

## **Unleashing Economic Transformation: Empowering TVET Institutions in Kenya through Strategic Funding - A Systematic Literature Review**

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### **Abstract**

A skilled workforce is a primary requirement for industrialization, economic growth, and sustainable development in developing countries. Technical and Vocational Education and Training hold a major role in producing a technical and entrepreneurial workforce; hence it's a key priority in Kenya's government development agenda. This paper discusses funding as a major challenge towards enhancing access, retention, gender parities, and completion levels in the TVET sector. We carry out a systematic literature review to identify that maintaining TVET institutions is expensive, and improving them comes at a price. The delivery of a quality workforce in TVET organizations is directly linked to effective management and strategic leadership to facilitate the entire process. We performed a systematic literature review to identify progress within our systems. The paper also identifies that funding and financing are major pillars in ensuring quality, relevance, access, and management, hence recommendations on improving TVET funding. Therefore, our major objective is to discuss strategies for funding TVET institutions in Kenya, thus the sustainable development agenda. We identify the major pros of increasing financing for TVET institutions promoting research, development, and innovative projects in TVET institutions (1), increasing and strengthening organizational capacity (2) promoting access and equity to TVET (3), and improving learners' engagement with stakeholders. The research concludes that HELB financing is crucial for performance efficacy in these institutions. Donors funding is also important in influencing learners' enrolment and retention rather than completing the program. Finally, we identify that self-financing has a limited influence on the performance of these programs. Therefore, we recommend that policyholders review the higher education funding to reach more beneficiaries, hence sustainability. They should also assure learners of the total funding of the desired programs to improve learners' relevance, access, equity, and retention.

**Key words:** Economic growth, TVET, Quality workforce, SWOT, HELB financing

## **1.1 Background of the Study**

In Kenya, as in many other developing countries, achieving robust economic growth and sustainable development is a top priority. Recognizing the crucial role of Technical and Vocational Education and Training (TVET) institutions in equipping the workforce with essential skills, there is a growing emphasis on empowering these institutions through strategic funding initiatives.

This study aims to explore the relationship between "Empowering TVET Institutions Through Strategic Funding" and its impact on "Economic Transformation" in Kenya. The dependent variable, "Economic Transformation," represents the desired outcome of providing robust funding to TVET institutions, while the independent variable, "Empowering TVET Institutions Through Strategic Funding," serves as the catalyst for this transformation. By conducting a systematic literature review, we seek to examine existing studies, theories, and empirical evidence to understand how investing in TVET institutions can drive Kenya's economic transformation (Paul et al., 2021). This research has the potential to inform policymakers, educational institutions, and stakeholders on optimizing funding strategies, ultimately leading to a skilled and adaptable workforce, increased innovation and entrepreneurship, and a thriving and sustainable economy in Kenya.

## **1.2 Research Aim and Objectives**

The main aim of the research is to assess the overall impact of funding TVET institutions in Kenya. Specifically, the research aims to achieve the following objectives:

- To identify the impact of funding TVET through the HELB program;

This objective focuses on understanding how financial support provided through the HELB program affects TVET institutions' performance, student outcomes, and overall effectiveness in equipping the workforce with essential skills.

- To assess the impact of self-financing and Donor funding on the performance of TVET institutions in Kenya;

This objective aims to analyze and compare the effects of different funding sources, including self-financing and funding from Donors, on the quality of education, infrastructure, and overall development of TVET institutions.

- Provide possible solutions to the challenges experienced at TVET institutions to derail the realization of the sustainable development agenda;

This objective seeks to identify and address the various challenges faced by TVET institutions in Kenya, which hinder their ability to contribute significantly to the country's sustainable development goals. The research aims to propose viable solutions that can help overcome these challenges and enhance the effectiveness of TVET institutions in promoting sustainable development.

### **1.3 Research Questions**

1. To what extent does the current HELB, self, and donor funding support TVET institution effectiveness in Kenya?
2. How shall an increase in funding for TVET institutions transform the Kenyan economy to achieve the sustainable development agenda?
3. What are the possible solutions to the challenges experienced at TVEST institutions to derail the realization of the Sustainable Development Goals?

