

Entry-Level Salary Trends In Malaysia: Insights From Private Sector Employment (1997-2022)



Acknowledgements

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Our encounter with the MEF Salary Survey dataset can be traced back to early consultations with human resource practitioners within the company and the physical archives of the PNBRI library. Seeing the potential in this undervalued resource, we hoped to uncover insights provided by the impressively long period, going back to the mid-1990s.

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Executive Summary

This report analysed entry-level salaries in Malaysia from 1997 to 2022 utilising data of “employees without prior experience”¹ extracted from the MEF Salary Survey, which is available for purchase by the public on its website². The survey is conducted annually among member companies of the Malaysian Employers Federation (“MEF”).

PNB Research Institute (PNBRI) aimed to understand if new entrants to the Malaysian labour market are doing significantly better compared to their predecessors. To that end, the PNBRI team scrutinised salaries from the educational dimension, as reported in the annual MEF Salary Survey for Executives and Non Executives among their member companies. The survey provided valuable data over 25 years, enabling us to conduct simple time series analyses of entry-level salaries.

Consistent with the literature, our study found that wages for new entrants to the Malaysian labour market within the private sector (using the respondents to this survey as the sample) have broadly not changed compared to their predecessors more than two decades ago. However, several positive developments were also found in this sample.

In summary, we uncovered the following promising and worrying trends:

1. The minimum wage has reduced wage inequality across education levels

- At the entry-level, there was a positive relationship between the qualification level and the salary level of the median employee. It was found that “the higher the qualification, the higher the pay” expectation was true and appeared consistent throughout the period of study from 1997 to 2022.
- In addition, comparing the periods 2002 to 2012 and 2012 to 2022, it was found that “the lower the education level at the point of entering the job market, the more the entry level wage has grown”. However, this growth rate mostly doubled across all qualification levels after the minimum wage legislation.
- In terms of growth, the median entry-level salary for secondary education had grown the strongest over the 25 years after adjusting for inflation. The median entry-level wage for those entering the workforce grew 89% (or 2.6% annually) for PMR holders and 44% (or 1.5% annually) for SPM holders.
- In other words, **the median entry-level PMR holder entering the private sector for the first time in 2022 was earning almost twice as much** as her counterpart in 1997, in real terms.
- The question left to bear is whether the inequality of wages between those with higher education levels and those without is the kind that should be reduced. Such a phenomenon may speak for the declining interest in higher education recently observed in Malaysia. In 2019, as high as 72.1% of SPM leavers did not wish to pursue tertiary education (Wong 2022).

¹ As defined by MEF

² mef.org.my

2. There appear to be signs of shrinking returns to education in the Malaysian private sector

- While there remains an ‘education premium’³ (in Ringgit Malaysia terms) for those with higher education qualifications compared to those without, **this premium had been declining.**
- In 1997, the median basic degree holder used to earn 2.7 times more than the SPM holder. By 2022, the median basic degree holder earned only 1.7 times more than the SPM holder.
- In terms of growth, the median entry-level salary for tertiary qualification holders had declined the most over the 25-year period after adjusting for inflation⁴, by 28% (or -1.3% annually⁵) for master’s degree holders and 10% (or -0.4% annually) for bachelor’s degree holders.
- In other words, the median fresh graduate with a master’s degree entering the private sector for the first time in 2022 effectively earned almost one-third less than her counterpart in 1997, in real terms.
- Again, while the role of the minimum wage is important in at least providing the bare minimum for livelihood, its effects in reducing wage inequality across education levels may not exactly be the kind of distributive improvement that is envisioned, especially if wages at the higher education level are not growing.

3. Academic graduates still earn more, but TVET is catching up

- The entry-level salary of **TVET qualification holders grew faster in real terms compared to that of non-TVET (“academic”) qualification holders, but they still earn less in absolute terms.** This is true across all TVET qualification levels – from post-secondary to technical certificates that are equivalised⁶ to a bachelor’s degree.
- Across the decade from 2012 to 2022, the academic bachelor’s degree holder had consistently been earning about 1.4 times more than the (TVET) technical institute certificate holder. During the same period, the academic diploma graduate had also consistently been earning 1.1 times more than the TVET diploma (DKM Level 4) graduate.
- In terms of growth, after adjusting for inflation, the median entry-level wage for a TVET diploma (DKM Level 4) graduate grew stronger by 14% (or 1.3% annually) between 2012 and 2022, compared a mere 2% (or 0.2% annually) growth in that of an academic diploma holder.

³ Interchangeably used as ‘education premium’ or ‘returns to education’ or ‘education wage premium’ or ‘educational wage differentials’ to describe the difference in income between an employed person with a high school diploma and an employed university graduate (Kurtzon 2004) (Goldin and Katz 1999)

⁴ 2012 = 100

⁵ Compounded annual growth rate (CAGR), based on geometric averaging

⁶ See Figure 10

- This may provide an early indication that the TVET pathway is growing in importance. In 2012, the (academic) diploma holder earned 1.2 times more than the equivalent TVET diploma (DKM Level 4) holder. In 2022, the diploma holder already earned the same as the equivalent TVET diploma (DKM Level 4) holder.
- In addition, “the higher the qualification, the higher the pay” phenomenon holds true in the TVET world. From 2012 to 2022, the median Advanced TVET diploma (DLKM Level 5) holder consistently earned one-tenth more than the median TVET diploma (DKM Level 4) holder, while the technical institute certificate holder consistently earned about one-fifth of a school leaver with the STPM.

These problems echo a well-recognized problem in the Malaysian labour market. Thus, many policies and institutions are already in place or at least in the works. Our study thus would support reiterating the following policy imperatives:

- To **maintain and strengthen the implementation** of the minimum wage policy for its anti-poverty and inequality-combating functions.
- To **complement the minimum wage with wage bargaining models such as institutionalised or centralised wage bargaining**, with an expanded platform for entry-level employees.
- To **expand access and incentivise TVET certificate holders to pursue their respective TVET education to the tertiary level.**

In conclusion, our report hopes to provide a more nuanced understanding of the evolving landscape of entry-level salaries in the private sector in Malaysia, beyond that of graduates from higher learning institutions in Malaysia. Apart from policy interventions directly on wage-setting mechanisms such as the minimum wage and the progressive wage policy, these highlighted trends raise crucial questions about the efficacy of investments in higher education and the need for strategic policy considerations in the school-to-work transition.

Background

The motivation of this study was driven by frequently heard comments such as “the starting pay today is hardly any different from three decades ago”. The specific group associated with ‘starting pay’ here may have to be clarified, but the underlying inquiry remains clear and worth investigating:

Accounting for inflation, are new entrants to the Malaysian labour market doing significantly better compared to new entrants three decades ago?

The landscape of policy research on labour compensation in Malaysia is admittedly already considerably mature. Studies on wages and salaries in Malaysia predate the COVID-19 pandemic and have contributed to important labour market institutions such as the minimum wage, which Malaysia was considerably late in adopting. Research has accelerated even further since the pandemic, following the pandemic-era Wage Subsidy program, and the recently proposed Progressive Wage Policy (PWP). Apart from the pandemic, structural developments such as declining returns to education, the advent of labour-replacing technology, and increasing job precarity and underemployment, have all contributed to this acceleration, none of which are unique to Malaysia.

To an extent, these findings already answered our question and set the backdrop for this study. Where we hoped to complement these readily known findings is by providing the perspective from

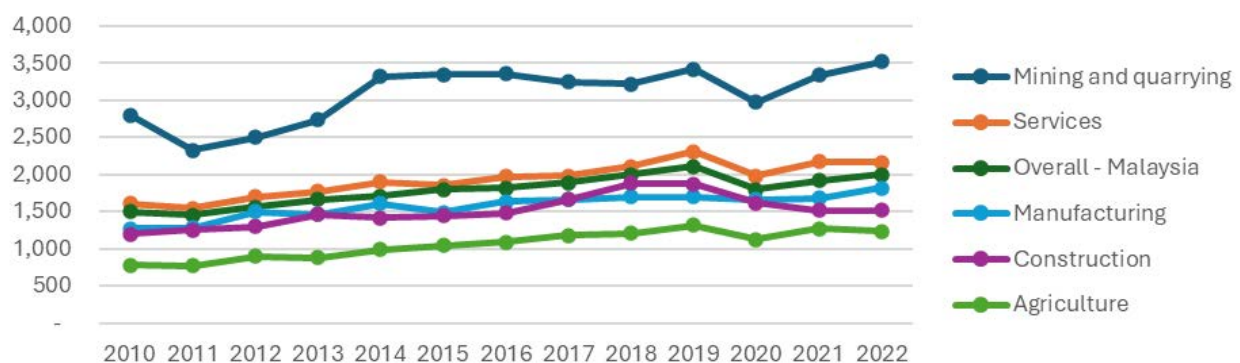
- a longer time scale that went back as early as the mid-1990s.
- *only* the private sector, given the sizeable proportion of the civil service (approximately 10%) in the Malaysian labour market (which has different wage-setting mechanisms beyond labour supply and demand).
- those without tertiary education, i.e., STPM and below.

We start by discussing some of these readily known findings.

Pay in Malaysia

Firstly, wage growth in Malaysia has remained broadly stagnant across the workforce. Between 2010 and 2022, wages grew at an average⁷ rate of 4.5%, but only 2.5% in real terms. Over the last decade, Malaysian workers experienced slower real wage growth than workers in China, Indonesia, Thailand, and Vietnam (Lee 2024). The stagnating trend in real median wages in Malaysia is illustrated in Figure 1 below. Apart from the workers in the mining and agricultural sectors, whose real wages grew by more than 3.0% annually on average, workers in all other sectors barely experienced the same levels of growth.

Figure 1: Real median wages by sector, Malaysia (RM), 2010 - 2022



Source: Malaysian Bureau of Labour Statistics (MBLS), authors' calculation

Stagnating wages are not a phenomenon unique to the last decade. Using the flagship Household Income Survey (HIS) covering 1995 to 2019 to complement the annual Salaries and Wages (SWS) which only began in 2010, Muthusamy, Abu Rahim and Khalidi (2023) recently found that wages for workers in the Malaysian labour market have been 'generally suppressed' while wage growth rates are 'broadly regressive' (Muthusamy et al. 2023) after adjusting for the effects of the structural factors, such as the minimum wage policy. In other words, low-wage workers would have experienced little to no real wage growth without the minimum wage.

Secondly, wage levels in Malaysia have not kept up with productivity levels. Malaysian workers earn less than a third for every dollar of GDP produced, as indicated by the "Productivity-adjusted wages" (Murugasu, Hakim, and Yau 2018)⁸, or the labour share of GDP for Malaysia. Malaysian workers earn a paltry 32% of every dollar of GDP generated by the country in 2022, the remainder being attributed to capital owners⁹. This is lower than even that of Singapore and the United States, at about 37% (The Ministry of Trade and Industry Singapore 2023) and 56% (U.S. Bureau of Economic Analysis 2024), respectively. In fact, the situation has worsened over the two years following the pandemic, declining from historical levels of 35-36% to the current 32%.

⁷ Calculated in terms of Compounded Annual Growth Rates (CAGR)

⁸ Compensation of employees divided by productivity (GDP (at purchasers' price) per worker)

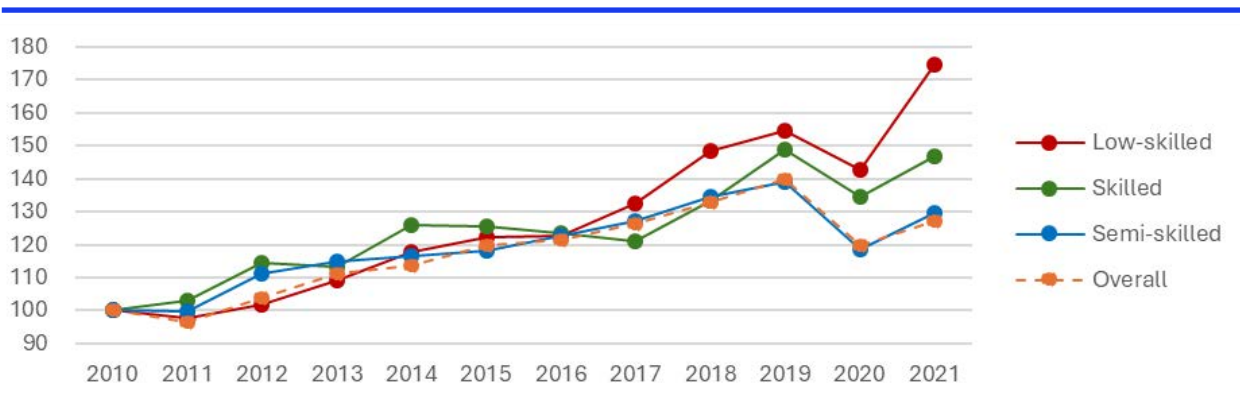
⁹ Net of taxes

Admittedly, a declining labour share of GDP should not be surprising given the advent of labour-replacing technology adoption in the backdrop (Bergholt, Furlanetto, and Maffei-Faccioli 2022). Benchmark countries like the U.S., South Korea, China, and Japan are similarly seeing declining wages-to-GDP ratios but have remained paying their workers at least half their respective GDPs. Meanwhile, Malaysian workers have primarily been on the receiving end of the wage bargaining power spectrum, partly driven by an FDI-centric and competitive cost growth model, limited avenues for collective bargaining, Malaysia’s corporate work culture (Lee and Zhang 2023), and an outsized population of MSME employers (97% of establishments) (SME Corp 2024).

Thirdly and rather importantly, the “middle jobs” were found to be structurally depressed.

Using the Semi-Skilled category to proxy “middle-level” jobs, as shown in Figure 2 below, this group of workers have experienced the least gains since 2010 and thus has influenced wage growth patterns for the labour market overall due to its largest share of employment (2021: 56%), compared to Low-Skilled and High-Skilled workers. Note that MASCO-08 classifies those working in clerical and sales and services workers as “semi-skilled” and those working in crafts, plant and machine operations, agriculture, and elementary occupations as “low-skilled” (Institute for Labour Market Information and Analysis (ILMIA) 2017).

Figure 2: Real growth in median wages (2010 = 100) by Skill, Malaysia (RM), 2010 – 2021¹⁰

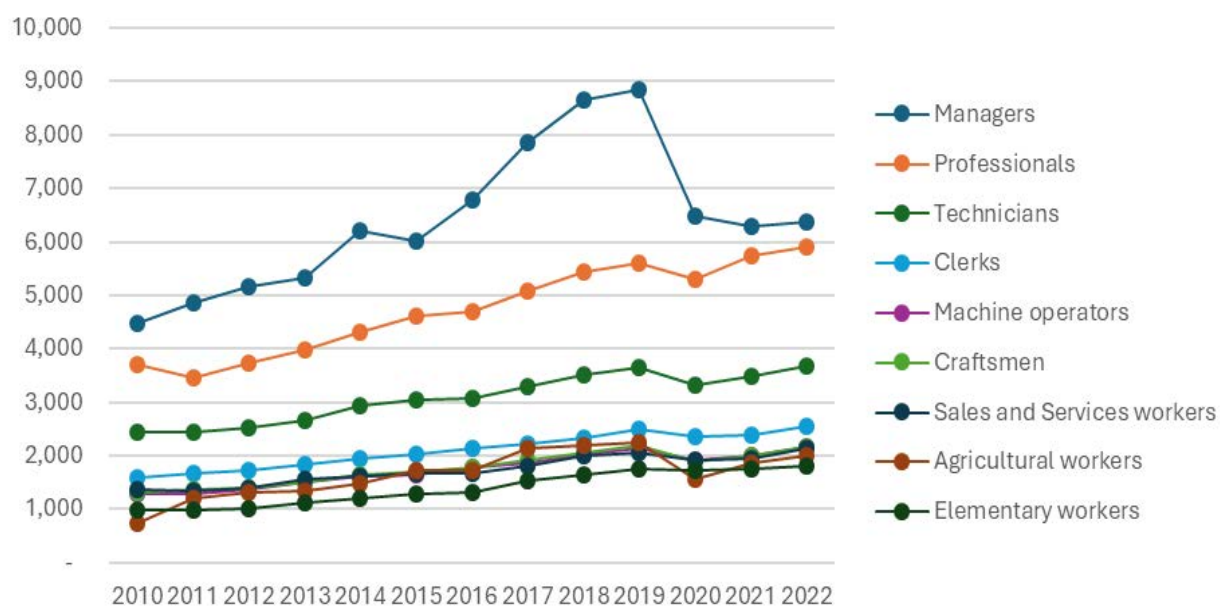


Source: Department of Statistics Malaysia (DOSM), authors’ calculation

A similar pattern is observed when looking at real median wages by Occupation, as depicted in Figure 3 below. As analysed by Lee (2024), jobs like plant- and machine operators, craftsmen, and sales and services workers, whom the author considers as “middle rung”, earn merely one-fifth (18-19%) more than agricultural and elementary workers. These jobs constitute some 55% of the employed population. Meanwhile, wages at the low end have been bolstered by the minimum wage policy, and wages at the top end have enjoyed steady growth rates due to potentially higher bargaining power (Lee 2024).

