

Institutional Efficiency of Private Tahfiz Institutions in Selangor: Implications for Sustainable Religious Education

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ABSTRACT

This purpose of this study is to examines the institutional efficiency of private tahfiz institutions in Selangor and discusses its implications for sustainable religious education and Sustainable Development Goal (SDG). By utilizing the Data Envelopment Analysis (DEA), the study evaluates technical efficiency (TE), pure technical efficiency (PTE), and scale efficiency (SE) among 34 private tahfiz institutions over the period 2015 to 2020. The analysis employs three inputs, namely the number of students enrolled, number of staff, and operating expenditure, and two outputs, namely the number of *Huffaz* graduates and student continuation to the next level of education. The findings indicate considerable variation in institutional efficiency across the study period, with mean technical efficiency ranging from 0.326 to 0.429. The results also indicate that inefficiency is associated with both managerial performance and scale-related factors, highlighting differences in resource utilisation among private tahfiz institutions. Several institutions consistently operated on the efficiency frontier, while others recorded persistently low or fluctuating efficiency scores. These findings provide empirical evidence of differences in institutional resource utilisation and educational outcomes among private tahfiz institutions in Selangor. While the selected educational outputs represent important institutional outcomes, they should not be interpreted as comprehensive measures of educational quality. Nevertheless, the efficiency evidence provides useful implications for institutional management, resource allocation, governance, and the sustainability of tahfiz education. The findings may also inform efforts to strengthen the contribution of private tahfiz education towards the broader objectives of SDG 4.

Keywords: Private Tahfiz, Institutional Efficiency, Data Envelopment Analysis, Islamic Education, Sustainable Education

INTRODUCTION

Tahfiz institutions play a vital role in preserving and passing down the teachings of the Quran by educating students to memorize and recite it with precision. In Malaysia, these institutions operate under two main categories: publicly funded and privately funded tahfiz schools. Publicly funded institutions, previously known as Maahad Tahfiz Al-Quran Negeri (MTQN), receive support from the state, while private tahfiz institutions rely on independent funding. Remarkably, over 91% of tahfiz institutions in Malaysia are privately owned, and supported by foundations, non-governmental organizations (NGOs), or individuals. Among the states, Selangor stands out as a hub for private tahfiz education, contributing nearly one-third of the total institutions in the country. According to the Selangor Tahfiz al-Quran Institution Society (PITAS), there are 411 registered private tahfiz institutions in the state, accommodating 22,076 students and 3,600 teachers as of 2019.

The efficiency of these institutions is crucial in ensuring that they provide quality education while remaining financially and operationally sustainable. Managing resources effectively allows them to maintain high teaching standards, improve student outcomes, and continue serving their communities. Without efficiency, institutions may struggle with financial instability, inadequate infrastructure, and limited access to qualified educators, ultimately affecting students' learning experiences. Unlike mainstream schools, many private tahfiz institutions do not receive regular government funding, making them dependent on donations, waqf, or tuition fees. This

financial uncertainty poses significant challenges in maintaining operations and ensuring long-term sustainability. Furthermore, the absence of standardized accreditation and governance can impact the credibility of these institutions, potentially limiting students' future educational and career opportunities.

Given these challenges, conducting an efficiency analysis is essential to help private tahfiz institutions optimize their resources and improve their long-term viability. By identifying gaps and areas for improvement, policymakers, administrators, and stakeholders can implement targeted strategies to enhance their impact. A structured efficiency assessment enables these institutions to refine their financial management, strengthen governance, and adopt sustainable funding models. Efficiency is also deeply connected to SDG 4 which promotes inclusive and equitable quality education for all. Private tahfiz institutions contribute significantly to expanding educational opportunities, particularly for students seeking an Islamic-based curriculum. However, their ability to provide quality education hinges on operational and financial efficiency. Institutions that manage resources effectively can improve student-teacher ratios, ensure better infrastructure, and establish sustainable partnerships through waqf and public-private collaborations.