### **1.4 Statement of the Problem**

There is an increasing need for TVET programs in Kenya since many youths who fail to join secondary schools or universities seek technical training at these institutions. With the current enrolment statistics, the demand for technical training is set to increase in the coming year. However, HELB is experiencing challenges in maintaining equity, equal opportunities, and efficiency for all learners. Researchers indicate that most youths who join TVET institutions are from families that practice subsistence agriculture, are self-employed, or are unemployed; thus, they cannot pay the learners' fees effectively. This means that the government, NGO, and private stakeholders should raise grants and bursaries for vulnerable learners to be enrolled and retained in their various programs. A study by Karimi (2008) at a youth polytechnic in Imenti South to find alternative ways to fund these programs for quality outcomes identifies government subsidies on students' fees as inefficient in promoting quality training. Therefore, there is a need to identify and bridge the TVET funding gap for sustainable development.

Secondly, there have been concrete measures by the government and stakeholders to finance TVET activities in Kenya. For instance, the Hon. Ukur Yatan (Cabinet Secretary, Treasury) allocated 30% of the Kenyan budget to support educational activities. However, only 3.6% is utilized in the TVET programs. Also, the government allocates ceilings on self-sponsored learners, while some of the allocations are channeled to the Higher Education Loans Board,

where students can access these loans relative to the institutions they are admitted to repaying at an interest. This leaves a huge gap among the learners who enroll at apprenticeships and private institutions.

The analysis of the two studies above illustrates the existing challenges in the efficiency of TVET programs, and funding is the major cause. Although these studies do not identify whether these funding sources in higher education are the determinants for program success, indeed, equality, enrolment, and retention of learners in TVET programs can be achieved through efficient funding and monitoring of these programs (Maina, 2019).

### **1.5 Purpose of the Study**

The study investigates how to transform the Kenyan economy by funding Technical, Vocational Education, and Training institutions in Kenya.

### **1.6 Justification of the Study**

Technical and vocational education and training is the major tool for transforming youth into a labor market and issuing lifelong education opportunities for the adults in the community. Therefore, it is a transformative tool for attaining the 2030 sustainable development goals. In particular, economic transformation in Kenya calls for all the stakeholders in the Public and private sectors to ensure quality and inclusive education to ensure lifelong learning (Erima, 2021). Notably, the program targets equal access to learning and training for all men and women across all tertiary institutions, including Universities. Therefore, funding TVET encourages the vision of intensifying the application of science, innovation, and technology to raise efficiency and productivity levels across all four pillars of the government Agenda (Legusov et al., 2022). System funding is the first step toward delivering a competent workforce, meeting the aspired national needs for sustainable development.

## **LITERATURE REVIEW**

### **2.1 The Historical Context**

The TVET is traced back to 1990 when the government acknowledged the system for tackling underemployment and expensive employment. The approach is attributed to expansive economic growth and development in China and Finland. Bloomberg ranked Finland as the most creative and innovative country in 2017, centered on reforms in TVET programs and huge investment in this sector. Africa's major challenge is unemployment and underemployment, as over 100 million youth lack technical and professional skills based on

the prevailing employment needs (Osumbah & Wekesa, 2023). Governments in Africa have adopted private institutions, public TVET programs, and traditional apprenticeships to improve youth knowledge in line with the African Union Strategic Plan for African Education. However, few countries have experienced challenges in funding these programs, and Kenya is not exceptional.

For the structural implementation of these programs in Kenya, the government under the constitution of Kenya in 2010 strategized proper financing and legislation. There shall be 20% of youth enrolled in TVET programs by 2030. For the program's success, Kenya adopted a parallel system with the mainstream education structure where one joins a TVET institution once they finish primary school or secondary school (Mukhwana et al., 2020). Further, the government put tripartite mechanisms such as HELB and private sponsorship by students, charitable organizations, and parents. These movements were set to increase enrolment, which was staged at 202 553 across all the TVET institutions in 2016. In 2018, the government further allocated Ksh 444. 1 billion to the Ministry of Education, and 16 billion was set to hire instructors, construct additional facilities, and capitation grants. Some youths have been supported by NGOs, others INGOS, while others have self-financed themselves. Therefore, we sought to identify the impact of funding TVET institutions in Kenya.