¹⁰ Data on median wages by Skills has not been reported by MBSL 2022 onwards

Figure 3: Real median wages (2010 = 100) by Occupation, Malaysia (RM), 2010 – 2022



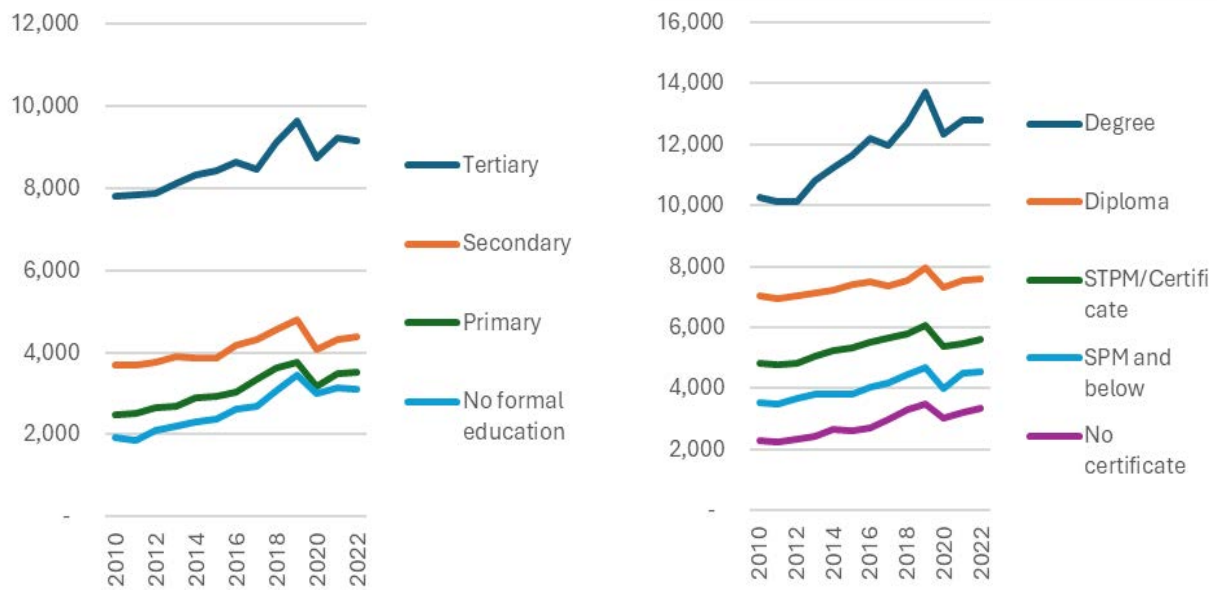
Source: Malaysian Bureau of Labour Statistics (MBLS), DOSM, authors' calculation

This analysis was built upon an earlier finding from Muthusamy, Abu Rahim and Khalidi (2023), which found 'compelling evidence' of a "squeezed middle" phenomenon (Muthusamy et al. 2023). When graphing out wage growth rates across the wage distribution (by decile), even in the decade prior to the COVID-19 pandemic, they found a discernible U-shape, indicating that wages in the middle deciles experienced the least growth in percentage terms, compared to lower and top-end wages (Muthusamy et al. 2023).

Although the report admits to a similar phenomenon in other labour markets globally, it cautions that in the case of Malaysia, the anaemic wage growth for middle-wage workers may be partly rooted in the underlying structural challenges in the Malaysian economy itself. One key challenge is Malaysia's continued overreliance on low-value-added services, and efforts to transition to high-value-added manufacturing and services have largely stalled. This is not dissimilar to an older finding by Bank Negara Malaysia (2018), which attributed the rising labour compensation-to-GDP ratio between 2010 and 2017 to expanding employment in the wholesale, retail, F&B, and construction industries – where wages continue to be low and foreign labour share remains high (Murugasu, Hakim, and Yau 2018).

Fourthly and finally, SWS data also confirms an anticipated positive correlation between education level and pay, where workers can expect to be broadly compensated in line with their respective qualifications. The absolute gap in Ringgit terms between the various education levels – namely SPM, STPM, diploma, and degrees – is discernible, relatively consistent, and in line with the observations in the overall (all-age) wage growth patterns, as observed in Figures 4 (a) and (b) below:

Figures 4 (a) and (b): Real median wages (2010 = 100), by Educational Attainment and Highest Qualification Obtained, Malaysia (RM), 2010 – 2022



Source: MBLs

- *Observation 1:* The median worker with a tertiary education consistently earns about twice as much as those with a secondary education across the observed period.
- *Observation 2:* The median monthly wage of workers without formal education has caught up with that of workers with primary-level education since 2019.
- *Observation 3:* The median monthly wage of workers without formal education grew the fastest (~42%) over the period 2012 to 2022, followed by workers with bachelor's degrees. Note that SWS wages data refer to wages of workers of all ages, not just those at the entry-level.

These findings have significant implications as we turn our focus to the younger workforce. They highlight not only the vulnerability of low- to middle-income households in keeping up with the cost of living but also the prospects of first-time entrants into the labour market. Youth-centric studies have since emerged to study the experience of Malaysian youth in the context of these broader trends. For example, the Ministry of Higher Education's (MOHE) Graduates Tracer Study (GTS) data¹¹ enabled the study of a large subgroup of the youth population, namely graduates of Malaysian higher education institutions (Mohd Ibrahim and Mahyuddin 2017; Abu Rahim and Suhaimi 2022; Hamid 2023; Abdul Hamid et al. 2024). An earlier study looked at another subgroup, namely youth aged 15 to 19 years using the International Labour Organization's (ILO) School-to-Work-Transition (SWTS) data (Lim et al. 2018). Similarly, some of these studies have pointed out that the amount and the types of jobs offered are of increasing importance, alongside skills and the education of the young workforce – particularly as the young decide between full-time or self-employment and whether to pursue tertiary education.

¹¹ <https://www.mohe.gov.my/en/services/graduate-employability> (MOHE)

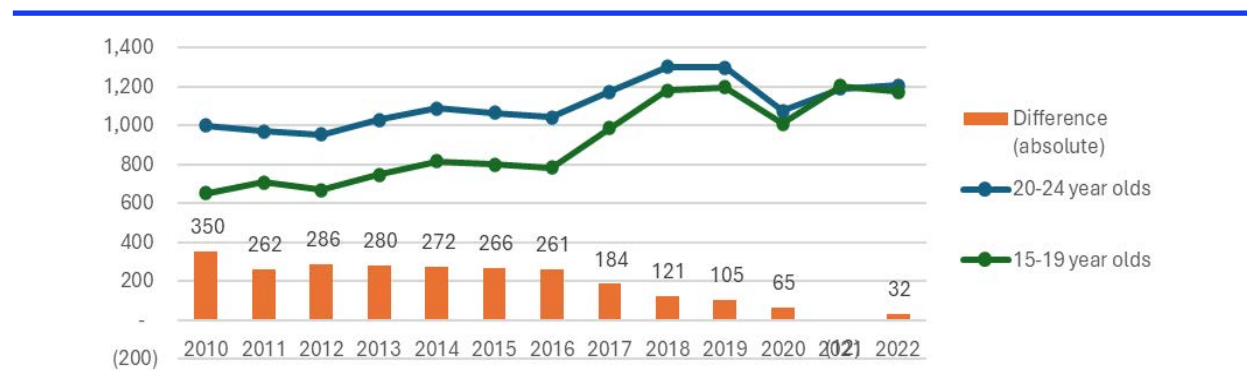
Pay for the Younger Workforce

Data from the annual Salaries and Wages (SWS) survey by the Malaysian Bureau of Labour Statistics (MBLS) once again offers the best starting point to investigate trends in pay for Malaysia's younger workforce. For this purpose, median wages by age – particularly at the younger end of the spectrum – are considered.

There is a potential trend of compressing wage differentials between graduates and non-graduates (based on the SWS), as indicated in Figure 5 below, assuming that the 15- to 19-year-old group has yet to enter higher education and that the 20- to 24-year-old group would mainly consist of those who are enrolled in, or have completed, higher education.

This is also a key finding of our study, where the SPM-PMR and the Diploma-SPM wage differentials were found to have dissipated with the introduction and subsequent revisions of the minimum wage policy, prior to the latest floor set at RM1,700 in November 2024 (see Findings chapter). Currently, there is some level of consensus on the effectiveness of the minimum wage policy in making Malaysia's wage distribution more progressive (Lee and Zhang 2023; Muthusamy et al. 2023; Lee 2024). However, its role in also narrowing the education premium at the lower end of qualification levels is a dimension that could be further investigated.

Figure 5: Real median wages (2010 = 100) by Age, Malaysia (RM), 2010 – 2022



Source: MBLS

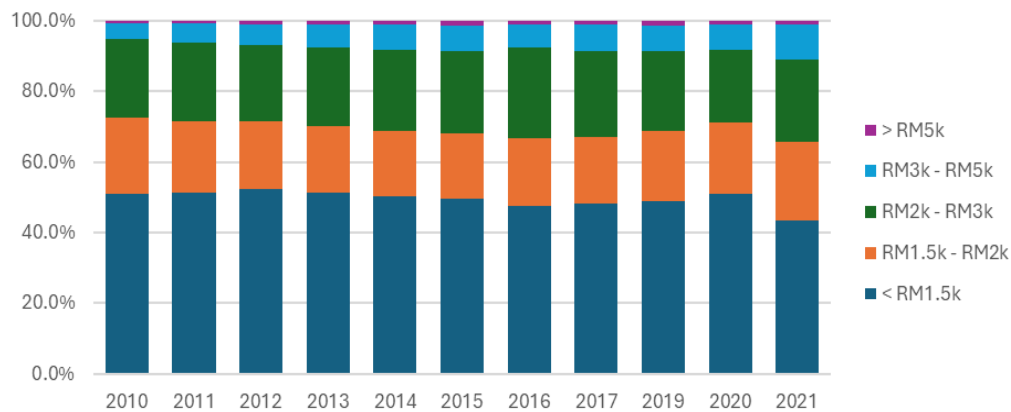
Unfortunately, the above observations cannot be generalised any further. While these young workers are most likely working their first job given their age, the SWS data do not precisely represent starting salaries or workers “without prior experience”, which is the topic of interest of this study. Fortunately, increasing public interest in the plight of the younger workforce has been followed by better insights from recent research, particularly on graduates. Some recent insights are discussed henceforth:

Firstly, starting salaries for graduates in Malaysia have remained stagnant over the past decade. A primary source for analysing these trends is the annually published Graduates Tracer Study (GTS) by MOHE, which has been tracking salaries for employed graduates in Malaysia upon graduation. Analysing this dataset, Khazanah Research Institute (2024) highlights that, until at least 2021, around half of Malaysian graduates consistently earned less than RM1,500 annually since 2010. As shown in Figure 6, this trend demonstrates a persistent lack of growth in graduate salaries over the analysed period.

While acknowledging the issue stems from various complex factors, the authors highlighted employers' high reliance on foreign workers as a crucial context to the stagnating wage growth. Their earlier report (Muthusamy, Abu Rahim, and Khalidi 2023) identified two important observations: (1) lower-paying sectors, such as retail and construction, tend to hire more foreign workers, while (2) higher-paying sectors, such as finance, employ fewer foreign workers but often hire highly skilled foreign workers at a premium compared to their local counterparts. Either way, local graduates appear to have lower bargaining power.

Our findings in this report will complement their findings, particularly on the experience of wage growth for new entrants who are not included in the Graduates Tracer Study (school leavers, SPM/STPM holders, TVET graduates with lower than diploma certificates, graduates from private TVET institutions), relative to graduates.

Figure 6: Breakdown of graduates by starting pay, based on data from Graduates Tracer Study, 2010-2021



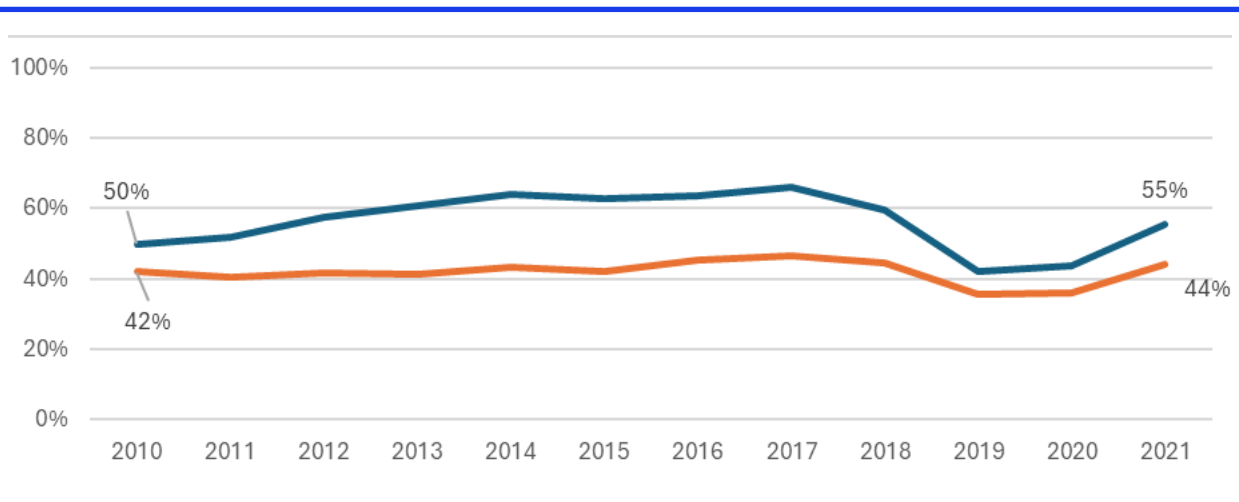
Source: Khazanah Research Institute (2024)

Secondly, an increasing number of graduates are forced to accept jobs for which they are overqualified, resulting in “wage penalty” (Khazanah Research Institute 2024). Having defined ‘overqualification’ as the scenario in which graduates have higher education and more training than what their jobs require, the authors reported an increasing trend of graduates who are considered overqualified for their jobs over the years, posing serious questions on the earnings prospects of graduates going forward (Figure 7). This mismatch often forces graduates to accept roles that underutilise their qualifications and undervalue their training. As a result, they experience a wage penalty – a reduction in earnings compared to what they could have earned in positions aligned with their qualifications.

Overqualification concerns both diploma and bachelor’s degree holders alike (Figure 7), but is more acute among diploma holders. In 2021, as high as 55% of diploma holders and 44% of degree holders were categorised as overqualified for the jobs they secured, often pushed into roles requiring skill levels below their training.

But to help confirm whether there is a more broad-based phenomenon of overqualification, comparing the overqualification experience between diplomas and degrees alone may be insufficient. We must also examine the employability and wage experience of graduates relative to non-graduates, such as PMR/PT3 or SPM/STPM holders. This is the area in which we hope our study would complement these earlier important findings. While we did not directly investigate overqualification as a phenomenon, it has an obvious and significant role in shaping the early employment outcomes of graduates.