Moreover, efficiency plays a direct role in enhancing the accessibility and sustainability of tahfiz education. Well-managed institutions can keep education affordable, maintain high academic standards, and foster a more structured learning environment. Addressing inefficiencies ensures that these institutions continue to thrive, providing future generations with structured, high-quality religious education while aligning with global educational sustainability efforts. Despite the critical role that tahfiz institutions play, there is still a significant gap in understanding their efficiency due to limited research and data. Many of these institutions operate independently, making it challenging to assess how effectively they utilize resources, manage finances, and uphold educational standards. Without clear performance metrics, it becomes difficult to establish best practices and develop policies that support their long-term growth.

Assessing the efficiency of private tahfiz schools is not just about financial sustainability it is about securing the future of Islamic education. Without proper analysis, these institutions may face resource shortages, overcrowded classrooms, or declining teaching quality. By evaluating efficiency, stakeholders can introduce policies that enhance financial stability, improve student learning experiences, and ensure the resilience of tahfiz education. This study, therefore, aims to assess the efficiency of private tahfiz institutions in Selangor and examine how efficiency supports SDG 4 and broader sustainability goals.

In conclusion, efficiency analysis plays a key role in shaping policies that strengthen the financial management, resource allocation, and governance of private tahfiz institutions. By adopting structured funding mechanisms such as waqf-based financial models and standardized accreditation systems, these institutions can ensure long-term stability while maintaining high educational standards. Furthermore, efficiency assessments provide critical insights for stakeholders including government agencies, NGOs, and waqf organizations helping them make informed decisions that support quality education, equitable resource distribution, and overall institutional resilience. Through data-driven policymaking, private tahfiz institutions can enhance their operational effectiveness, ensuring sustainable growth and continued access to high-quality religious education for generations to come.

Review on Efficiency in Islamic Education Institutions Studies

By using Data Envelopment Analysis (DEA), Pratignyo, Supian, & Lesmana, (2023) aims to analyze the efficiency and productivity of seven study programs at as Syafi'iyah Islamic University. This study utilized five inputs (sum of college students, sum of permanent lecturer, sum of temporary lecturer, lecturer with master's degree and lecturer with doctor degree) and three outputs (sum of graduate, sum of research and sum of article). The result indicates that the efficiency of the 7 study programs at as Syafi'iyah Islamic University was analyzed using the DEA method. Six study programs consistently achieved a technical efficiency value of 100% over two consecutive years. In addition, the productivity of the 7 study programs was measured using the Malmquist Productivity Index method. The Islamic Religious Education Program (PAI) achieved the highest productivity with a Total Factor Productivity (TFP) value of 1.124. Meanwhile the study programs with the highest efficiency

values from 2017/2018 to 2018/2019 were KPI, PBS, Management, Accounting, Diploma of Nursing, and Bachelor of Nursing, with an average efficiency of 100%.

By implementing the different methodology, S. T. Noor, Sanusi, & Uwes (2022) aim to identify the performance of principals who have implemented school-based management (SBM) at Al Lathif Islamic School in Bandung using the Balanced Scorecard (BSC) model. The study aims to measure the work efficiency of the institution in four perspectives: financial, customer, internal business processes, and learning and growth perspectives. The BSC method is introduced as a suitable approach for monitoring and evaluating the performance of the institution. The paper emphasizes the importance of strategic planning and the integration of SWOT analysis with the BSC for effective performance improvement. The paper utilizes a quantitative approach with descriptive analysis to assess the performance of principals at Al Lathif Islamic School. Primary data is collected through a questionnaire to measure the performance from the financial perspective and the perspective of learning and growth. Secondary data is used to measure performance from the financial perspective and internal business process perspective. Data collection methods include the use of questionnaires to gather relevant primary data and interviews for in-depth analysis of the measurement performance. The interviews conducted are non-structured, allowing for free conversation and exploration of the data. The study involves various stakeholders, including educators, education personnel, students, parents, and alumni, to provide a comprehensive perspective on the performance of the school. The result analysis shows that Al Lathif Islamic School's performance, customer perspective, internal business process and learning and growth perspective was in the very good category. While the financial perspective indicated that the school met economic requirements, effectiveness, and efficiency.