## **2.2 The Research Context**

In the pursuit of sustainable economic development in Kenya, TVET institutions play a pivotal role in equipping individuals with essential skills for the workforce. The effectiveness of these institutions, however, hinges on their funding sources and the theoretical frameworks guiding such investments (Stephen, 2020). This research delves into the context of funding TVET institutions, exploring the impact of different funding sources, including the Higher Education Loans Board (HELB) program, self-financing, and Donor funding. Additionally, it examines three influential theories - the Theory of Human Capital, the Theory of Socialist Economies, and the Theory of Economic Diversification - to shed light on how funding decisions can drive economic transformation. Through a systematic literature review, this study seeks to provide valuable insights for policymakers and stakeholders in optimizing funding strategies to empower TVET institutions and promote Kenya's sustainable development agenda.

### **2.2.1 The Theory of Human Capital**

The theory acknowledges education to develop a skilled and creative workforce. Smith justifies that financing education programs relies on a skilled workforce; thus, qualitative training and learning transform economic development and empower learners to pursue their goals (Doppelt, 2019). Therefore, it is against learners' dropout and underscores the quasi-public good of training where the local community, family, and the general society shall benefit. The theory's effectiveness has been derailed by poverty among Kenyan households, high levels of inflation, and a lack of creative and innovative managers at TVET institutions, thus its essence in the research (Anindo, Mugambi, & Matula, 2016). This theory aligns with the research aim of assessing funding's impact on TVET institutions in Kenya, emphasizing the importance of education in developing a skilled workforce (Osiobe, 2019). It provides insights into qualitative training and learning's transformative effects on economic development and learner empowerment. By addressing learners' dropouts and recognizing education as a quasi-public good, the theory offers implications for optimizing funding strategies and enhancing TVET institutions' effectiveness.

### **2.2.2 The Theory of Socialist Economies**

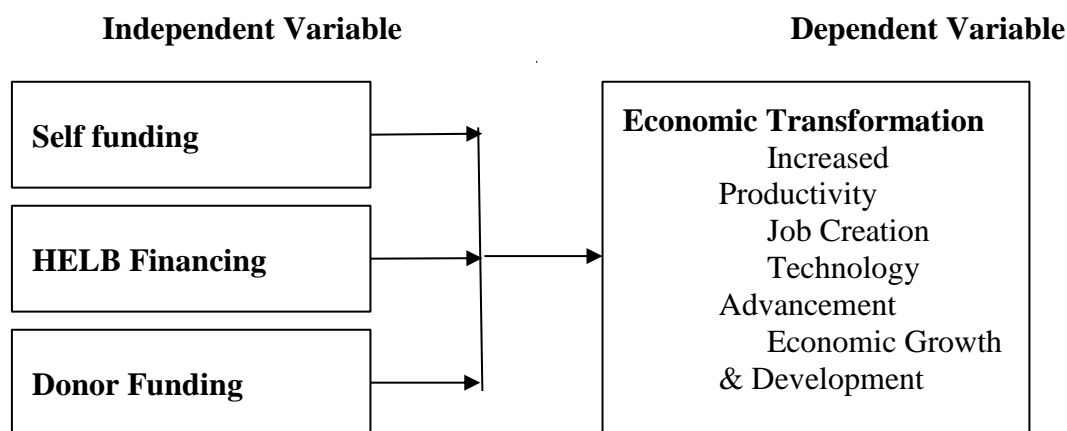
Louis Blanc developed this theory through the Lorenz curve to examine the essence of equitable resource sharing for economic growth and development (Bidabad, 2019). Practically, the government is adopting the Lorenz curve in the disbursement of loans and bursaries since needy students are allocated higher than middle-class families (Sifuna, 2020). This is meant to increase admissions at TVET institutions based on equal and fair allocation of these resources. For the study's objectives, stakeholders shall understand the purpose of funding and to whom. This theory is relevant to the research aim of assessing the impact of funding TVET institutions in Kenya, emphasizing state-led funding to promote equitable access to education. Within the research objectives, this theory provides insights into the implications of socialist economic principles on funding strategies for TVET institutions, particularly in terms of addressing issues of accessibility and inclusivity (Galbaatar, 2022). It also offers valuable perspectives on how state-led funding can influence the overall performance and outcomes of TVET institutions in Kenya.

