup> Hawati Abdul Hamid (2023)

<sup>50</sup> Mohd Amirul Rafiq Abu Rahim and Shazrul Ariff Suhaimi (2022)

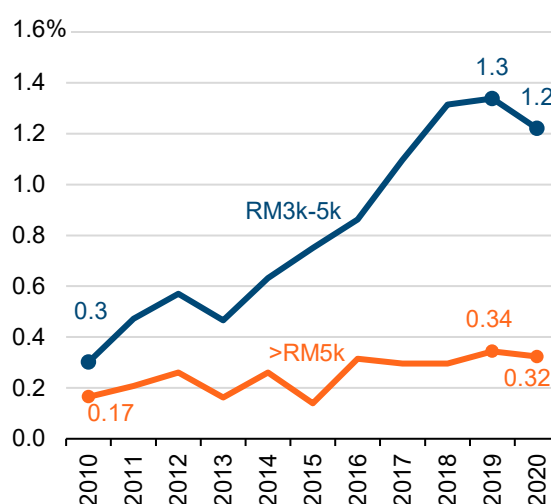


**Figure 7: TVET degree holders earning RM3,000 and above, 2010-2020**



Source: MOHE (various years), authors' calculations

**Figure 8: TVET diploma holders earning RM3,000 and above, 2010-2020**



Source: MOHE (various years), authors' calculations

Potential of TVET graduates involved in self-employment could be unleashed further to produce higher returns.

To further understand the factors affecting pay level beyond qualification level, we look at the employment type to examine the differences between those working in full-time employment and those who are self-employed.

As a background, the GTS data shows that the overall percentage of graduates working full-time has generally declined over the last decade. Meanwhile, the percentage of self-employed has increased—from less than 5% in 2010 to over 20% in 2020<sup>51</sup>. This could be a result of the government's efforts under the Malaysia Education Blueprint<sup>52</sup> of encouraging more Malaysians to become entrepreneurs in an effort to turn job seekers into job creators. Subsequently, initiatives have been undertaken to nurture the entrepreneurial spirit in youth at an early age such as at the vocational colleges and technical schools<sup>53</sup>.

<sup>51</sup> Mohd Amirul Rafiq Abu Rahim and Shazrul Ariff Suhaimi (2022)

<sup>52</sup> MOHE (2012)

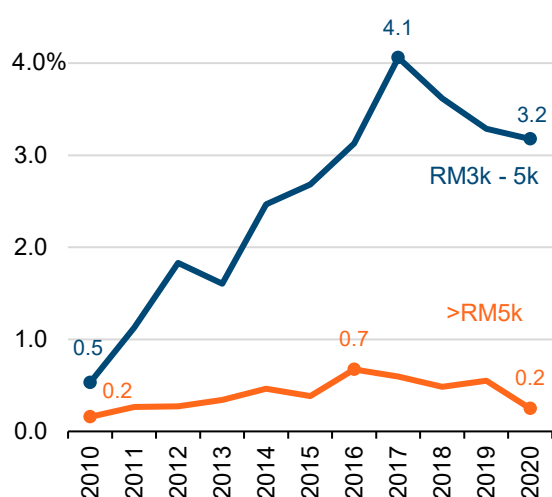
<sup>53</sup> 11thMP, EPU (2015)

Figure 9 shows that the percentage of TVET graduates working in full-time employment and earning RM3,001-RM5,000 has been increasing from less than 1.0% in 2020 to more than 3.0% in recent years. The trend was also moving in a similar trajectory for pay level of above RM5,000 despite it being at a much lower percentage. Although the percentage has been trending upward, it should be highlighted that the prevalence of TVET graduates earning better than average is still lower compared to non-TVET graduates with a gap of around 10.0 percentage points for the RM3,001-RM5,000 income bracket. As highlighted earlier, the gap is most likely due to the qualification factors of the two groups.