Saihu & Islamy (2021) aims to determine the effectiveness of the management of the Jam'iyyah Islamic Boarding School in South Tangerang also by utilizing the BSC analysis. This study used mixed methods of quantitative and qualitative data collections. The evaluation of the school's management is based on four perspectives: 1) financial perspective, 2) customer perspective, 3) internal business process perspective, and 4) learning and growth perspective. The result shows that the financial condition of the school is less efficient, with fluctuations every year. However, the public support ratio increased, indicating good contribution from donors. Based on their Head of Administration and Finance Division this is not a major disruption as funds will rise again in the next month or year. For the customer perspective, 65 respondents were satisfied with the cost they spent for the services they received from the school indicated that the school achieved its targets in terms of acquisition process and customer satisfaction, with an increasing number of students and a high customer satisfaction index. While the internal business process perspective demonstrated successful achievements in innovation enhancement and customer service enhancement. Lastly, for learning and growth perspective the performance assessment was done by exercising the percentage of employee participation in training and seminar programs, as well as the increase of employee satisfaction which were considered important for the effectiveness of the school. As overall, based on the result presented by the BSC, the management of the Jam'iyyah Islamiyyah Islamic Boarding School in South Tangerang is effective.

By using the same method, Meldona & Segaf (2015) aim to measure the performance of an Islamic higher education institution as a Public Service Agency using the Balanced Scorecard (BSc) method in the Sharia perspective. The study aims to integrate the BSc in Islamic perspectives, including the Sharia Financial Perspective (SFP), Sharia Customers Perspective (SCP), Sharia Internal Business Process Perspective (SIBPP), and Sharia Learning and Growth Perspective (SLGP). The analysis was conducted in the State Islamic University of Maliki Malang (UIN Maliki Malang) in Indonesia. The data was analyzed in two steps: first, by integrating the BSc in Islamic perspectives, including the Sharia Financial Perspective (SFP), Sharia Customers Perspective (SCP), Sharia Internal Business Process Perspective (SIBPP), and Sharia Learning and Growth Perspective (SLGP); and second, by measuring those integrating perspectives. The study also conducted a literature review and utilized documentation and questionnaires to gather information on the UIN Maliki Malang in Indonesia. Hence, the study found that the total score of the Balanced Scorecard (BSc) for the Islamic higher education institution as a Public Service Agency was 85.68%, indicating good performance. However, the Sharia Financial Perspective (SFP) showed that the realization was below the target due to the dominant use of conventional banking institutions for financial cash flow. UIN Maliki Malang achieved the best score of BLU performance in the higher education sector, with a score of 84.81%. Hence, the research emphasizes the importance of

integrating Islamic perspectives into the BSc framework to ensure the satisfaction of stakeholders and employees in Islamic higher education institution.

While, Abadian & Yousefnejad (2014) evaluate the performance of management departments of Islamic Azad universities in the northern provinces of Iran using Data Envelopment Analysis methodology. The evaluation is based on the quality and quantity of education, as well as research activities. This study measures the performance of decision units using two input indices (number of entered students and full-time scientific group) and three output indices (quality of education, quantity of education, and research activities). The result revealed that out of the 16 management departments of Islamic Azad universities in the northern provinces of Iran, 10 units were identified as efficient, while the remaining units were deemed insufficient. The Anderson-Peterson technique was used to rank the units based on their efficiency, but the specific rankings were not mentioned in the provided sources. The findings of this study also have identified Tonekabon, Jouybar, Chaloos, Bandar Anzali, and Behshahr units as having low performance in the original model and all five different scenarios, indicating the need for improvement in their efficiency. The study also suggests that units with no activities in the educational aspect should focus on getting more involved in this area to improve their performance.