### **2.2.3 The Theory of Economic Diversification**

This theory emphasizes the importance of a diversified economy and suggests that investments in TVET institutions can foster a skilled and adaptable workforce capable of driving innovation and productivity across various sectors (Idiong, 2020). By exploring this theory within the research objectives, the study aims to understand how funding strategies for TVET institutions can contribute to economic diversification in Kenya, reducing reliance on a single industry or sector and promoting overall economic resilience.

### 2.3 Conceptual Framework

This framework elaborates on how particular variables contribute to or are linked to each other. In the case of our study, the relationship between variables is illustrated below



**Figure 1:** Conceptual framework analyzing the relationship between different variables related to funding TVET programs

From the above analysis, we can identify three independent, and dependent variables. Firstly, it was identified that self-financing involved the affordability of the program cost, copying strategies by the financier, and socioeconomic situations that determine the financier's ability to meet the program costs. Secondly, it was identified that HELB financing requires sufficient funds disbursements, a clear selection approach to identify the needy, and timely disbursement for appropriate action (Nduhiu, 2014). Finally, it was evident that in-kind support, donors direct funding to TVET institutions, and restrictions over their funds for appropriate use greatly influenced the output of TVET institutions. Most importantly, the outcome is significantly influenced by policy regulations. Scholars have also provided sufficient information on funding TVET programs toward economic transformation.

## RESEARCH METHODOLOGY

### 3.1 Introduction

The research methodology for this systematic literature review was chosen for its comprehensive approach to synthesizing existing knowledge on the impact of funding TVET institutions on economic transformation. A systematic literature review was justified as it enables an unbiased and rigorous examination of a wide range of scholarly articles, reports, and studies.

### **3.2 Research Approach and Design**

The research adopted a deductive approach, starting with a well-defined research question to guide the systematic search and selection of relevant literature. This approach ensures that the findings are grounded in existing theories and evidence (Pandey, 2019). The study follows a retrospective design, analyzing and synthesizing previously published research. This design allows for a comprehensive review of various funding strategies and their effects on TVET institutions and the economy.

### **3.3 Sampling Technique**

The research utilized systematic searches on reputable databases such as Google Scholar and academic journals, employing specific keywords related to TVET funding, economic transformation, and strategic funding. This sampling technique allows for the retrieval of relevant and diverse sources, enhancing the scope and representativeness of the literature review.

### **3.4 Data Analysis and Measurement**

A qualitative synthesis of the selected literature was conducted, identifying key themes, trends, and patterns related to the impact of funding TVET institutions. This data analysis method facilitates the extraction of meaningful insights from various studies, supporting the research's aim of providing evidence-based conclusions. To assess funding's impact on economic transformation, the research examines indicators such as GDP growth, employment rates, innovation, and industry diversification (Hidalgo, 2021). Additionally, measures of TVET institution performance and learner outcomes are evaluated to understand the effectiveness of funding strategies in driving economic transformation. This multifaceted approach to measurement ensures a comprehensive analysis of the research variables and their interconnectedness.



### **3.5 Ethical Consideration**

In conducting this systematic literature review, ethical considerations primarily revolve around respecting the intellectual property rights and confidentiality of the authors whose works are included. Proper citation and acknowledgment were ensured to give credit to the original sources and avoid plagiarism (Suri, 2020). Transparency and rigor in the research process were maintained, allowing for reproducibility, while any potential conflicts of interest will be disclosed to uphold research integrity. As no human subjects are involved, the focus was on maintaining ethical practices in data analysis, citation, and adherence to copyright laws.

## **DATA ANALYSIS AND PRESENTATION 4.1 Introduction**

This chapter critically examines the strengths, weaknesses, opportunities, and threats (SWOT) of the topic of funding TVET institutions for economic transformation. By delving into these aspects, the chapter aims to provide a comprehensive understanding of the current landscape and potential implications for policy formulation and decision-making. This analysis serves as a crucial foundation for assessing the effectiveness of funding strategies in empowering TVET institutions and fostering sustainable economic development in Kenya.