Figure 7: Incidence of Overqualification among Degree and Diploma Graduates, based on data from Graduates Tracer Study, 2010-2021



Source: Khazanah Research Institute (2024)

Thirdly, while the technical and vocational (“TVET”) stream has increasingly gained attention for its potential to improve employment outcomes, it does not necessarily translate to higher earnings. High praises for TVET have mainly been based on the Graduate Employability (GE)¹² rate of TVET graduates, which stood at 94% in 2023, higher than the overall GE rate of 89.8% for all graduates (MOHE 2024). In addition, TVET graduates have also consistently exhibited a higher share of employment compared to academic graduates (Figure 8 (a)).

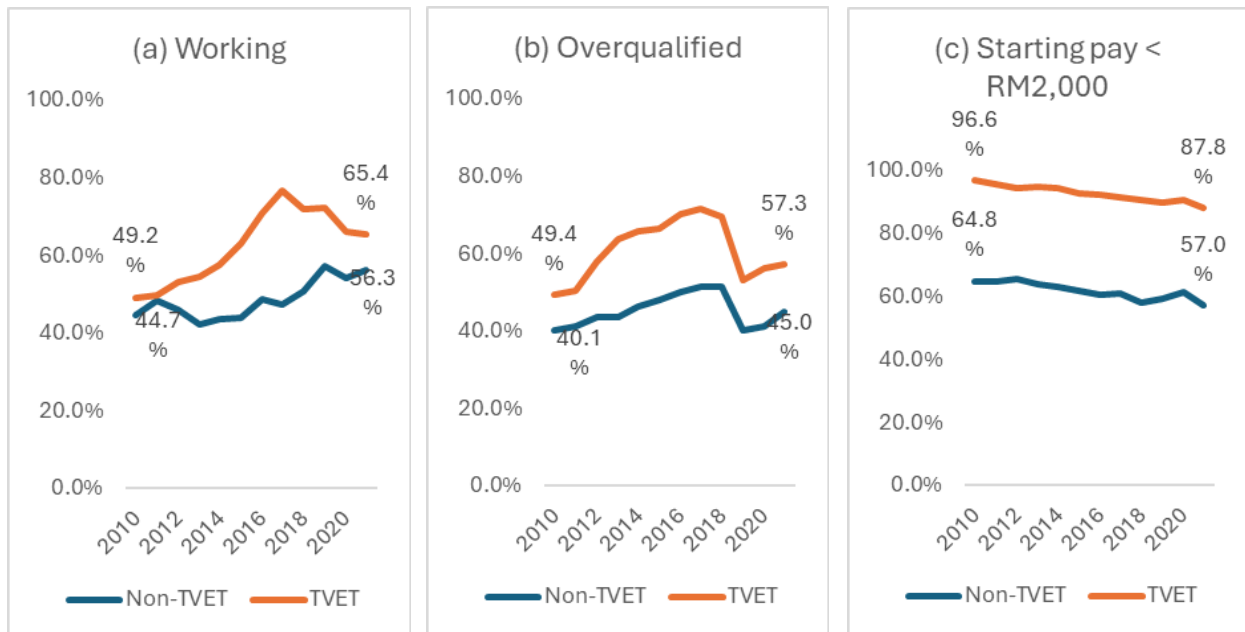
However, examining the earnings of TVET graduates provides a more sobering picture. As shown in Figure 8 (b) and (c), a higher percentage of TVET graduates experience what Khazanah Research Institute (2024) consider as overqualification compared to their academic counterparts. To provide a clearer perspective, it is more common for TVET graduates to occupy roles that require qualifications below their training level. For instance, TVET diploma holders are often employed in positions designed for skills certificate holders. It is even more concerning, though perhaps not surprising, that as high as 87.8% of TVET graduates earn less than RM2,000 per month, compared to 57% of academic graduates (Figure 8 (c)). This raises important questions about the true returns to a TVET education at its various levels, as they appear to face worse wage penalties and limited earning potential, despite their high employment rates.

Our study hopes to complement existing data on earning outcomes of TVET graduates by including institutions not currently covered in the GTS data¹³. We also had the fortune of analysing TVET qualifications at a higher granularity, where TVET is further compartmentalized based on its levels – from Sijil Kemahiran Malaysia 1 (MQA level 1 equivalent) to Technical Institute Certificates (MQA level 6, or bachelor’s degree equivalent).

¹² The GE rate includes not only graduates who are (1) employed, but also those who are: (2) continuing their studies, (3) enrolled in upskilling or reskilling programs, and (4) awaiting job placement (MOHE 2024)

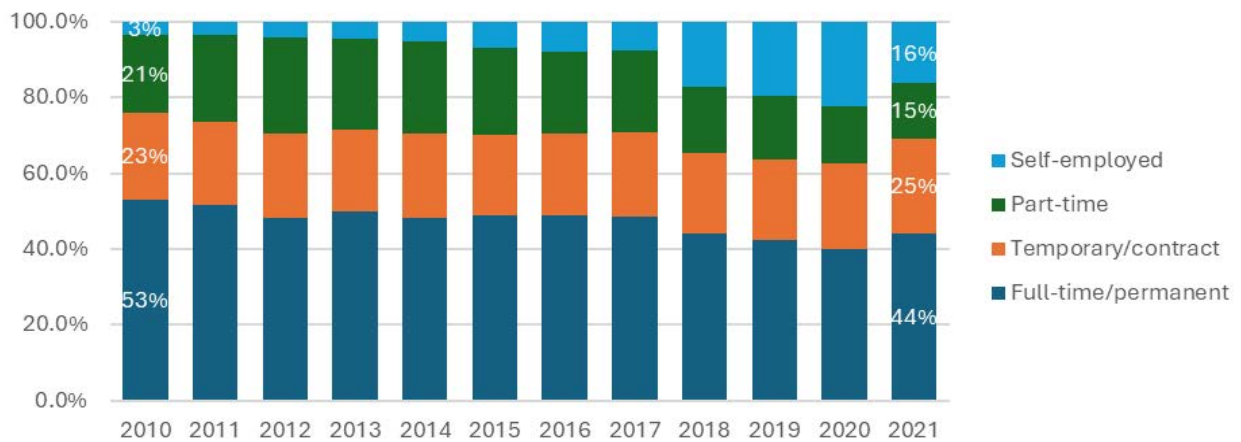
¹³ GTS does not include non-public TVET institutions

Figures 8 (a), (b), (c): Proportion of graduates (Academic and TVET), who are (a) working, (b) overqualified, and (c) earning less than RM2,000, 2010-2021



Source: Khazanah Research Institute (2024)

Figure 9: Breakdown of working graduates, by status of employment, 2010-2021



Source: Khazanah Research Institute (2024)

Fourthly, an increasing number of graduates face job security challenges and are pushed into non-standard forms of employment. There has been a noticeable decline in the proportion of graduates obtaining full-time positions, with temporary and self-employment becoming the most viable options for many (Figure 9). While the growth of self-employment, often linked to the rise of gig work (KRI, 2023; Ahmad Naqib Idris, 2017), can be viewed as a shift towards a more flexible and diverse labour market, it raises serious concerns about job security and the rise of (skills-based) underemployment. Young graduates may not voluntarily choose these forms of employment, which typically fail to make full use of their skills and qualifications.

About this study

Objectives

This study attempts to investigate whether recent entrants to the Malaysian labour market are doing significantly better than new entrants three decades ago. If the answer is no, and the Malaysian labour market cannot be relied upon to deliver social mobility and just compensation for its participants, it should not be surprising if Malaysians turn to foreign labour markets or partake in self-employment for better opportunities.

Our research hopes to complement many existing studies on compensation for *graduates*, which tend to use the authoritative annual Graduates Tracer Study and the corresponding Statistik Siswazah, which focus on those with tertiary-level qualifications from domestic higher-learning institutions (IPTAs and IPTS).

Toward this end, our study uses a relatively understudied resource, the annual MEF Salary Survey for Executives and Non executives, to observe compensation for first-time entrants in the *private* sector across more than two decades. More than 200 MEF member companies respond on a voluntary basis annually, thus we refrain from generalising its findings across the entire private sector, let alone the entire labour market. However, it did enable us to tap into time series that go further back from the GTS by MOHE (starting year: 2006) and the SWS by MBL/DOSM (starting year: 2010). Given this time scale, we can observe two and a half decades' worth of structural shifts in the labour market for new entrants into the private sector.

About the survey

The survey is annually dispensed by the Malaysian Employers Federation (MEF), a prominent organisation representing the rights of employers whose founding traces back to the independence of Malaya (1959). The MEF has a membership of 6,800 from 22 industry groups. Its key activities are providing expert advice on industrial relations issues and a broad range of training in Industrial Relations, Human Resources Management & Development and Occupational Safety & Health (OSH) to member companies. It has also been actively providing member companies with salary benchmarking information through these annual surveys, which date back as early as 1995.

Since 1997, they have been dedicated to surveying entry-level executives and non-executives in a designated section called "Employees without prior working experience". The respondents for this section would include member companies hiring non-graduates, as evidenced by the reporting of salaries of job holders with only PMR and SPM as their highest qualifications. It would also include graduates of non-MOHE institutions, such as graduates of non-Malaysian institutions. For context, before the pandemic, outbound Malaysians pursuing studies abroad amounted to about 5% of enrolment in domestic public and private universities¹⁴.

¹⁴ Based on authors' calculation, from Statistik Pendidikan Tinggi (2019), MOHE; data.uis.unesco.org, UNESCO

Data and Methodology

One key strength of the dataset is its focus on entry-level positions. In the case of DOSM's SWS data, for example, some assumptions needed to be made, such as using the wages of young workers between 15 and 25 years old as proxies for entry-level wages.

The categorisation 'by qualification' allows for an exploration of salary differentials between two job holders, based on their educational backgrounds – which is arguably one of the most important determinants of compensation for entry-level workers, in the absence of other unobservable determinants that are typically acquired through time and experience, such as soft skills, organisational knowledge, and social networks.

In addition, the MEF dataset presents a unique opportunity to conduct some rudimentary analysis on the “returns to education” in the Malaysian labour market, because the entry-level is precisely where we would expect a jobholder’s qualifications to matter the most. The data reflects actual starting salaries paid rather than offered, indicating that it is employer-*i.e.*, demand-centric.

Finally, the MEF has also been remarkably consistent in conducting the survey, providing us with an extended timeframe that allows for the identification of trends and patterns across more than two decades, compared to official national wage statistics.

To access this data, the authors mined 24 years’ worth of physical reports of the Malaysian Employer’s Federation (MEF) annual Salary Survey for Executives and Non executives reports for the years 1997 to 2022, with the assistance of an embedded image-to-text recognition function in our preferred processing software. In particular, the team extracted data on salaries for “employees without prior working experience”, amassing 48,996 data points from the reports, of which 1,410 were used in this discussion. Subsequently, the data is analysed ‘as is’ and not statistically altered.

Subsequently, the data was sanitised by removing:

- Data on starting salaries for those with Doctorates, Chartered Engineering, Certified Accountancy, and IT certification, as they were no longer reported since 2006.
- Data on starting salaries for those with a category reported as “Skills Certificate” due to inconsistencies and lack of clarity on what these different levels represent (of 1, 2, or 3).

Meanwhile, the nine (9) types of qualifications reported by the survey were collapsed into only 4 relevant qualifications for analytical purposes (please refer to the following segment on Profile of Respondents).

Limitations and Opportunities for Future Research

The main limitation of this dataset (in our context) is that the salary data are primarily presented by the *highest level of qualification* of the job holder. Where other parameters are also presented, they are presented primarily by qualification, such as by qualification and location and by qualification and industry. The implication is that its statistics cannot be reconstituted exclusively into location, sector, or company size, even though some of these factors may (or may not) have overriding effects over the qualifications factor. Some of these overriding effects may seem intuitive, but others are less so. For example, it was found that two job holders with the same qualification – one working in Johor and the other in Terengganu – unsurprisingly, experience different wage levels.

Another important caveat is that this study is only avail to secondary reported data which are already presented in key statistics, while the raw data remains proprietary to MEF. As such, our ability to recategorise or regroup the data is limited. Therefore, the statistical properties of the standard measures of central tendency, such as means and medians, are preserved and used exactly as reported in this study. We do not make further statistical analyses of the reported medians and means.

With access to the primary format of this data, future research may seek to establish which of these factors are the strongest determinants of a new entrant's wages or whether any of these factors interact with each other, potentially using the classic Mincer earnings function (Mincer 1958) or its more contemporary variants. In other words, it would be even more beneficial to establish if there are other factors that determine a new entrant's wage levels more strongly than his or her qualifications.

The data may also suffer from an upward response bias, since respondents are human resource departments, and not the job holders themselves. Furthermore, since wages are subject to a floor through institutions like the minimum wage, companies would naturally exhibit compliance in a self-reported survey such as this.

The sample may also be subject to a potential bias towards mid-market and large companies, as they are more likely to become MEF members compared to MSMEs. However, considering that 51.8% of employment in Malaysia is generated by non-MSMEs (Department of Statistics Malaysia, 2023), the sample of respondents seems to be representative as in 2022, about half of the MEF survey respondents are from companies with annual sales turnover of higher than RM50 million.

The dataset may not provide a statistically representative picture of the entire Malaysian workforce. Since the survey is voluntary and the respondents are MEF member companies, the study may not be generalisable, especially in the case of public sector employees, own account workers, and the self-employed. It is essential to recognise that the survey is primarily designed to allow for salary benchmarking by human resource practitioners and MEF members. Thus, its utility for academic or research purposes is limited. This may also be a major strength of this research – in that it surfaces data that underlie the wage-setting logic of a large section of private sector employers in Malaysia. Despite the inherent biases, the ordinal and trend-wise revelations from this dataset are not unimportant.

Profile of Respondents

In the “Employees without prior working experience” section of the MEF survey report, participating companies are asked to disclose starting salaries based on the qualifications with which these job holders enter the company. In the case of entry-level workers, this appears to be most practical considering the sheer diversity in job grades and job families between organisations. Collecting entry-level salary data by qualifications allows for greater comparability across organisations.

For ease of analysis, PNBRI has collapsed the extensive range of nine (9) qualifications from the MEF salary survey into only five (5) specific types of qualifications: **Academic Tertiary**, **TVET Tertiary**, **Academic Post-Secondary**, **TVET Post-Secondary**, and **Secondary**, as in Figure 10 below. This classification adheres to the guidelines set forth in the Malaysian Qualifications Framework (MQF) Second Edition by the Malaysian Qualifications Agency (MQA).

Figure 10: Educational qualifications and MQF level comparison for Academic and TVET pathways

MQF Levels	Categories reported by MEF		Final categorization by PNBRI
	Academic	TVET	
7	Master's Degree		Academic Tertiary; TVET Tertiary
6	Degree with Honours ¹⁵	Technical Institute Certificate	
	Basic Degree ¹⁶		
5		Diploma Lanjutan Kemahiran Malaysia (DLKM) Tahap 5	
4	Diploma	Diploma Kemahiran Malaysia (DKM) Tahap 4	
3	Certificate ¹⁷	Sijil Kemahiran Malaysia Tahap 3 (SKM Tahap 3)	Academic Post-secondary; TVET Post-secondary
2		Sijil Kemahiran Malaysia Tahap 2 (SKM Tahap 2)	
1		Sijil Kemahiran Malaysia Tahap 1 (SKM Tahap 1)	
n/a ¹⁸		STPM	
n/a	SPM		Secondary ¹⁹
	PMR or PT3 ²⁰		

Source: Malaysian Qualifications Framework (MQF) 2nd Edition, PNBRI

¹⁵ “Degree with Honours” is the term used by MEF, interchangeable with bachelor’s degree with honours degree with honours and may include TVET degrees from Malaysian Technical University Network (MTUN)

¹⁶ “Basic Degree” is the term interchangeable with bachelor’s degree and may include TVET degrees from Malaysian Technical University Network (MTUN)

¹⁷ The MQF levels depend on the credits awarded upon completion of certificates. These post-secondary certificates usually signify a single field of study without specifying any specialization, such as “Certificate in Business Studies.”(Malaysian Qualifications Agency 2021)

¹⁸ STPM, and other entry qualifications to universities are not in the MQF. Nevertheless, MQF still determines standards for these qualifications for standardisation purposes

¹⁹ Secondary qualifications may extend beyond the standard Government-sanctioned academic secondary qualifications of SPM. Examples include the Unified Examination Certificate (UEC) for graduates of Chinese Independent schools or other high school certificates obtained through alternative pathways.