Agha, Kuhail, Abdelnabi, Salem, & Ghanim (2011), aim to assess the efficiencies of academic departments at IUG using DEA and provides a brief review of relevant literature and variables used in similar studies during the years 2004-2006. The inputs for the DEA analysis include operating expenses, credit hours, and training resources, while the outputs considered are the number of graduates, promotions, and public service activities. The study also utilizes multiple linear regression to establish a relationship between super efficiency and input and output variables. The result revealed that the average efficiency score of the academic departments at the IUG is 68.5%. Out of the 30 departments studied, 10 were found to be efficient. The departments in the faculty of science, engineering, and information technology need to significantly reduce their laboratory expenses while the department of economics and finance was identified as having the highest super efficiency score among the efficient departments. In addition, this study also found that there was no significant relationship between efficiency scores and the size of the academic departments.

Challenges in Private Tahfiz Institutions

Regardless of all development of tahfiz institution in Malaysia, some major issues have been frequently highlighted by previous studies which related to the governance of the institution.

One of the major issues pertaining tahfiz institution in Malaysia are the audit committee for fund received (Anas, Samori, Hamid, Zulkipli, & Noor, 2019; Azha, Baharuddin, Suyurno, Rani, & Hamid, 2013; Kamal & Seman, 2017). Currently, both private and public tahfiz institutions fully depend on students' fees to support their operating costs. However, the amount received is insufficient to support their activities (Mohd Yusof, Mohamad Akhir, Ismail, Abdullah, & Ghazali, 2022). Basically, they obtain funds from the federal government, state government as well as the public in terms of *waqf*, *sadaqah*, and *zakat*. Hence, for the sustainability of their institution, a proper report with a valid audit must be presented. The failure of tahfiz institution to provide audited financial reports might reduce public confidence towards the tahfiz operators. Therefore, maintaining excellent performance is not an option, it is a requirement for all organizations (A. H. M. Noor, Rasool, Rahman, Yusof, & Ali, 2012a).

In addition, other issues that are often associated with tahfiz institution in Malaysia are related to the unstandardized curriculum provided by the tahfiz institution based on their owner preferences. Most of the private tahfiz did not take the new tahfiz curriculum by the government due to several issues such as they need to prepare a competent teacher following the rules and regulations by the government. There is also a mentality that the government will take over their institution once they follow the government curriculum. Tahfiz institution insists on using their own curriculum and sometimes without proper planning on the students' continuity. Academic related subjects are also being ignored and most of the students did not prepare for their SPM.

Furthermore, issues related to the characteristics of teachers who teach memorization subjects are also among the debated issues. According to Prof Dato Dr. Ab Halim Tamuri, Rector of Kolej Universiti Islam Selangor

(KUIS) has stated that the Tahfiz Teacher Training Institute needs to be established to coordinate the curriculum and standard teaching methods in the Tahfiz schools (M. B. Yahaya, 2018). In addition, the public also cannot consider teachers to graduate in Islamic Education studies can become good tahfiz teachers because tahfiz requires teaching specialization. Razak, (2020) mentioned that tahfiz teachers lack knowledge and pedagogic practices. Meanwhile, a study by M. Yahaya (2017) stated that there are about 40% of non-tahfiz graduates become a tahfiz teacher in MRSM Ulul Albab in Negeri Sembilan, Terengganu, and Pulau Pinang. Whereas only 20 out of 62 tahfiz teachers in MRSM Ulul Albab have undergone training to become tahfiz teachers. Even though tahfiz graduates are increasing, the issue of lack of graduate teachers in tahfiz institution still exists. This problem occurs simply because the certificate is not recognized by Darul Quran.