Figure 10 shows that the percentage of TVET graduates earning more than RM3,000 and involved in self-employment. The figure suggests that over the last decade, 2.0% were in the RM3,001-RM5,000 income bracket. Unlike full-time employment, outcomes between TVET and non-TVET graduates doing self-employment are more comparable, with a gap of less than 2.0% on average. Furthermore, although the percentage of those earning more than RM5,000 has deteriorated over the years, it is still much higher compared to their peers who work in full-time employment.

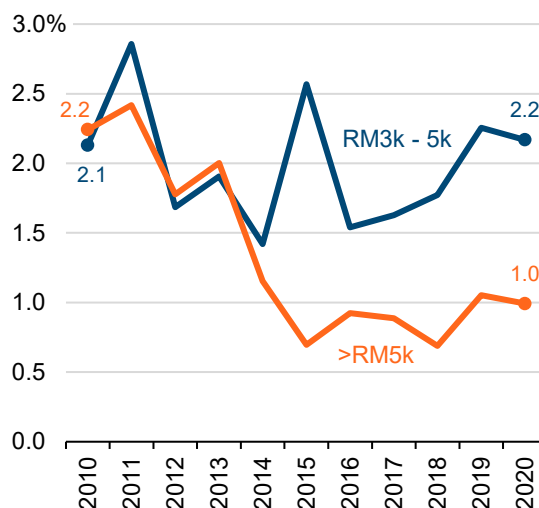
Even more encouraging is that among TVET graduates who were earning more than RM5,000, a greater number of them are diploma holders. In 2020, the number of diploma holders in this category was ten times higher than degree holders while the prevalence within each group was quite comparable, at 1.0% respectively. Data also indicates that these self-employed TVET graduates are typically involved in manufacturing and construction activities, compared to non-TVET graduates who are more involved in sales and services activities. This underscores the potentials of skill-based education in driving entrepreneurship to generate more economic activities and job opportunities.

**Figure 9: TVET degree graduates in full-time employment and earning RM3,000 and above, 2010-2020**



Source: MOHE (various years), authors' calculations

**Figure 10: TVET diploma graduates in self-employment and earning RM3,000 and above, 2010-2020**



Source: MOHE (various years), authors' calculations

## 5. Conclusion

In conclusion, findings from the GTS data analysis indicate that employment outcomes of TVET graduates have improved over the years as evidenced by higher employability rate. This could be attributable to efforts made on the supply side to address several challenges faced by the sector such as in terms of quality assurance, governance and misperception. The establishment of MTUN as a pathway to higher education for this group of students, as well as the government's encouragement of embracing entrepreneurial spirit have benefitted some TVET graduates. Although Malaysia's TVET achievements are still behind than that of other developed countries, it is performing better than in the past and is increasingly becoming more important in providing the skilled manpower needed for economic and social development. Indeed, it is one of the important game changers in strengthening Malaysian education and the labour market.

Nevertheless, the issue of low wages continues to be a major concern for TVET graduates, although it is not unique to this group of graduates alone<sup>54</sup>. However, getting well-paid job is not impossible as findings from this study show. For example, TVET graduates who are involved in self-employment have the potential of earning higher and make a significant contribution to the economy and society. This highlights that the world has changed and the idea that only the standard employment alone could provide steady and well-paying jobs should be reinvented.

Unleashing their potential further would definitely require a multi-pronged approach. This could entail equipping them with the skills and knowledge to identify and run viable business opportunities successfully, as well as providing supports in terms of access to markets, funding and business advisory services. Stronger collaboration with industry players will provide the necessary exposure for them to sharpen their hard and soft skills as well as broaden their network.

Hence, the focus moving forward should also be given on the demand side especially on finding strategies to support graduates in earning higher incomes, thus providing a better return on education investment. Stronger collaboration with the industry in terms of shaping the curriculum and training delivery is critical as they will be the ones receiving the new workforce. Initiatives announced in the Budget 2023 would contribute to unlocking the potential of TVET education and its graduates, but more concerted efforts are needed to make Malaysia's TVET stand on an equal footing with other successful countries.

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<sup>54</sup> Hawati Abdul Hamid (2023)

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