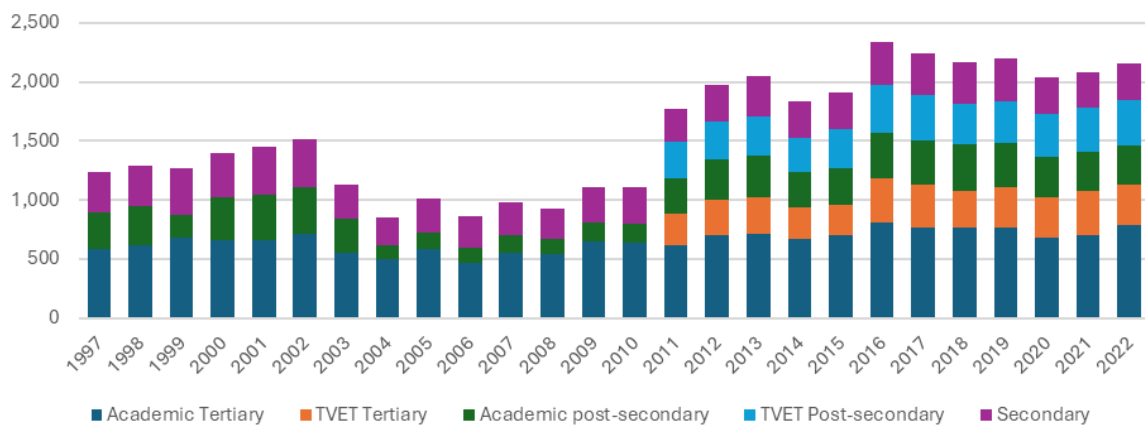
²⁰ PMR is a standardised label for all its equivalent examinations: SRP (1997-1999), and PT3 (2015-2019). At the school level, PT3 has been cancelled in 2020 and 2021, and officially abolished in 2022 (Yunus 2022). The starting salary data for “PMR” after 2019 refers to the remaining PT3 graduates who just entered the workforce.

Note that individuals entering the labour market may also possess qualifications beyond the standard Government-sanctioned academic secondary qualifications of SPM, such as the Unified Examination Certificate (UEC) for graduates of Chinese Independent schools or other high school certificates obtained through alternative pathways. These respondents are categorised as 'Certificates' in the MEF survey.

Our reclassification aims to capture the diverse levels of education and qualifications while also recognising that substantive distinction exists mainly between the academic and TVET pathways, particularly given the growing importance and interest in TVET in Malaysia today (BERNAMA 2023).

The breakdown of respondents' profiles based on these classifications is outlined below::

Figure 11: Number and distribution of entry-level employee respondents based on educational classification, 1997-2022



Source: MEF, PNBRI

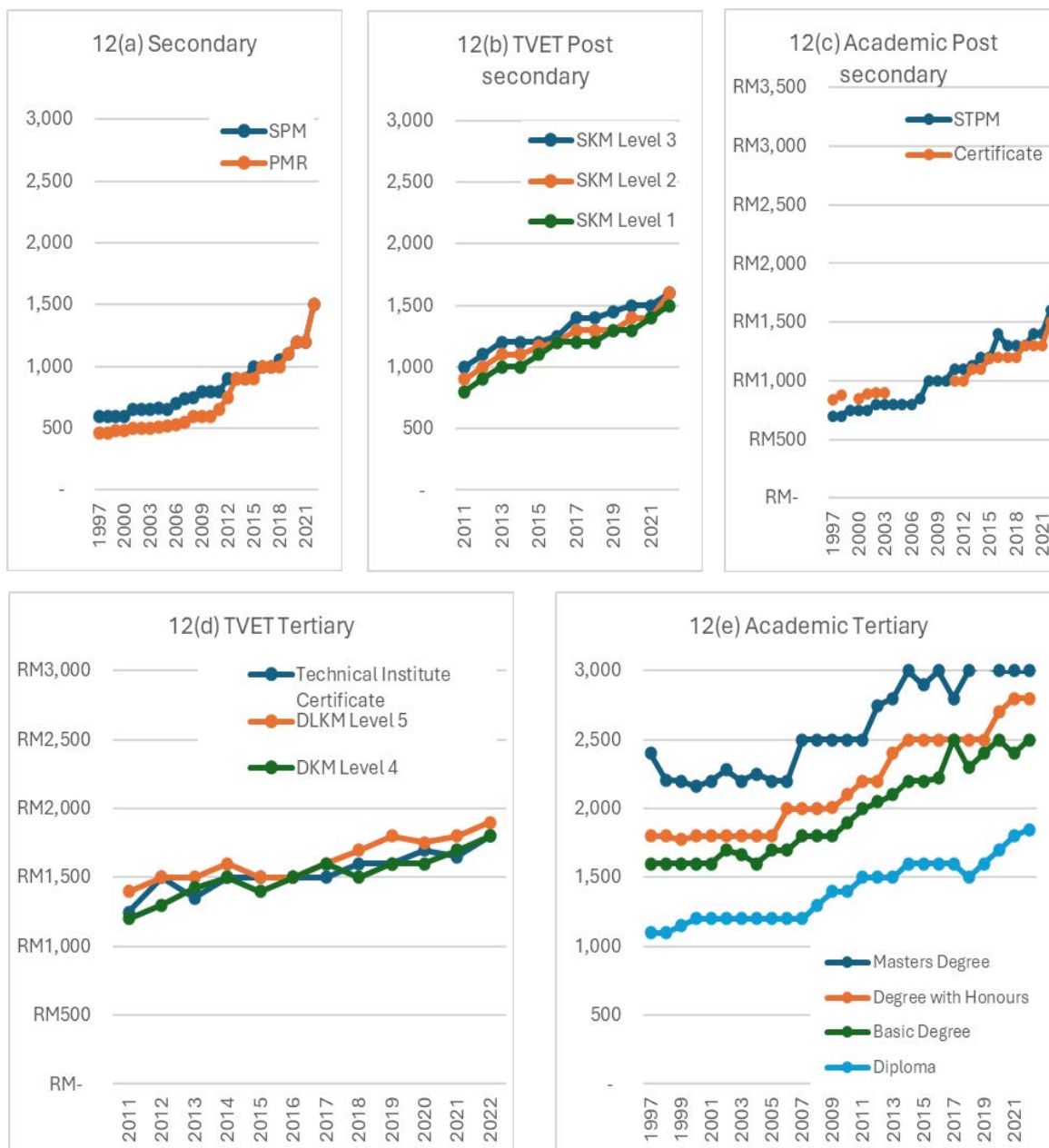
Figure 11 illustrates the composition of entry-level employee respondents based on educational classification from 1997 to 2022. Key discernible trends are as follows:

- Notwithstanding the unknown true population composition, jobs filled by those with Academic Tertiary qualifications have consistently represented approximately half of the total responses during the study period.
- The number of responses was relatively evenly distributed among all other educational classifications since 2011.
- The TVET category appeared inconsistently among the surveyed population until 2011, when the category became a permanent feature. For example, a category referred to as "Vocational" appeared between 1997 to 1999, while the category "Skills certificate" appeared between 2004 and 2010.
- Even with the inclusion of TVET qualifications from 2011 onwards, respondents with Academic Tertiary qualifications continued to hold the highest share every year, consistently ranging from 30% to 40%.
- The proportion of respondents with secondary education witnessed a substantial reduction after the inclusion of TVET categories in 2011.
- We note a slight dip in the number of responses during the COVID-19 pandemic years between 2020 and 2021.

Findings

We first observe the plot of salary levels across the period, by entry-level qualification, as illustrated in Figures 12 (a) to (e) below. While this study is not privy to the full distribution of the survey sample from MEF, we can at least establish the general distribution of the median salary across the levels of qualification to have a baseline sense of the trend across the years. We start by observing the general pattern of salaries (nominal) across five (5) MQF equivalised education levels, as shown in Figure 10 above. Note that for TVET qualification holders, data only became available since 2011.

Figures 12 (a), (b), (c), (d), (e): Nominal median entry-level wages by Qualification, 1997 – 2022 (RM)



Source: MEF, PNBRI Analysis

The monthly median salary for PMR and SPM holders entering the job market remained suppressed below RM1,000 until 2016. This was the year that the minimum wage was raised from RM900 to RM1,000. Across the 25-year period, the median entry-level salary has largely remained suppressed below and around RM1,500 for all qualification holders except those with basic degrees and higher qualifications. Notably, all groups have experienced growth in median starting salaries. Interestingly, this data showed no impact on median salaries offered to fresh graduates during the COVID-19 pandemic years between 2020 and 2021, potentially due to the voluntary nature of the survey, where employers who maintained salary levels during the period may have self-selected into the surveyed sample.

One key observation is that while there has been broad-based growth, the growth has been steepest for entry-level employees in the lower and higher qualifications. For those with academic education, wages have risen by between RM900 and RM1,000 in the past 2.5 decades. For those with TVET education, the wage barely grew by RM500 over the last 11 years.

These observations echo earlier findings – a broad situation of depressed wages in the Malaysian labour market. This serves as a starting point for our subsequent analyses and findings, which can be mainly summarised into three (3), concerning:

- the **effects of the minimum wage policy** on wages for early entrants with lower qualifications and early entrants from the TVET pathway, relative to the academic pathway.
- the **returns to education for early entrants**, in wage levels and in rates of wage growth.
- the **outcomes of a TVET education for early entrants**, in wage levels and rates of wage growth.

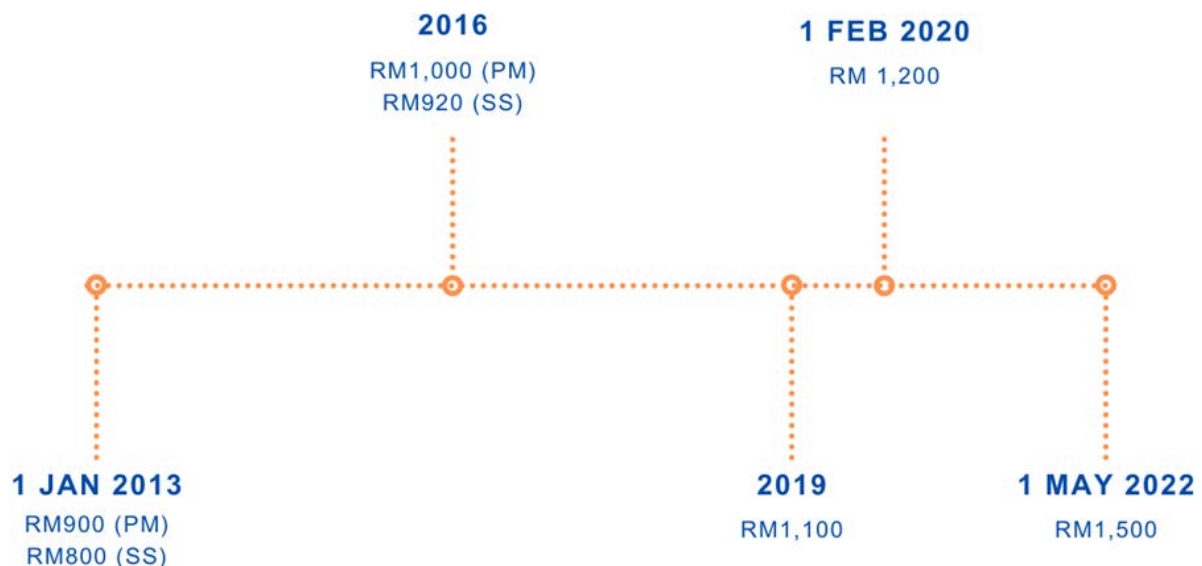
Minimum Wage and Inequality Across Qualification Levels

The International Labour Organization (ILO) defines the minimum wage as “the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract” (“Chapter 1 – How to Define a Minimum Wage?,” n.d.)

In Malaysia, the minimum wage is defined as basic wages, excluding any allowances or other payments. The National Wages Consultative Council Act 2011 describes “wages” and “minimum wages” under section 2. “Wages” has a similar meaning to “wages” in section 2 of the Employment Act 1955 or Sabah Labour Ordinance (Cap.67) and Sarawak Labour Ordinance (Cap.76), whereas “minimum wages” refers to basic wages only, excluding any allowances or other payments (“What Is the Minimum Wage in Malaysia?” 2022). **Therefore, the term “minimum wage” here practically leans more towards the salary than the wage.** Wages and salaries will be used interchangeably in this study.

The Minimum Wages Order (MWO) is a legal document in Malaysia that establishes the minimum wage rate for employees (Attorney General’s Chambers of Malaysia 2022). The timeline of the implementation of the MWO is as shown below in Figure 13:

Figure 13: Timeline of the Implementation of the Minimum Wages Order, 2013 – 2022 (reproduced)

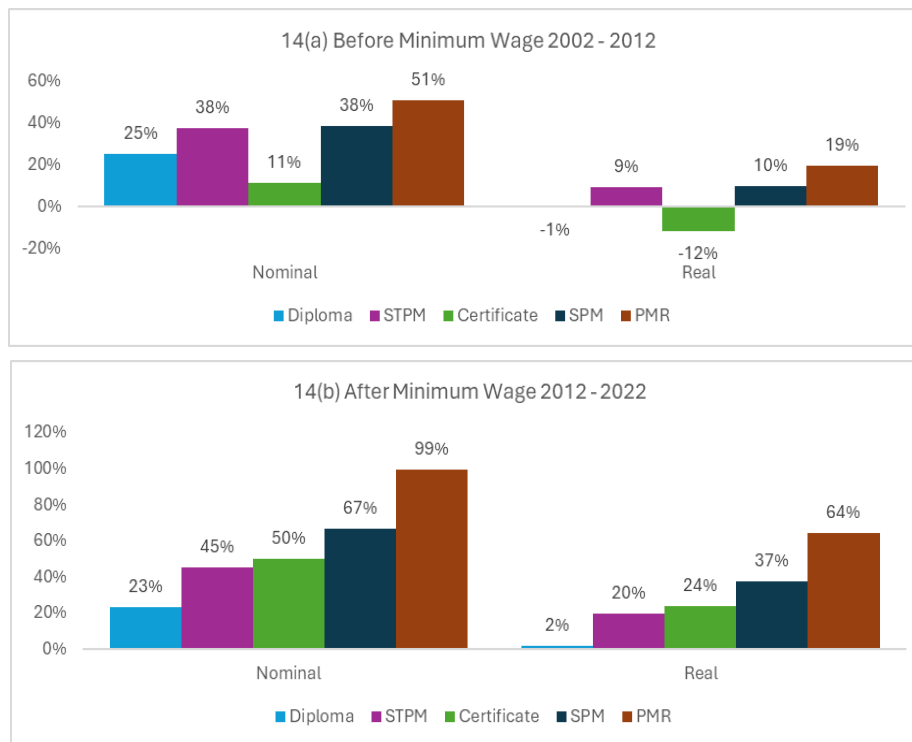


Source: Federal Government Gazette, National Human Resource Centre

The time length of this dataset allows us to analyse two distinct decades – one prior to and one after the institution of the minimum wage policy. The initial decade, from 2002 to 2012, therefore serves as a baseline comparator. Once again, we take the compounded average (annual) growth rate of the median entry-level salaries for all qualifications excluding the TVET qualifications, which were only introduced into the dataset in 2011.

As observed earlier in Figures 12 (e), even at the current (2024) minimum wage level of RM1,700, the real median salaries for new entrants with master's degree, honours degree and basic degree have been considerably higher than the minimum wage level. Thus, the subsequent analyses shall exclude them.