Recognition of the certificate also becomes one of the major issues being highlighted by the government and the public concerning the future of the students after they finish their memorization. Most of the tahfiz institutions did not have a proper certificate with accreditation from the authorized body. For the time being, when the students need to continue their studies to the next level, they need to take another exam to verify their memorization before they can have the certificate to pursue their studies. Most of the private tahfiz did not have recognition from the government-authorized body. Hence, this certificate cannot be used to continue their study in other government institutions such as college and universities. Hence, the government through Darul Quran has introduced Sijil Tahfiz Malaysia (STM) for all private tahfiz students that need recognition of their memorization. They need to sit for the exam organized by Darul Quran to get the certificate (S. Razak, Wan, San, Tumiran, & Bakar, 2022).

In addition to that, private tahfiz in Malaysia have been under scrutiny in recent years due to safety issues. Many private tahfiz in Malaysia lack proper fire safety measures such as fire alarms, sprinkler systems, and fire exits. This has resulted in several deadly fires that have claimed the lives of students and teachers. Some private tahfiz schools operate in buildings that are not structurally sound or have not been properly maintained. This can lead to dangerous situations such as collapsed ceilings or walls (Alsubaie, 2017). Some private tahfiz are not adequately supervised, and students are left unsupervised for extended periods. This can result in accidents, injuries, or other safety hazards (Ibrahim, Idris, Lumat, & Shimi, 2023). Some private tahfiz schools lack proper sanitation facilities, such as clean toilets and running water. This can lead to health problems and the spread of diseases. In some cases, students have reported being physically abused by teachers or administrators at private tahfiz schools. This can cause long-term physical and emotional trauma. It is important for private tahfiz schools in Malaysia to prioritize the safety and well-being of their students. The Malaysian government has introduced regulations to improve the safety of private tahfiz schools, but more needs to be done to ensure that these schools are safe places for children to learn and grow.

SDG 4 and Islamic Education

SDG 4 focuses on ensuring inclusive, equitable, and quality education while promoting lifelong learning opportunities for all (United Nations, 2015). While SDG 4 primarily addresses formal and secular education, its core principles are highly relevant to tahfiz institutions, which provide structured religious education. These institutions contribute to expanding educational access, particularly for students who seek an Islamic-based curriculum. However, to fully align with SDG 4, tahfiz institutions must improve their quality, governance, and sustainability.

One of the key targets of SDG 4 is to ensure equal access to education for all children, regardless of socioeconomic background (UNESCO, 2016). Many tahfiz institutions, particularly private ones, operate on donations, waqf-based funding, and community contributions, making them an affordable alternative for students from lower-income backgrounds (Ibrahim et al., 2021). However, financial instability remains a major challenge, as the lack of consistent funding can affect the quality of education, infrastructure, and teacher salaries (Ismail & Hassan, 2018). To address this, strengthening financial mechanisms, such as structured waqf-based financing, could provide long-term sustainability for these institutions.

SDG 4 also emphasizes quality education through improved teaching methodologies, well-trained educators, and better infrastructure (World Bank, 2019). While tahfiz institutions excel in Quranic memorization, many

lack formal training programs for educators, which can impact the effectiveness of teaching and student comprehension (Rahman et al., 2020). To enhance educational quality, integrating modern pedagogical approaches such as competency-based learning and blended education can improve learning outcomes while ensuring tahfiz education aligns with global standards (Salleh & Mohd Noor, 2019).

Furthermore, lifelong learning and skills development are fundamental components of SDG 4 (UNDP, 2020). Traditionally, tahfiz education has been limited to religious studies, with minimal exposure to academic subjects such as mathematics, science, or language studies. However, integrating dual-stream education models which combine tahfiz learning with mainstream academic subjects can equip students with a well-rounded education that enhances their career prospects (Ahmad et al., 2021). This approach not only strengthens their knowledge base but also ensures that graduates are better prepared for higher education or employment opportunities.