Figures 14 (a) and (b): Growth²¹ of real (2012 = 100) and nominal median monthly salary for entry-level employees with diploma and below (%), 2002 - 2012 and 2012 - 2022



Source: MEF, PNBRI Analysis

Comparing Figures 14 (a) and Figures 14 (b), **in both periods, the lower the education level at the point of entering the job market, the faster the wage has grown**. The rates of growth have mostly doubled since the minimum wage, in nominal terms, across all qualifications except for “certificate” holders.

Before the minimum wage, the median PMR holder entering the job market for the first time in 2012 earned one and a half times that of their predecessor in 2002. Meanwhile, his counterparts entering the job market with higher qualifications in 2012 had experienced slower rates of growth in entry-level wages compared to their respective predecessors in 2002. In fact, after adjusting for inflation, the median worker entering the job market with a diploma in 2012 had experienced a real -1% decline in wages compared to her predecessor in 2002.

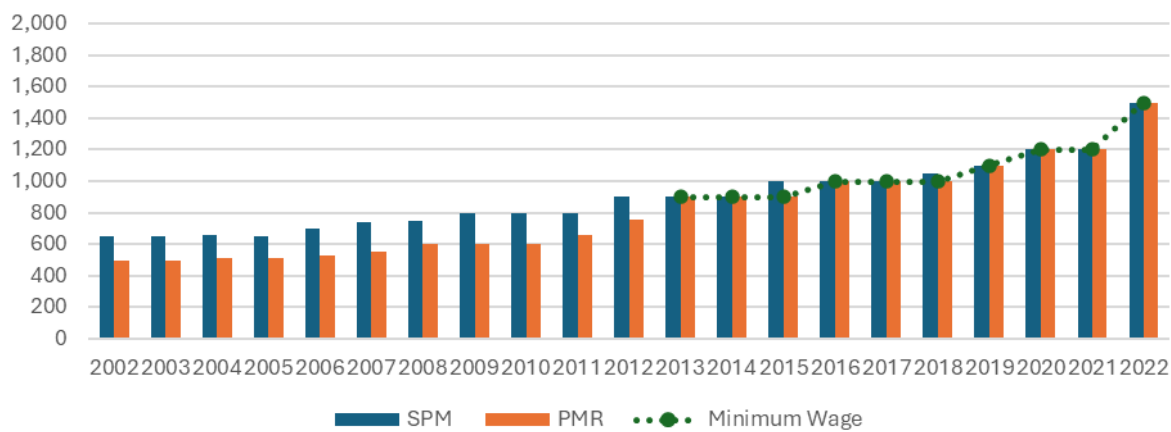
After the minimum wage, the median PMR holder in 2022 continued to experience a faster rate of growth, with his salary effectively doubled from that of his predecessor in 2012. Meanwhile, his counterparts entering the job market in 2022 with higher qualifications also continued to experience slower rates of growth compared to their respective predecessors in 2012.

²¹ Point to point growth rate

Secondary

We direct our focus towards the SPM and PMR qualifications, where the median entry-level salary trends for both SPM and PMR holders experienced a significant shift in 2013 — also the first time the minimum wage order was enforced. While salaries prior have largely remained suppressed below RM1,000 for more than a decade, **the bump in the wage experience for SPM and PMR holders appear exclusively attributable to the minimum wage.**

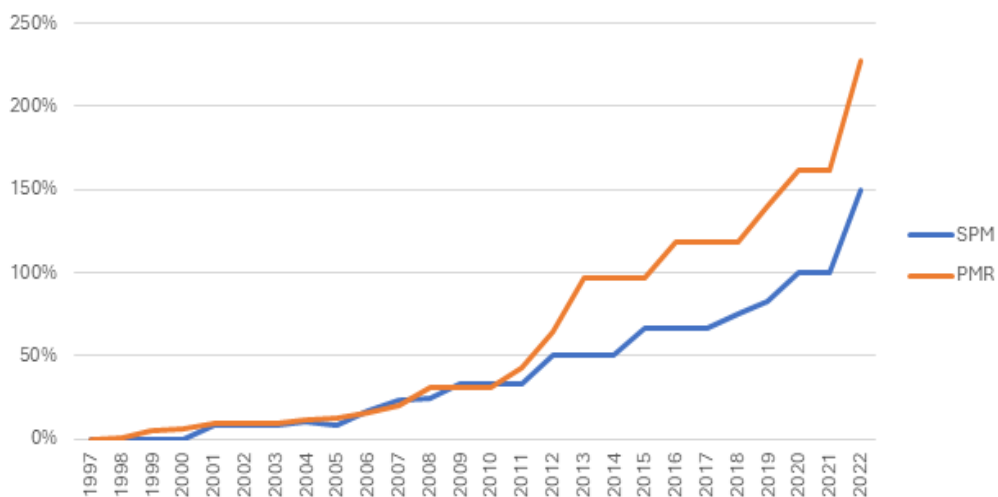
Figure 15: Nominal median entry-level salaries for PMR and SPM holders, against the statutory minimum wage, 2002 – 2022 (RM)



Source: MEF, PNBRI Analysis

As shown in Figure 15 above, the increasing trend in the entry-level median salary for both PMR and SPM holders mimics a stair-like pattern, directly corresponding to the prevailing minimum wage levels. From 2013 onwards, the growth rate of the median salary is now effectively the growth in the statutory minimum wage – where salaries appear stagnant in the subsequent years in which the wage floor is not revised.

Figure 16: Cumulative growth in nominal median monthly salaries for entry-level employees with Secondary qualifications indexed to 1997 (RM, %), 1997-2022



Source: MEF, PNBRI Analysis

Comparing the *absolute* levels and the cumulative growth (indexed to 1997) patterns of the median starting salary of PMR holders with that of SPM holders, median starting salaries for PMR holders began converging with that of SPM holders right around 2013, when the landmark minimum wage legislation was instituted for the first time in Malaysia. Based on Figure 16 above, the median PMR wage clearly experienced higher growth rates compared to the median SPM wage in the post-minimum wage years, causing PMR wage level to converge with SPM.

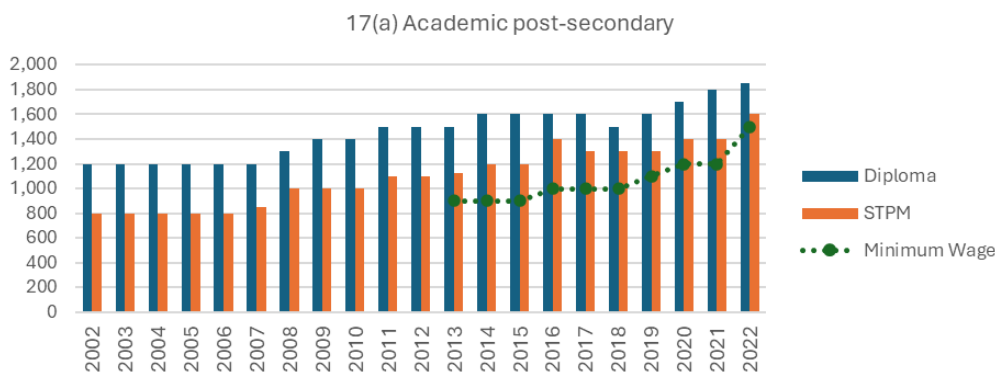
While the wage floor has obviously helped wages at the low end of the qualification spectrum grow, some concerns arise. Firstly, whether a potential moral hazard would ensue on the part of wage setters. For all its benefits, the wage floor may also have introduced an unintended “cap” on the wages for some SPM or PMR holders. Being required to meet the statutory wage level for all new entrants, there may be reduced incentive for the employer to offer anything more for one new entrant over the next. Since the median SPM new entrant was earning higher than PMR prior to the policy, and both are earning the same after, this suggests some sort of “capping effect”. In other words, if there were no capping effect, one might expect to see a continued premium for SPM.

The absolute level to which the wages converge is only the prevailing level of minimum wage as dictated by policy, of RM1,500 (as at 2022) (Attorney General’s Chambers of Malaysia 2022). By a great measure, this is insufficient to cover the most basic costs of living as implied by the prevailing National Poverty Line Index (PLI²²) of RM2,589 (as at 2022) at the household level (Department of Statistics Malaysia 2023).

Academic and TVET Post-secondary

While PMR and SPM holders experienced very strong growth post minimum wage, the same cannot be said for STPM and Diploma holders. In inflation adjusted terms, the median diploma holder experienced almost no gains compared to peers with lower qualifications in the same year, after the minimum wage order. This should not come as a surprise as the minimum wage discussion is one that is exclusively at the lowest end of the qualification spectrum. Median entry-level salaries for STPM and Diploma holders have long surpassed the prevailing minimum wage, as can be seen in Figures 17 (a) below.

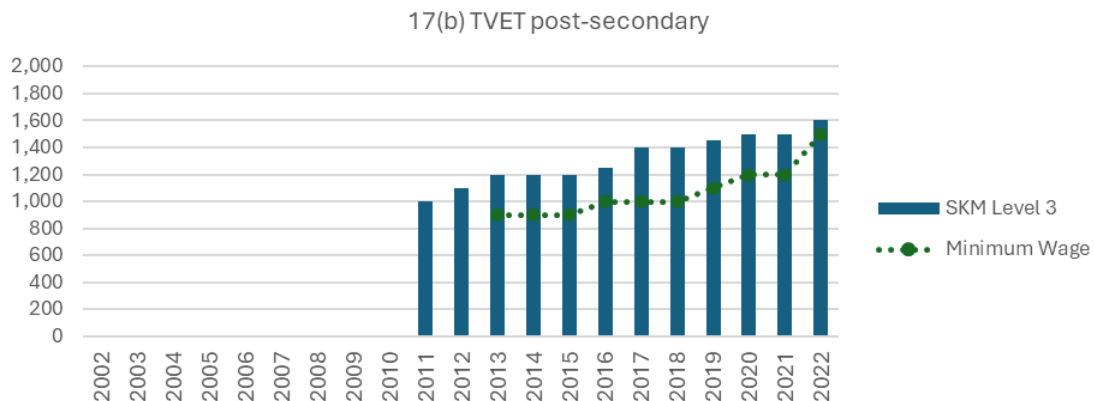
Figure 17 (a): Nominal median entry-level salaries for post-secondary qualifications, against the statutory minimum wage, 2002 – 2022 (RM)



Source: MEF, PNBRI Analysis

²² It is to note that PLI is an absolute poverty line deduced by DOSM that shall vary depending on the location and lifestyle of individuals (Koh, n.d.).

Figure 17 (b): Nominal median entry-level salaries for post-secondary qualifications, against the statutory minimum wage, 2011 – 2022 (RM)



Source: MEF, PNBRI Analysis

Similarly, **the minimum wage discussion is not applicable to the TVET equivalent of a post-secondary qualification – namely, the *Sijil Kemahiran Malaysia (SKM)*, taken to the third and final level (SKM Level 3).** Until 2021, the median SKM Level 3 holder entering the job market for the first time would have experienced wage levels that are consistently higher than the prevailing wage floor. In one aspect, we may take some comfort by seeing this as the Malaysian labour market recognising the equivalent post-secondary TVET qualification holders at their “rightful level”, which is in line with STPM or Diploma holders rather than lower.

Overall

At the superficial level, it can be said that the desired effect in terms of a reduction in wage inequality was achieved. Minimum wages are typically introduced “to protect workers against unduly low pay” (“Chapter 1 – How to Define a Minimum Wage?,” n.d.) or “reduce poverty and reduce inequality” (Loo See, n.d.). In this dataset, the lower qualification holders sit at the bottom of the wage distribution for entry-level employees. Thanks to the minimum wage, these workers had experienced a meaningful bump. However, this “reduction” in wage inequality also came at the expense of the relative (wage) advantage of undertaking higher education, which will be discussed in the next section. When coupled with a phenomenon of stagnant wages at the higher end of the education spectrum, the return to higher education comes into question.

In Summary:

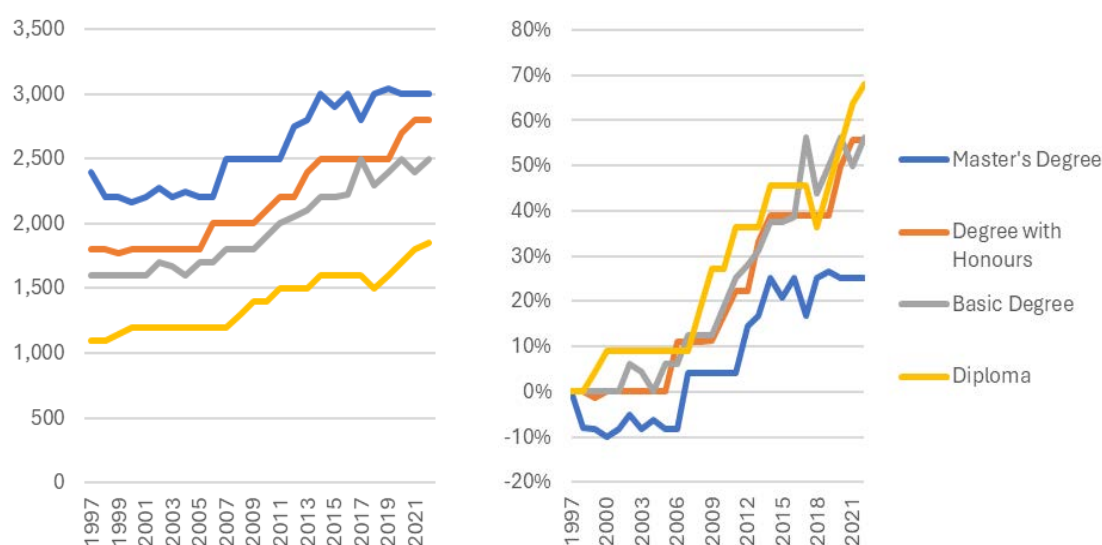
- Before and after the minimum wage, PMR and SPM holders had been the group of early entrants that experienced the most wage growth, relative to their peers with higher qualifications. After the minimum wage, the growth rate of the median wage for the median PMR holder doubled (in percentage points).
- With the convergence of the early entrant salaries for the PMR and the SPM holders, two concerns arise – namely, the unintended “capping” of salary at the floor level, and the zero benefit of finishing secondary school to the SPM level.
- Based on this dataset, the minimum wage discussion is almost exclusively relevant for early entrants with PMR and SPM qualifications. Those with post-secondary qualifications (both Academic and TVET) have historically earned more than the prevailing minimum wage.
- Overall, the minimum wages have helped salaries at the low end of the distribution – in this case, those at the lower end of the education spectrum – experience strong wage growth rates.

Shrinking Returns to Education

Academic Tertiary

We begin by analysing median monthly salaries for entry-level employees offering Academic Tertiary qualifications, namely master's degree, degree with honours, basic degree, and diploma. MEF classifies basic degree as the standard bachelor's degree and degree with honours as the standard bachelor's honours degree, as self-claimed by the job holder.

Figures 18 (a) and (b): Nominal median monthly salaries and cumulative growth in nominal median monthly salaries for entry-level employees with Academic Tertiary qualifications indexed to 1997 (RM, %), 1997-2022

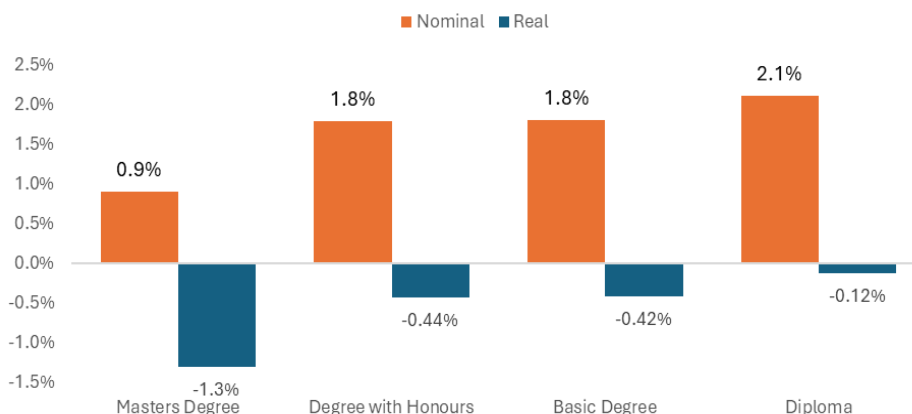


Source: MEF, PNBRI Analysis

The higher the qualification, the higher the pay. From Figures 18 (a), we observe entry-level employees with master's degrees consistently earning the highest, followed by those with degree with honours, and basic degrees, while diploma holders earn the lowest, across the 25-year study period. This is both intuitive and directly correlates with the equivalent MQF levels of these qualifications, confirming the conventional wisdom of the influence that educational attainment has on earnings potential.

However, the higher the qualification, the less the pay has grown over the last 2.5 decades. Quite conversely, in Figures 18 (b), we observe that the plot for median monthly entry-level salaries is almost akin to a mirror image of the plot for growth in median entry-level wages over the same period. The median wage for entrants with diplomas has grown the most annually and over the period, followed by graduates of the rest of the qualification levels in ascending MQF order. Although graduates of higher qualifications have been earning more in absolute terms year upon year, the growth of the entry-level salaries has been slower.

Figure 19: Compound annual growth rates (CAGR) of real and nominal median monthly salaries for entry-level employees with Academic Tertiary qualifications (%), 1997-2022

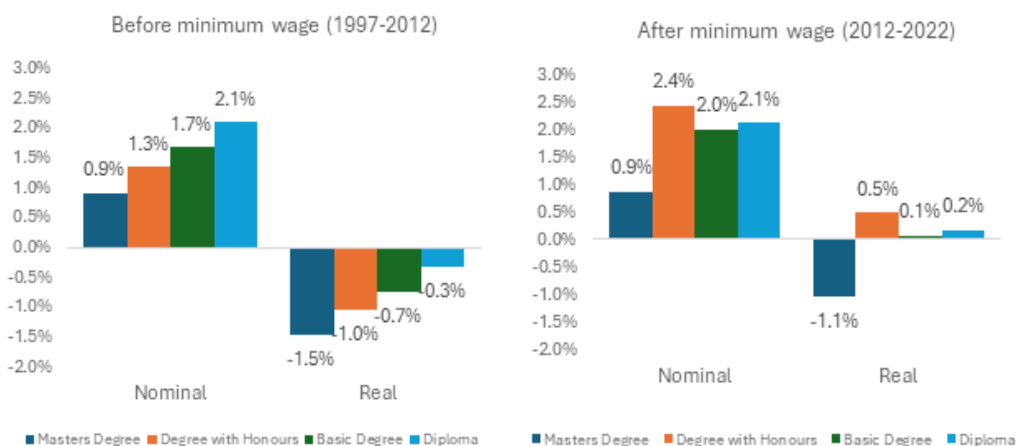


Source: MEF, PNBRI Analysis

The observation is more obvious when looking at annual growth rates (on a compounded basis²³) entry-level salaries, as illustrated in Figure 19 above. On average, the median wage for master’s degree holders of sampled entry-level employees has been growing at a dismal rate of less than 1% annually over the period, before even considering the effects of inflation. This is lower than that of the median entry-level employee with degrees (at 1.8% annually) and diploma (at 2.1% annually).

Adjusted for inflation, the median entry-level salary for a tertiary education graduate has effectively declined over the 25-year period, where the median salary of a master’s degree holder has effectively declined by 1.3% annually on average, over the last 25 years. This provides early but pivotal evidence that there is a declining return to education in Malaysia, at least in the private sector. As will be discussed in the Discussion section of this paper, the education premium for higher educational qualifications appears to be “flattening” (Valletta 2018).

Figures 20 (a) and (b): Compound annual growth rate (CAGR) of real (2012 = 100) and nominal median monthly salaries for entry-level employees with Academic Tertiary qualifications (%), 1997-2012 and 2012-2022



Source: MEF, PNBRI Analysis

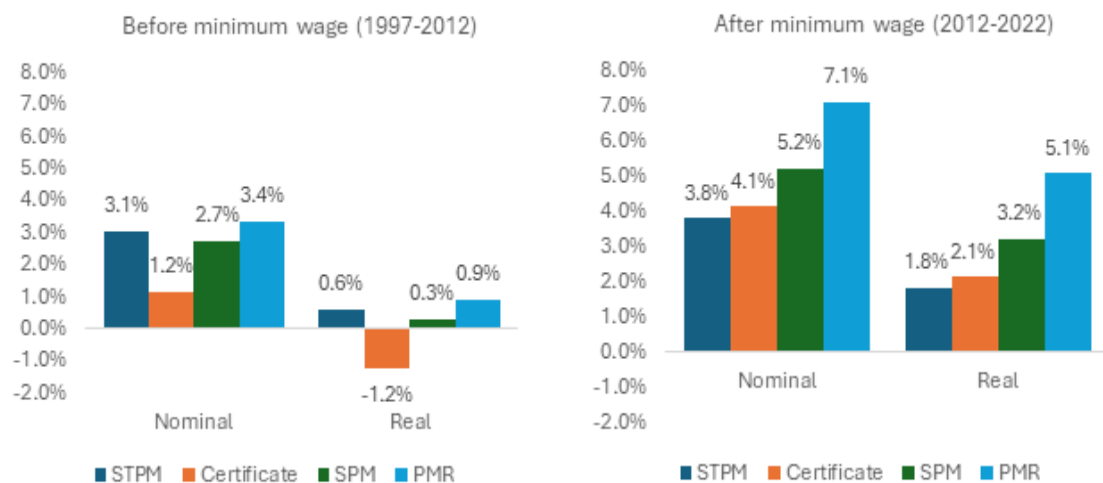
²³ Compounding annual growth rate (CAGR) refers to the geometric average of growth between two data points representing the upper and lower bounds of a period.

There is clear evidence of declining returns to higher education in Figures 20 above. The inverse trend between growth and education level is rather obvious when analysing the *growth* of these salaries over the years. Here, two main findings can be inferred:

Firstly, *before the institution of the minimum wage between 1997 and 2012* (Figures 20 (a)), entry-level salaries for a master's degree holder grew by less than 1% annually. In fact, it has been declining by 1.5% annually on average, accounting for inflation²⁴. In contrast, the median diploma holder would have experienced an effective 2.1% growth in entry-level salaries every year, but a 0.3% decline annually after adjusting for inflation.

Secondly, *after the institution of minimum wage between 2012 and 2022* (Figures 20 (b)), entry-level salaries for the median master's degree holder had been growing at the same dismal rate as the previous one-and-a-half decades but declined at a slower rate of 1.1% annually on average, accounting for inflation. Conversely, the median entry-level wages for other qualification holders have at least remained effectively flat on an inflation-adjusted basis over the 10-year period.

Figures 21 (a) and (b): Compounded average annual growth rate (CAGR) of real (2012 = 100) and nominal median monthly salaries for entry-level employees with Academic and Post-Secondary and Secondary qualifications (%), 1997-2012 and 2012-2022



Source: MEF, PNBRI Analysis

The evidence of starting salaries declining with education is less clear among Post-secondary and secondary, as depicted in Figures 21 above. Indeed, in the decade after the *institution of the minimum wage* (Figures 21 (b)), the lowest qualification holders (i.e., the median PMR/PT3 holder) experienced the most growth in entry-level salaries by about 5.1% in real terms. Meanwhile, the highest qualification holders in this group (i.e., the median STPM holder) had experienced the least gains over the last 10 years by about 1.8% in real terms. After the minimum wage, the situation of “declining growth rates with increasing education level” holds true.

²⁴ based on 2012 prices

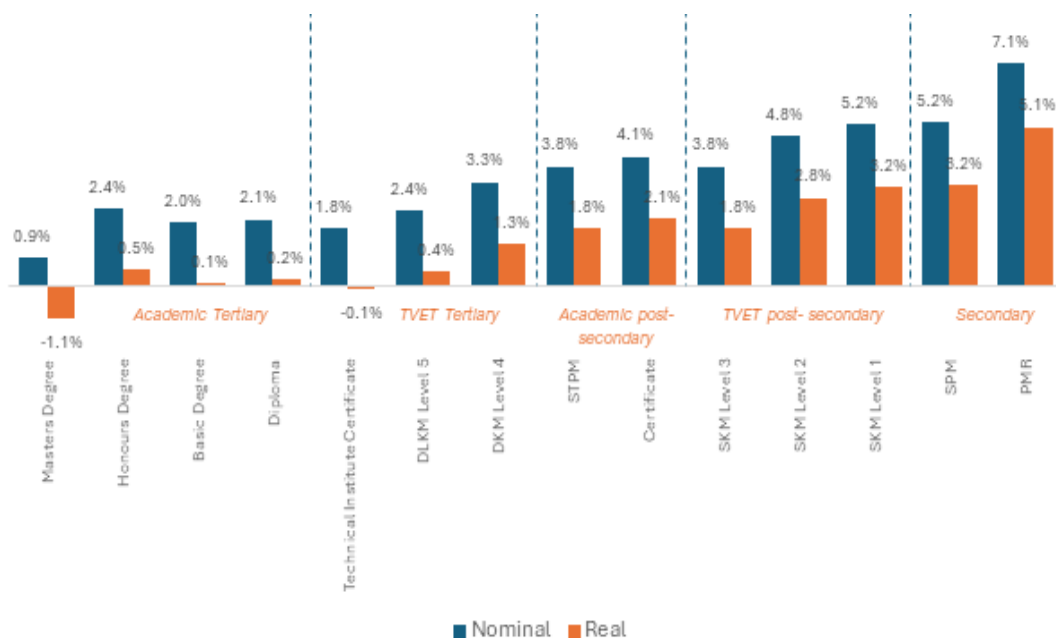
However, **before the institution of the minimum wage (Figures 21 (a)), a similar relationship between education and entry-level wage growth did not hold.** In the one-and-a-half decades prior to the wage floor policy, the lowest qualification holders (i.e., the median PMR holder) experienced the highest growth rate among all other qualification holders, by 3.4% annually on average. But the highest qualification holders in this group (i.e., the median STPM holder) trailed closely behind, with their entry-level wage having grown by 3.1% annually on average.

Admittedly, many other confounding factors would have also been at play during these two very different historical periods. But we cannot ignore – at least to some extent – the contribution of the minimum wage in increasing the progressivity and reducing the inequality of the inter-education wage distribution. The trade-offs between income equality and the building of a high-income knowledge economy will be discussed later in the *Discussion* section of this paper.

Overall

Interestingly, this dataset also offers a range of entry-level salaries for those from the technical and vocational education and training (TVET) routes beginning 2011 – in particular, the ‘TVET Tertiary’ (equivalent to MQF levels 4 and above) and the ‘TVET Post-secondary’ (equivalent to MQF levels 3 and below), based on our reclassifications (refer to Figure 10).

Figure 22: Compound annual growth rate (CAGR) of nominal and real (2012 = 100) median monthly entry-level salaries by qualification, 2012-2022 (%)



Source: MEF, PNBRI Analysis

Bringing it all together, as observed in Figure 22 above, the shrinking in returns to higher education is not only a phenomenon within the Academic pathway, rather, it is consistent across both academic and TVET pathways. Master’s degree and technical institute certificate holders – which are both notably of tertiary level of education – experienced negative real growth during the last 10 years between 2012 and 2022. This shall be the focus of our next analysis.

The two above findings on the (i) **effectiveness of the minimum wage** and (ii) **returns to education** demand that we be more specific when acknowledging the use of a single national floor level, especially as an inequality-combating mechanism. Institutions such as the minimum wage must be accompanied by a policy suite that supports meaningful improvements more broadly.

The **Living Wage**, as another example, represents a worthy policy tool to consider amid the anemic level of livelihood that even the minimum wage offers. It is still a single national floor number, thus its effects on the wage distribution are unlikely to differ from the minimum wage as discussed in the two preceding discussions. The planned **Progressive Wage Policy (PWP)**, for example, is another meaningful policy that would address wage stagnation in the middle and far above the minimum wage, where entry level workers would have to be paid according to the PWP wage schedule as soon as qualifying employers receive the wage subsidy at this initial stages of implementation.

The planned **Progressive Wage Policy (PWP)**, for example, is another meaningful policy that would address wage stagnation in the middle and far above the minimum wage. Its usefulness at the entry-level however may be very limited, given the time that needed to have elapsed for relevant measures of productivity to have kicked in and qualify workers for pay raises.

Efforts towards improving and **centralizing Wage Bargaining**, such as the tripartite bargaining that already happens in the case of minimum wages, may also tackle the aspect of this problem where Malaysian workers' income share of GDP has been persistently low. Such models are those where the state plays a role in coordinating and enforcing wage schedules for occupations by skills, experience, and industry to better address issues of mismatch and skills-based underemployment.

As discussed at length by Muthusamy and Wilkstrom, if the vision for a more just labour market in the 12th Malaysia Plan is to be realised, we must address the inherent gaps – in terms of existence and preparedness of our institutions representing employers (such as the MEF), employees and the government – towards workers having a greater say in the compensation structure of firms (Muthusamy and Wikstrom 2022).

In Summary:

- Among tertiary education holders in this dataset, the higher the education level, the slower the growth in the median starting salaries of every passing year.
- The negative relationship between education level and growth in entry-level salaries seen among the tertiary education holders does not hold as neatly among non-tertiary education holders in this dataset.
- Minimum wage institution, while laudable, must be more specifically assessed in its redistributive benefits and be accompanied by a policy suite to address its limitations. The Living Wage and PWP may be limited for entry-level workers. Expanding access to institutionalised wage bargaining among entry-level workers and youth may represent one of the ways forward.

TVET Catching Up

TVET stands for Technical and Vocational Education and Training, understood as “comprising education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods” (United Nations Educational 2016). The history of TVET in Malaysia predates its independence, but a notable point in its modern history was between 1997 and 1999 when the government conducted a “Basic Study on the Design of a Dual Vocational Training Scheme in Malaysia”. With assistance from German advisors, the study gave rise to the National Dual Training System (NDTS), which references the National Occupational Core Curricula (NOCC) as a core national curriculum, replacing the National Occupational Skills Standard (NOSS) (Hasmori et al. 2015).

By 2011, synchronisation efforts resulted in the Sijil Kemahiran Malaysia (SKM), or the Malaysian Skills Certificate, being officially recognised as the country’s skills-based and vocational certification (Aripin 2022). Not coincidentally, our MEF dataset began introducing these TVET categories beginning 2011.

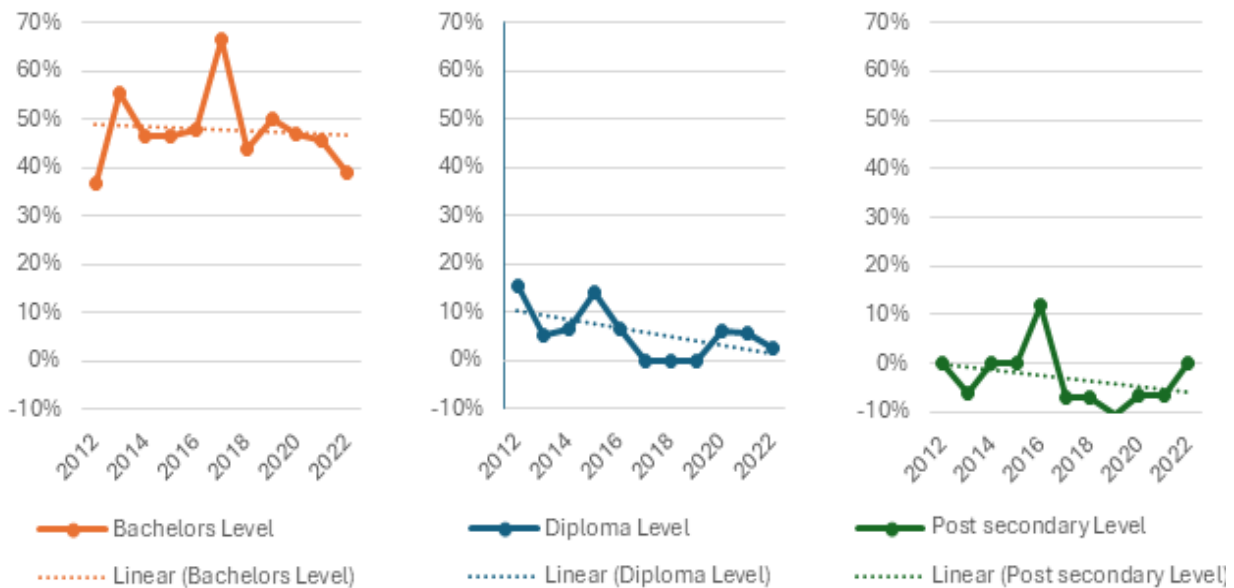
Academic versus TVET: Tertiary and Post-Secondary

Our analysis began with the premise that graduates and certificate holders from the TVET education pathway would command lower salaries at the entry-level. Based on the equivalence MQF table in Figure 10 discussed earlier, we compared the median entry-level salaries of three education levels in the academic pathway with their TVET equivalent, as follows:

- *Bachelors level:* A **basic degree** (or bachelor’s degree²⁵) holder against a **Technical Institute Certificate** holder,
- *Diploma level:* A **diploma** holder against a Diploma Kemahiran Malaysia (**DKM**) **Level 4**, and
- *Post-secondary level:* A Sijil Pelajaran Tinggi Malaysia (**STPM**) against a Sijil Kemahiran Malaysia (**SKM**) **Level 3**.