Another critical aspect of SDG 4 is the sustainability and efficient management of educational institutions. Many private tahfiz institutions face governance issues due to a lack of standardized accreditation systems and regulatory oversight (Mahamood & Ab Rahman, 2015). Poor governance can lead to inconsistent teaching quality and operational inefficiencies. By implementing stronger institutional governance, accreditation frameworks, and transparent financial management, tahfiz institutions can improve their long-term sustainability (Kadir et al., 2022).

In conclusion, tahfiz education aligns with SDG 4 by providing accessible, high-quality, and sustainable religious education. However, to fully contribute to global education goals, greater efforts are needed in curriculum development, teacher training, financial sustainability, and institutional governance. By addressing these challenges, tahfiz education can evolve into a more structured and impactful system that not only preserves Islamic traditions but also meets modern educational and economic demands.

METHODOLOGY

All information and data were collected from secondary source. To utilize DEA, all inputs and outputs used in this study; number of staff, number of students enrolled, operation expenditure, number of graduates, and continuation to the highest level are obtained from the private tahfiz institution report, file, and database. All data are collected over the period of study from 2015 to 2020. This study utilizes three inputs (the total number of students enrolled, the total number of staff, and total expenditure) and two outputs (the total number of graduate students (*Huffaz*) and continuation to the highest-level). The explanation of each input and output is detailed below. The chosen inputs and outputs are shown in Table 1 below.

Table 1: Input and Output

Input / Output	Variables	Explanation
Input	Number of Student enroll	Total number of students enroll in every Tahfiz institution
	Number of Staff	Total number of staffs of every Tahfiz institution
	Operation Expenditure	Total yearly expenditure of every Tahfiz institution (RM)
Output	Number of Graduate (<i>Huffaz</i>)	Total number of graduate student (<i>Huffaz</i>) of every Tahfiz institution
	Continuation to the highest-level	Number of students who continues their study to the next level

The efficiency of tahfiz institution was analysed by utilizing input and output given. DEA indicated three different dimensions of efficiencies namely Technical, Pure Technical, and Scale Efficiencies. Technical efficiency (TE) is the result of a combination of Pure Technical (PTE) and Scale Efficiencies (SE). The DEA score falls between the intervals 0 and 1. By obtaining the result of PTE and SE, the organization can observe

the inefficiency of the private tahfiz that has resulted from managerial underperformance or choice of inappropriate scale size. The relationship between these three efficiencies is shown below.

$$[\text{Technical Efficiency}] = [\text{Pure Technical Efficiency}] \times [\text{Scale Efficiency}]$$

Results and Findings

The table below presents descriptive statistics for the input and output variables used in the efficiency analysis of private tahfiz institutions.

Table 2: Descriptive Statistics of Inputs and Outputs of the Tahfiz, 2015-2020

	Mean	Maximum	Minimum	Std. Dev.
Input				
Number of students enroll	60	269	1	55.10
Number of staff	11	39	3	9.43
Total expenditure	303086.62	892500.00	33333.33	232464.89
Output				
Number of Graduate (<i>Huffaz</i>)	8	59	1	11.31
Continuation to the highest-level	10	59	1	13.72

The table provides an overview of key input and output variables for private tahfiz institutions, highlighting variations in resource allocation and educational outcomes. On average, institutions enroll 60 students, with the largest having 269 and the smallest only one. Staffing ranges from 3 to 39 employees, with an average of 11, while total expenditure varies significantly, from RM33,333.33 to RM892,500.00. These differences suggest that some institutions operate on a much larger scale with better funding, while others function with minimal resources.

In terms of outcomes, institutions produce an average of 8 *huffaz* graduates per year, with numbers ranging from 1 to 59. Similarly, student progression to higher education varies, averaging 10 students per institution, with the highest reaching 59. The high standard deviations indicate inconsistencies in efficiency, as institutions with higher resources do not always produce proportionally better results. This variation suggests differences in governance, curriculum effectiveness, and financial management, emphasizing the need for efficiency analysis to optimize resource utilization and enhance long-term sustainability.