²⁵ It must be noted that the data set combines salaries for basic degree holders, for academic degrees and bachelor’s degrees that are considered as TVET.

Figures 23 (a), (b), (c): Wage differentials²⁶ between two equivalent qualifications from the Academic and TVET pathways, 2012 – 2022 (%)



Source: MEF, PNBRI Analysis

Generally, the trend in wage differential between academic and TVET (or “academic premium”) has mainly shrunk. Based on all three levels of qualifications shown in Figures 23 (a), (b), and (c), no discernible trend of a shrinking or growing academic premium can be observed across the past decade for the bachelor’s level, while the premium had been shrinking at the diploma and post-secondary levels.

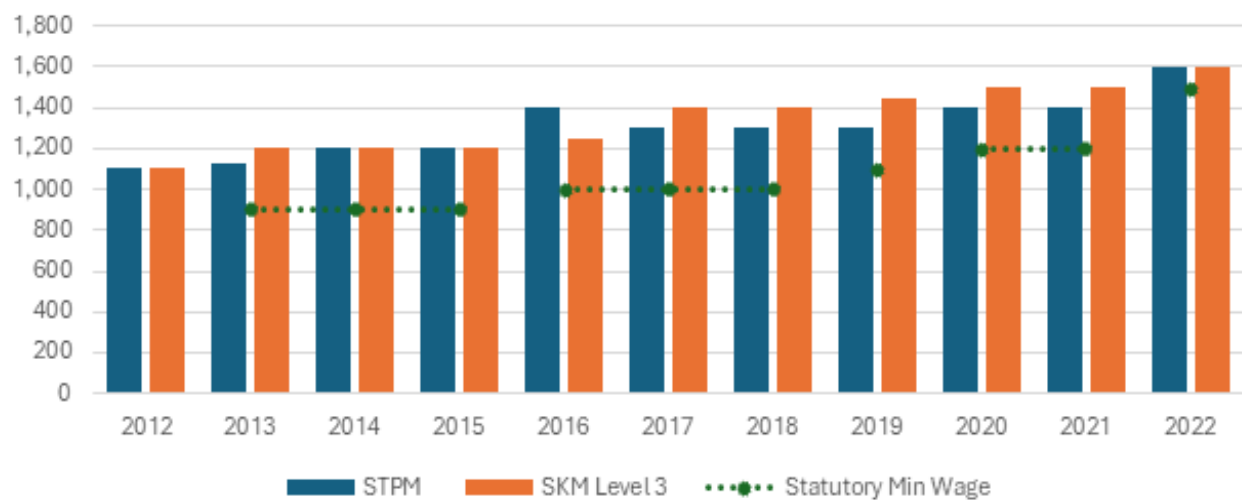
Among the three equivalent qualification levels, the academic premium is most pronounced at the bachelor’s degree level. It is worth noting that the specific difference between the academic bachelor’s degree and TVET bachelor’s degree cannot be observed here, as this dataset does not differentiate between a TVET and non-TVET bachelor’s degrees. With this in mind, the median bachelor’s degree graduate (academic *and* TVET degrees) still commanded at least one-third higher entry-level pay than the median pure TVET graduate with a technical institute certificate (arguably a type of tertiary-level qualification in the TVET pathway) across the last decade.

At the bachelor’s and diploma levels, there is some evidence of a decline in the academic premiums. For example, in 2017, the median basic degree holder earned as high as two-thirds more than the technical institute certificate holder. That premium has shrunk to only one-third by 2022. Similarly, in 2015, the median diploma holder earned as much as 15% more than his/her DKM Level 4 counterpart. By 2020, that premium has reduced to sub-10%. There were also instances in history where the entry-level earnings of a DKM Level 4 are equivalent to those of a diploma holder.

²⁶ Measured as the percentage premium of the median entry-level wage of an academic graduate over the median entry-level wage of a TVET graduate (in nominal terms).

Interestingly, at the post-secondary level, the median SKM Level 3 holder consistently either earned more or, at the very least, was on par with the median STPM holder (except for 2016). While they may not share the same MQF level, it's noteworthy that the STPM is still a post-secondary certificate and adheres to standards supervised by MQA. Additionally, students take a relatively similar amount of time (2 years) to achieve these qualifications — 2 years for STPM and SKM Levels 1, 2, and 3. It's worth noting that individuals can even skip the *Sijil Pelajaran Malaysia* (SPM) – which is the precursor to the STPM – and directly pursue the SKM Levels 1 to 3, potentially allowing them to enter the workforce at a younger age than STPM holders.

Figure 24: Nominal median entry-level salaries for STPM and SKM Level 3 holders, against the statutory minimum wage, 2012 – 2022 (RM)



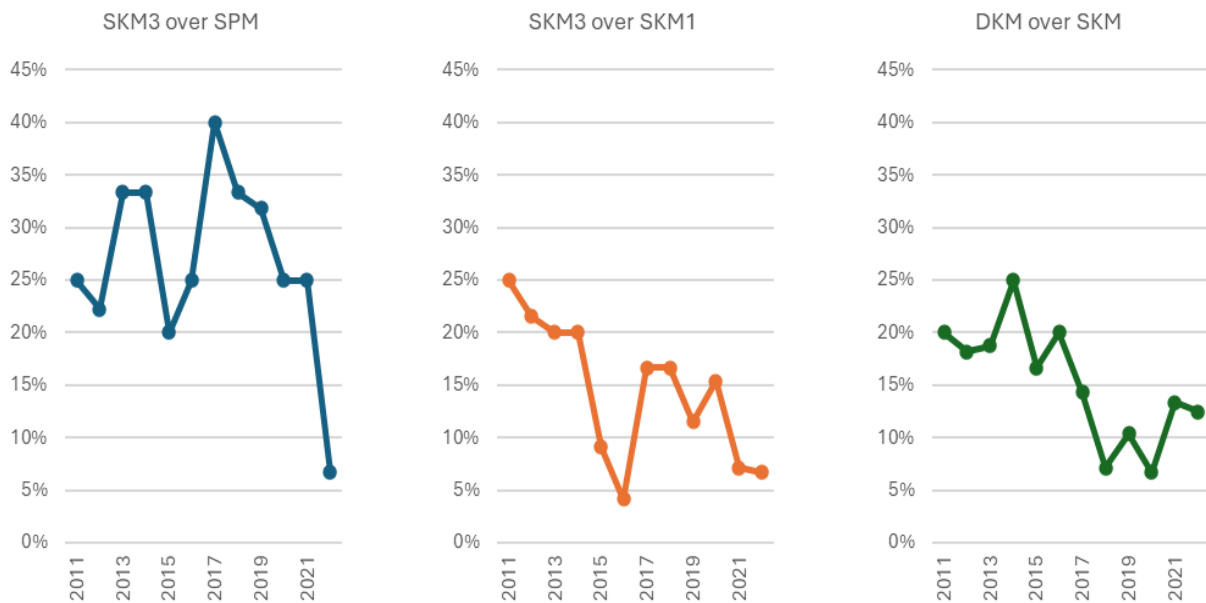
Source: MEF, PNBRI Analysis

As seen in Figure 24 above, **even without the minimum wage acting as a “floor”, the median entry level graduate of SKM3 could be seen to earn consistently higher than the entry level STPM graduate since 2017** the entry-level salaries for the median STPM holder and median SKM Level 3 holder have always surpassed the prevailing statutory minimum wage in the first place, despite the persistent different wage outcomes between academic and TVET, which is a very encouraging early indication of the potential benefits of TVET relative to academic pathways. Inevitably, this observation is consistent across the higher qualification levels, namely the diploma, the DKM Level 4 levels, the bachelor’s degree, and the technical institute certificate.

TVET Tertiary versus TVET Secondary

Given the parity, in some cases superiority, in wage outcomes of TVET qualification holders compared to academic qualification holders, we sought to also establish if there were material advantages to pursuing the TVET pathway to its highest levels.

Figures 25 (a), (b), (c): Wage differentials²⁷ between a higher and a lower qualification within the TVET pathway, 2012 – 2022 (%)



Source: MEF, PNBRI Analysis

Figures 25 above confirmed that even in the TVET pathway, the higher the qualification level pursued, the higher the pay. This situation also appeared consistent across the last decade, since the data for the nationally standardised TVET qualifications – namely the three levels of the *Sijil Kemahiran Malaysia* (SKM, Malaysian Skills Certificate), the *Diploma Kemahiran Malaysia* (DKM, Malaysian Skills Diploma) and the *Diploma Lanjutan Kemahiran Malaysia* (DLKM, Malaysian Advanced Skills Diploma) – became available.

In every year since 2011, there had been a premium in the median wage for an entry-level employee who completed

- the national TVET certification (SKM) program, over someone with only the SPM,
- the SKM to its third and highest level, over someone who stopped at the first level, and
- the national TVET diploma (DKM) program, over someone who stopped at the SKM level.

Therefore, a higher qualification, even the TVET world, appeared to have paid.

²⁷ Measured as the percentage premium of the median entry-level wage of the higher TVET qualification over the median entry-level wage of the lower TVET qualification (in nominal terms)

Overall

Based on this dataset alone, **there is still room to improve compensation prospects for TVET graduates to incentivise TVET as a career path**, as it can no longer be decisively concluded that the earning outcomes of a TVET education in Malaysia are still unequivocally inferior to those of academic (non-TVET) graduates, particularly among post-secondary graduates. This may indicate an increasingly compelling returns profile for individuals pursuing the TVET pathway beyond secondary education, compared to their academic counterparts, *at least* in terms of entry-level salaries. There is no saying if this may be the case for salaries for experienced individuals in the job market, when other factors such as experience, social capital, and factors other than one's qualifications begin to kick in.

Two early, yet distinct, conclusions may be reiterated at this stage.

Firstly, **at the post-secondary level, TVET post-secondary qualifications (namely the SKM taken to the third and final level, Level 3) had caught up and even outperformed the wage outcomes of the STPM**, even without the “help” of a wage floor. This trend may be attributed to the practical nature of TVET post-secondary qualifications, aligning graduates with the skills necessary for immediate entry into the workforce. On the other hand, academic post-secondary qualifications such as the STPM often only serve as a prerequisite for tertiary education, rather than offering occupational value in themselves.

Secondly, while there is no clear trend of shrinking wage differentials among tertiary graduates, it must be noted that **TVET qualifications, if followed through to a level that is “high enough,” namely the tertiary level**. This indicates the persistence of an education premium, even in the TVET world, where “the higher the qualification, the higher the earnings” phenomenon holds. This is no different from an earlier finding, which found the prevalence of TVET degree holders earning more than RM3,000 to be as high as about 10% in 2020, compared to only 1.2% among TVET diploma holders. However, it must be noted that most tertiary-level graduates in the TVET pathway stop at the diploma level (MOHE 2023; Abdul Hamid and Tan 2023a)²⁸.

²⁸ The studies found that almost two-thirds of TVET diploma graduates chose to work post-graduation instead of pursuing the higher (degree) qualification.

Recommendations

There has been increasing focus on the TVET pathway by the Government. One of these efforts was the nationalisation and standardisation of the qualification at the SKM, DKM, and DLKM. This study showed that, taken to its highest levels, TVET graduates with a tertiary education also enjoy superior wage outcomes in the Malaysian labour market, compared to those who stop at the TVET certificates or post-secondary level. Therefore, it is recommended that access to **TVET education at the tertiary level be broadened**, and students with the certificate (SKM) level be **systematically encouraged to pursue it**. These may imply prioritising placements, scholarships, and infrastructure dollars towards TVET diploma and degree programs at public educational institutions and incentivising private education institutions to offer such programs.

There are also current efforts by the Government in providing greater and bespoke access to TVET training for targeted groups. These include youth from the Orang Asli community, from segregated religious educational pathways (such as Tahfiz graduates) and those from Sabah and Sarawak [[PNBRI's February Views article on TVET for Social Mobility](#)]. These groups have traditionally faced structural barriers that deter them from accessing education and thus higher-paying jobs. Going forward, the **wage outcomes of those pursuing the TVET pathway, in terms of wages and employability, should also be tracked closely**.

In Summary:

- At the tertiary level, the “academic premium” commanded by academic level qualifications continued to persist over TVET qualifications, although this premium had clearly been shrinking over the last decade.
- At the post-secondary level, the median SKM Level 3 (“TVET”) graduate may command a higher entry-level salary than the equivalent STPM (“academic”) graduate, but potentially because STPM is often seen as a precursor to higher-level education rather than the final targeted qualification to be achieved before entering the job market.
- “The higher the education level, the higher the entry-level pay” phenomenon holds true even in the TVET world. Therefore, students with Certificates and post-secondary qualifications within the TVET pathway should be systematically encouraged to pursue higher education. Meanwhile, wage and labour outcomes of the many different TVET programs should be tracked closely.

Discussion

The above analysis surfaces several key insights that we hope will bear strong implications for labour market institutions and the education system in Malaysia.

The minimum wage order has resulted in positive distributive effects, with lower wage earners benefiting disproportionately. Since the lower wage brackets are primarily composed of first-time entrants with lower qualifications, such as the PMR and SPM, the wage premium associated with higher education (“education premium”) had been shrinking with rises in the minimum wage. This shows the particular importance of the minimum wage, particularly in the Malaysian labour market where 71.2% of workers have SPM (or below) as their highest education level (DOSM 2023).

This is consistent with earlier studies: Muthusamy et. al saw the minimum wage institution as a true “force for wage growth” for workers who are earning low²⁹ wages (Muthusamy et al. 2023). In our case, early entrants with lower educational qualifications represent this low wage group. Conversely, experiences in advanced economies have shown increased inequality associated with reductions in wage floors (Jaumotte et al. 2015).

It took Malaysia long enough to institute the minimum wage. Countries like France and the United States have had a minimum wage in place since early 20th century, while lower-income neighbours such as Cambodia and Indonesia have fronted Malaysia (Lee and Zhang 2023), having legislated their wage floors in the 1970’s and in 1997 respectively. Any backtracking on this policy would thus represent a significant loss to the gains made in recent years. Parsing out the effects of the minimum wage, Muthusamy et. al in 2022 proved how wages offered by the Malaysian labour market would have provided “a poor pathway” for most workers to secure a good foundation for living if it were not for the minimum wage (Muthusamy et al. 2023).

Our findings merely confirm these earlier evidence – albeit in the context of starting pay. Where we hope to contribute a novel perspective is in the implications of the minimum wage on the returns to tertiary education.