Efficiency Levels of Private Tahfiz Institutions in Selangor

The table presents the technical efficiency (TI) scores of 34 private tahfiz institutions (TI 1–TI 34) from 2015 to 2020. A score of 1.000 indicates that an institution is fully efficient and operating on the efficiency frontier, while values below 1.000 suggest inefficiency, with lower values indicating greater inefficiencies. The mean efficiency scores for each year show fluctuations, with an overall trend of slight improvement from 2015 (0.356) to 2020 (0.429).

Table 3: Efficiency of Private Tahfiz Institutions in Selangor

TI	2015	2016	2017	2018	2019	2020
TI 1	0.367	0.369	0.885	1.000	1.000	0.260

TI 2	1.000	0.148	0.148	0.147	0.119	0.172
TI 3	0.062	0.124	0.188	0.429	0.059	0.249
TI 4	0.187	0.063	0.063	0.188	0.141	0.063
TI 5	1.000	1.000	1.000	1.000	1.000	1.000
TI 6	0.117	0.074	0.177	0.177	0.209	0.262
TI 7	1.000	1.000	0.687	0.647	0.526	0.524
TI 8	0.143	0.227	0.192	0.577	0.692	0.462
TI 9	0.208	0.208	0.208	0.208	0.035	0.010
TI 10	0.121	0.181	0.236	0.148	0.157	0.328
TI 11	0.139	0.118	0.393	0.379	0.311	0.508
TI 12	0.167	0.183	0.188	0.148	0.187	0.192
TI 13	0.033	0.059	0.143	0.353	0.376	1.000
TI 14	0.114	0.141	0.111	0.139	0.203	0.283
TI 15	0.545	0.427	0.472	0.359	0.273	0.275
TI 16	0.048	0.052	0.039	0.044	0.026	0.033
TI 17	0.058	0.057	0.058	0.058	0.030	0.020
TI 18	1.000	1.000	1.000	1.000	1.000	1.000
TI 19	0.488	0.039	0.030	0.046	0.645	0.242
TI 20	0.302	0.197	0.216	0.190	0.202	0.455
TI 21	0.148	0.148	0.148	0.148	0.137	0.148
TI 22	0.243	0.320	0.320	0.295	0.376	0.379
TI 23	0.156	0.189	0.110	0.083	0.471	0.872
TI 24	0.226	0.410	0.499	0.367	1.000	1.000
TI 25	0.288	0.502	0.401	0.205	0.405	0.772
TI 26	0.187	0.063	0.063	0.188	0.141	0.063
TI 27	0.139	0.286	0.333	0.381	0.420	0.381
TI 28	0.457	0.814	0.571	0.832	0.858	0.864
TI 29	0.787	0.787	0.306	0.384	0.395	0.464

TI 30	0.163	0.131	0.171	0.150	0.168	0.182
TI 31	0.077	0.200	0.143	0.125	0.228	0.167
TI 32	0.917	0.676	0.958	0.221	0.130	0.701
TI 33	0.224	0.123	0.143	0.123	1.000	0.257
TI 34	1.000	1.000	1.000	0.361	0.518	1.000
Mean	0.356	0.333	0.341	0.326	0.395	0.429

From the Table above, several institutions, such as TI 5 and TI 18, maintained full efficiency across all six years, demonstrating consistent optimal resource utilization. Conversely, many institutions, including TI 3, TI 4, and TI 17, exhibit persistently low efficiency scores, highlighting operational inefficiencies that need addressing. Some institutions, such as TI 1 and TI 24, improved their efficiency over time, while others, such as TI 2 and TI 32, experienced fluctuations, indicating varying factors affecting their performance.