The “higher learning higher earnings” phenomenon continues to hold true among graduates in Malaysia (Hamid 2023). Our study found the same – the education premium of higher (tertiary education) over non-graduates in our dataset did persist in absolute terms over the last 2.5 decades, but it is declining – mainly thanks to the minimum wage experienced by those with lower qualifications. It must be cautioned that this is not the kind of improvement in income equality that is desired. “Raising the floor” is laudable but as important is a broader upward (level) shift in the entire wage distribution across education levels.

²⁹ “Low” here refers to both the relative, i.e. the lower end of the overall wage distribution in the country, but also the objective i.e. low wages in absolute terms, considering the costs of living a decent life in Malaysia.

The declining return to higher education observed in our study demands serious attention, especially given emerging evidence of declining interest in higher education since the COVID-19 pandemic. Although there has yet to be confirming evidence, one poll conducted in 2023 revealed that almost half (49%) of the 1,000 polled secondary school-leavers aged 18 to 20 do not plan to continue studying. In addition, four-fifths of them planned to look for a job while the rest had no plans (UCSI Poll Research Centre 2023). Declining interest in higher education, particularly STEM education³⁰ (Harun and Sallehuddin 2024) – spells tragedy for the knowledge-based and high-income economy Malaysia aspires to be.

Could the young be blamed if the labour market and its related institutions are failing our shared ideal that education is the promise of upward socio-economic mobility? As our study showed, graduates today are not faring better in terms of pay compared to their predecessors from more than two decades ago, questioning the validity of our shared idea of development. The classic notion of education as “the great equaliser” (Mann 1848) have long underpinned policies focused on the provision of education, including tertiary education, evidenced by state-sponsored funding programs for the pursuit of higher education. Today, these same graduates who are experiencing depressed salary levels are also facing elevated education debt levels (particularly PTPTN³¹), altering the calculus for pursuing higher-level education going forward.

This may also be indicative of a broader ‘underemployment’ phenomenon. The broader wage dynamics presented by SWS and MBLs data discussed earlier suggested that wage stagnation is most chronic at the ‘middle-jobs’ level. If we were to superimpose this idea onto our findings, together with recent findings on underemployment among youth and graduates (Abu Rahim and Suhaimi 2022; Mohd Ibrahim and Mahyuddin 2017), it may be worth examining further if the ‘shrinking’ education premiums is actually pointing to a larger phenomenon of a mismatched labour market.

Mohd Ibrahim and Mahyuddin (2017) suggested that underemployment among graduates may be caused by the limited creation of new high-skilled jobs in the market and graduates who are not ready for the industry. The “tight labour market yet high underemployment rates” paradox, as cited by the Ministry of Human Resources (MOHR) in early 2025, also spoke to this problem; before the pandemic in 2019, the DOSM reported 104,000 new jobs were created, only 44,700 of which were considered ‘high skilled’ (Department of Statistics Malaysia 2020). In that same year, as many as 299,000 new graduates were entering the labour force (Ministry of Higher Education Malaysia 2019).

It is thus unsurprising that TVET has become the go-to for policymakers in efforts to reduce the prevalence of unemployment and underemployment among youth.

As of 31 December 2023, there are some 669 public TVET educational institutions, 652 private TVET educational institutions, and 24 state-sponsored TVET educational institutions, all involving as many as 12 ministries and their relevant agencies. In short, TVET features prominently in the Malaysian education system. In recent times, a slew of policy efforts was aimed at positioning TVET as a credible educational pathway. These include the establishment of the Malaysian Board of Technologists (MBOT) in 2016, TVET Malaysia (now TVET MADANI) in 2017, a parliamentary committee on TVET in 2018, a TVET Action Council, and most recently, the National TVET Policy 2030.

³⁰ Ratio of science to arts students in Ministry of Education schools is currently reported at 30:70.

³¹ National Higher Education Fund.

Some positive outcomes may have been the result of these significant efforts. Among those that have been observed by recent studies (Abdul Hamid and Tan 2023b; Azahar 2022) include how the graduate employability (GE) rate of TVET graduates has increased from 66% in 2010 to 88% in 2020. In fact, since 2012, the GE rate of TVET graduates had exceeded that of Academic (non-TVET) graduates. TVET graduates are also more “employable”, judging from their employment status at the time of graduation³². On average, between 2010 and 2020, as many as 76% of TVET graduates were already working at the time of graduation, compared to only 64% of Academic (non-TVET) graduates. The unemployment rate among TVET graduates has declined by two-thirds, from 35% in 2010 to 12% in 2020. The unemployment rate has also been lower than that of Academic (non-TVET) graduates since 2012.

While these superior outcomes are not to be undermined, they are not unique. Other countries with strong dual training systems have seen lower school dropout rates and improved “school-to-work” transitions. In countries like Germany and South Korea, the employability of TVET graduates is comparable to those from the standard academic pathway (Azahar 2022).

The problem is, again, with wages commanded by the TVET graduates, as also found and discussed earlier in this study. With exclusive access to the full Graduates Tracer Study (GTS) annually collected by the Ministry of Higher Education (MOHE), Abdul Hamid and Tan observed that the prevalence of TVET graduates earning better than average salary is still significantly lower than that of academic (non-TVET) graduates, although it has been on an upward trend from 2010 to 2020 (Abdul Hamid and Tan 2023b).

Where our study may complement their insights is on TVET education levels that are lower than the tertiary level, namely the SKM Level 1, 2 and 3. Our study confirmed that the ‘academic premium’ over a TVET qualification also exists and is most pronounced at the tertiary (bachelor’s degree) level when compared with technical institute certificates³³. In addition, we also found that at lower education levels, the median SKM Level 3 (TVET) qualification holder consistently either earned more, or earned at least on par with the median STPM (academic) qualification holder³⁴.

Furthermore, our study confirms that the higher the level of education, the higher the pay holds true even in the TVET world. In the past, the skills and vocational pathway may have been seen as an alternative for the less academically inclined wishing to forgo higher education. As shown in Figure 10, there are no MQF equivalents of a master’s or doctoral degree in the TVET pathway. However, the rising importance of technical, skills, and vocational studies in our education system had brought about Malaysian Technical Universities (MTUs) and the offering of TVET courses by private education providers.

³² In Malaysian public educational institutions, graduation typically takes place within six months after the completion of study

³³ In Malaysian public educational institutions, graduation typically takes place within six months after the completion of study

³⁴ Except for 2016.

Any wage premium enjoyed by a TVET graduate with tertiary education is most likely explained by the higher qualification component (or the academic premium) rather than any kind of TVET premium. This is not to say that employers continue to prefer academic and intellectual skills above technical and vocational skills; rather, the labour market appears to still prioritise those with higher education, TVET or otherwise. In some ways, Spencer's classic conclusion of the "signalling" function of higher education beyond its intrinsic value or educational content may be evoked, even in the context of skills-based education and vocation (Spence 1973). Thus, it may be worth redirecting higher education dollars towards broadening access and encouraging take-up of tertiary-level TVET education for its pursuers.

Conclusion

This study aimed to shed light on the starting pay among workers at the entry level, primarily youth. While many studies precede ours, most make use of either the broader prevailing wage levels beyond the youth or graduate age group, or graduates of higher education institutions. We hope to complement those earlier findings, particularly by providing additional insights into the situation of those without tertiary education. The granularity of the qualifications offered by this relatively untapped MEF survey dataset provided compelling insights into the levels and growth rates of salaries for new entrants into the private sector job market in Malaysia.

To reiterate, our key findings include:

- That **the minimum wage has largely been beneficial to PMR and SPM holders** who, prior to the legislation of the wage floor, have consistently earned below RM1,000 in nominal terms.
- That **the education premium (or returns) persists, albeit declining**. The decline is likely attributable to the minimum wage.
- That the 'education premium' **holds true even in the TVET world**, where the higher the TVET qualification, the higher the pay.
- **Academic level qualifications broadly continue to offer an 'academic premium' over TVET qualifications**, but has been clearly shrinking over the last 2.5 decades, particularly for bachelor's degrees compared to technical institute certificates, and for academic diploma holders compared to TVET diploma holders.
- However, **TVET graduates at the post-secondary level – namely SKM, taken to the third and final level SKM Level 3 – offers superior wage outcomes** to their academic equivalent, the STPM. This may be due to the STPM being perceived as an intermediate qualification rather than the final qualification before the job market

Going back to the earlier inquisition, *Accounting for inflation and other structural shifts, such as higher education attainment or technological adoption, are new entrants to the Malaysian labour market doing significantly better than new entrants three decades ago?*

We can conclude the answer to be largely no, although the outcomes have been comparatively better for the lower end of the education spectrum, thanks to the landmark minimum wage legislation in 2013. In addition, these findings confirm ongoing evidence presented by various studies on (i) a generally suppressed wage levels in the Malaysian labour market, (ii) the potential role of TVET in improving employment (and increasingly earnings outcomes) for its graduates, (iii) skills-based underemployment, where graduates are forced into lower paying jobs below their skills level and (iv) growing interest in self-employment as an increasingly attractive alternative to low earnings offered by full time employment.

This final point relates to broader questions about the lack of high-paying jobs being created by the Malaysian economy, in line with the growing importance of lower-value-added sectors such as retail and wholesale services in the structure of the Malaysian economy. Admittedly, these findings are derived under highly limited circumstances, being only avail to secondary data (of median salaries). Therefore, they should be interpreted and understood in the context of other important findings abound in the literature on the Malaysian labour market.

Glossary

Basic degree									
CAGR	<p>Compound Annual Growth Rate (CAGR): A financial metric used to calculate the smoothed annual growth rate of an investment, business, or economic indicator over a specified period. The formula for CAGR is given by:</p> $\text{CAGR} = \left(\frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\frac{1}{n}} - 1$ <p>Where:</p> <p>Ending Value is the final value of the economic indicator.</p> <p>Beginning Value is the initial value of the economic indicator.</p> <p>n is the number of years.</p> <p>CAGR provides a standardised annualised rate, considering the compounding effect, and is particularly useful for comparing economic variables over different time periods. Adjusting for inflation, the metric known as Real CAGR offers insights into growth in constant purchasing power, providing a more accurate representation of the actual rate of return.</p>								
Entry-level salary	This level of salary is associated with individuals who are at the beginning of their career, with no prior working experience.								
Malaysian Skills Certificate (SKM)	<p>More widely known as SKM, an abbreviation for Sijil Kemahiran Malaysia, the Malaysian Skills Certificates offers three levels of authentication, before qualifying graduates to pursue Diploma in Skills Malaysia (DKM) and Advanced Diploma Skills Malaysia.</p> <p>Candidates are required to pass a lower SKM level before registering for a higher SKM level in the same field. The duration of each SKM levels is as follows (Department of Skills Development, n.d.):</p> <table border="1" data-bbox="472 1776 1353 1966"> <thead> <tr> <th>SKM Level</th> <th>Duration taken</th> </tr> </thead> <tbody> <tr> <td>SKM Level 1</td> <td>6 months</td> </tr> <tr> <td>SKM Level 2</td> <td>12 months</td> </tr> <tr> <td>SKM Level 3</td> <td>12 months</td> </tr> </tbody> </table>	SKM Level	Duration taken	SKM Level 1	6 months	SKM Level 2	12 months	SKM Level 3	12 months
SKM Level	Duration taken								
SKM Level 1	6 months								
SKM Level 2	12 months								
SKM Level 3	12 months								

<p>Median salary</p>	<p>Median refers to the middle observation in a set of data that are arranged in a sequence. The median salary is used to give a more accurate picture of the "average salary", as the determination of the median is not affected by extreme values (Department of Statistics Malaysia (DOSM) 2023)</p>																		
<p>Minimum wage</p>	<p>The International Labour Organization (ILO) defines minimum wages as “the minimum amount of remuneration that an employer is required to pay wage earners for the work performed during a given period, which cannot be reduced by collective agreement or an individual contract” (“Chapter 1: What Is a Minimum Wage,” n.d.)</p> <p>In Malaysia, the minimum wage is defined as basic wages, excluding any allowances or other payments (“What Is the Minimum Wage in Malaysia?” 2022). The National Wages Consultative Council Act 2011 describes “wages” and “minimum wages” under section 2. “Wages” has a similar meaning to “wages” in section 2 of the Employment Act 1955 or Sabah Labour Ordinance (Cap.67) and Sarawak Labour Ordinance (Cap.76), whereas “minimum wages” refers to basic wages only, excluding any allowances or other payments (“What Is the Minimum Wage in Malaysia?” 2022).</p> <p>Therefore, the term “minimum wage” here leans more towards signifying salary rather than wage.</p>																		
<p>Minimum Wage Order</p>	<p>The Minimum Wages Order (MWO) is a legal document in Malaysia that establishes the minimum wage rate for employees (Attorney General's Chambers of Malaysia 2022)</p> <div data-bbox="470 1321 1412 1758" data-label="Figure"> <p>The figure is a horizontal timeline showing the implementation of the Minimum Wages Order (MWO) in Malaysia from 2013 to 2022. The timeline is represented by a horizontal dotted line with orange circular markers at each update point. Vertical dotted lines connect these markers to their respective dates and wage rates. The data points are as follows:</p> <table border="1"> <thead> <tr> <th>Date</th> <th>Peninsular Malaysia (PM)</th> <th>Sabah and Sarawak (SS)</th> </tr> </thead> <tbody> <tr> <td>1 JAN 2013</td> <td>RM900</td> <td>RM800</td> </tr> <tr> <td>2016</td> <td>RM1,000</td> <td>RM920</td> </tr> <tr> <td>2019</td> <td>RM1,100</td> <td>-</td> </tr> <tr> <td>1 FEB 2020</td> <td>RM 1,200</td> <td>-</td> </tr> <tr> <td>1 MAY 2022</td> <td>RM1,500</td> <td>-</td> </tr> </tbody> </table> </div> <p>Figure 26: Reproduced Timeline depicting the Implementation of Minimum Wages Order (2013-2022) (Source: Federal Government Gazette, National Human Resource Centre)</p> <p>Notes:</p> <p>PM: Peninsular Malaysia SS: Sabah and Sarawak</p>	Date	Peninsular Malaysia (PM)	Sabah and Sarawak (SS)	1 JAN 2013	RM900	RM800	2016	RM1,000	RM920	2019	RM1,100	-	1 FEB 2020	RM 1,200	-	1 MAY 2022	RM1,500	-
Date	Peninsular Malaysia (PM)	Sabah and Sarawak (SS)																	
1 JAN 2013	RM900	RM800																	
2016	RM1,000	RM920																	
2019	RM1,100	-																	
1 FEB 2020	RM 1,200	-																	
1 MAY 2022	RM1,500	-																	

The National Higher Education Fund Corporation (PTPTN)	The National Higher Education Fund Corporation, or more widely known as PTPTN, is an agency responsible for providing student loans at the tertiary level. They also offer saving schemes and manage funds for higher education. PTPTN is established under the National Higher Education Act 1997 (<i>PERBADANAN TABUNG PENDIDIKAN TINGGI NASIONAL ACT 1997 1997</i>)
Real CAGR	<p>Real CAGR (Compound Annual Growth Rate) considers the impact of inflation on the growth. It provides a more accurate measure of growth by adjusting for changes in the purchasing power of currency over time.</p> <p>The formula for real CAGR is as follows:</p> $Real\ CAGR = \left(\frac{1 + Nominal\ CAGR}{1 + Inflation\ Rate} \right) - 1$ <p>Here,</p> <p>Nominal CAGR is the nominal compound annual growth rate.</p> <p>Inflation Rate is the average annual inflation rate over the same period.</p>
Salary	Salaries are fixed amounts paid regularly, usually on a monthly or annual basis, regardless of the actual hours worked. Salaried employees often have a contractual agreement that specifies their annual or monthly earnings.
Technical Institute Certificate	Technical Institute Certificate is an MQA level 6 qualification, which is equivalent to a bachelor's degree. It is usually offered in both public and private technical institutes, more widely known as Institut Latihan Kemahiran Awam (ILKA) and Institute Latihan Kemahiran Swasta (ILKS)
Wage	Wages refer to all remuneration in money payable made throughout the reference period to employees. The wage estimate includes bonuses, commissions, and allowances per the data sources' definition (Department of Statistics Malaysia (DOSM) 2023)

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