The data suggests that while some private Tahfiz institutions operate efficiently, many face challenges in optimizing resources. The low mean efficiency scores, particularly in the earlier years, indicate widespread inefficiencies. These results highlight the need for better governance, financial management, and resource allocation to enhance the sustainability and effectiveness of these institutions.

Sustainability Insights

Waqf, as a form of Islamic endowment, has historically played a crucial role in funding educational institutions, including madrasahs, universities, and religious schools (Mohsin, 2019). By dedicating assets such as land, buildings, or cash for perpetual educational purposes, waqf provides a sustainable financial model that reduces dependency on tuition fees and unstable donations. This mechanism ensures long-term financial security for private tahfiz institutions by generating passive income from waqf assets, which can be used to cover operational expenses, infrastructure maintenance, and teacher salaries (Sadeq, 2002).

A well-managed waqf system can also improve the governance and transparency of tahfiz institutions. Establishing a structured waqf fund, overseen by state religious councils or waqf foundations, can prevent financial mismanagement and ensure that resources are allocated efficiently (Hassan & Shahid, 2010). Furthermore, integrating Islamic financial instruments such as waqf sukuk and cash waqf can provide additional liquidity while preserving principal assets for long-term benefits (Shaikh, Ismail, & Shafiai, 2017). Research has shown that waqf-based education financing is a viable alternative to conventional funding methods, ensuring continuous financial support for underprivileged students (Cizakca, 2011).

The role of corporate waqf initiatives is also growing in modern Islamic finance. For instance, Islamic banks and financial institutions have introduced structured corporate waqf funds that generate revenue for educational and social welfare programs (Raimi, Patel, & Adelopo, 2014). Collaboration between the corporate sector and waqf administrators can further strengthen the financial resilience of tahfiz institutions, allowing them to focus on delivering quality education rather than struggling with financial constraints.

CONCLUSION

This study examined the institutional efficiency of private tahfiz institutions in Selangor using Data Envelopment Analysis (DEA) and assessed the implications of the findings for the sustainability of tahfiz education. The results demonstrate substantial variation in efficiency across institutions and over the 2015–2020 period. While several institutions consistently operated at the efficiency frontier, many others recorded relatively low or fluctuating efficiency scores, indicating differences in the utilisation of institutional resources. The findings further highlight the importance of examining both managerial and scale-related aspects of institutional efficiency. The variation in efficiency suggests that differences in the allocation and utilisation of students, staff,

and operating expenditure are relevant to the performance of private tahfiz institutions. The results therefore provide useful empirical evidence for institutional managers and policymakers seeking to improve resource utilisation and strengthen the sustainability of private tahfiz education. Importantly, the number of *Huffaz* graduates and student continuation to the next level used in this study represent measurable educational outcomes rather than comprehensive indicators of educational quality. Consequently, the efficiency scores should be interpreted primarily as measures of relative institutional resource utilisation and output performance, rather than as direct measures of teaching quality, curriculum quality, or student learning achievement. Nevertheless, efficient utilisation of institutional resources remains an important foundation for maintaining accessible and sustainable educational provision. From a policy perspective, the findings support greater attention to resource planning, institutional governance, financial management, and appropriate institutional scale. Structured funding mechanisms such as waqf, together with collaboration among government agencies, NGOs, and relevant Islamic philanthropic organisations, may further support the financial resilience of private tahfiz institutions. Such measures should complement, rather than replace, broader efforts to strengthen teacher competency, curriculum development, accreditation, and student progression. In relation to SDG 4, the findings should be understood as providing an institutional-efficiency perspective that may support the broader objective of sustainable and inclusive education. The study does not directly measure all dimensions of educational quality; rather, it demonstrates how efficiency analysis can identify differences in resource utilisation and educational outcomes that are relevant to the sustainability of tahfiz education. Future studies could extend this analysis by incorporating direct measures of teaching quality, student learning achievement, curriculum quality, teacher competency, and other dimensions of educational quality, as well as by expanding the analysis to other states and comparing private and public tahfiz institutions.

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