### **4.1 The Frame of Reference**

The frame of reference for data analysis and presentation is grounded in the systematic literature review methodology adopted in this research. It was emphasized that through a deductive approach, the analysis focuses on evaluating the impact of strategic funding on TVET institutions in relation to the theory of human capital, the theory of socialist economies, and the theory of economic diversification. It was mentioned that by aligning the findings with these theoretical frameworks, the frame of reference aims to provide a structured and coherent assessment of the SWOT factors in the context of funding TVET institutions for economic transformation.

### **4.2 Stakeholder Involvement**

The importance of stakeholder involvement in the data analysis and presentation chapter was highlighted. It was noted that involving policymakers, educational institutions, funding agencies, and representatives from the private sector ensures the relevance and practicality of the findings (Okumu, & Abuya, 2022). Engaging stakeholders throughout the process fosters

a collaborative approach, allowing for a more comprehensive understanding of the SWOT factors and the development of targeted solutions to address challenges and capitalize on opportunities in funding TVET institutions for sustainable economic growth.

### 4.3 Study Findings

The findings are represented in the table below:

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>● TVET is profoundly rooted in achieving Vision 2030 and Agenda 4.</li> <li>● Qualified and qualified personnel in TVETA &amp; MOE, TVETA Strategic Plan 2019-2023</li> <li>● National Education Sector Strategic Plan (NESSP) 2018-2022</li> <li>● A TVETA Board of Directors has been established, including members who are diverse</li> <li>● The TVET sector now operates in a cooperative manner collaborating with development partners</li> <li>● Regulatory standards and guidelines have been created and in usage</li> <li>● CBE implementation and TVET modernization.</li> <li>● TVET is collaborating with county governments to promote</li> <li>● Each county has its own polytechnic &amp; Public-Private Partnership Act (2013)</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>● The national government has created a capitation/grant for TVET trainees, increasing the demand for and access to excellent TVET training across the country.</li> <li>● Increasing the importance of self-employment and skill development in terms of job creation and poverty alleviation</li> <li>● UNESCO efforts and interest in greening economies</li> <li>● The administration's emphasis on government services and service digitization</li> <li>● The government's desire to strengthen TVET to address the demands of Vision 2030 and Agenda 4.</li> <li>● Interest from development partners in supporting TVET reforms and initiatives.</li> <li>● Emerging environmental challenges such as e-waste management, recycling, and climate change</li> </ul>
<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>● Inadequate human capability for greening TVET training courses</li> <li>● Incompatibility between TVET training and industry standards institutions and industry's actual competence requirement</li> <li>● The absence of a structure for engaging with institutions under Line-Ministries.</li> <li>● Limited interaction with the private sector and industry</li> <li>● The absence of a national TVET management information system.</li> <li>● Insufficient human resource capabilities in the TVET industry</li> <li>● TVET governance legislation and policies that are fragmented and</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>● COVID'19's Impact on Development Agencies and Government Funding Priorities</li> <li>● Counties place a low value on TVET.</li> <li>● The ministry's new policy creation and approval processes are lengthy and time-consuming.</li> <li>● Perceived corruption and a lack of responsibility for donor cash used in government initiatives</li> <li>● Reduced government and development agency funding</li> <li>● Unaccredited university credentials and certificates</li> <li>● Duplicate mandates amongst TEVT</li> </ul>

contradictory. • Outdated equipment in TVET college	Government Agencies • Fragmented and diverse policies and regulations harm TVET.
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Table 1: SWOT Analysis of TVET Institutions in Kenya

## FINDINGS, CONCLUSION, AND RECOMMENDATION

Based on the systematic literature review, we can identify that:

### 5.1 Transforming economic development involves sufficient funding for TVET programs

The findings concur with the theoretical framework concerning the essence of funding TVET programs to promote sustainability. The study identified that some communities practice fundraising through harambees to acquire funds that support trainees in their careers. This is motivated by the expected investment return once the learners are done with their respective courses. Situational analysis indicates that students are confident to attend classes without fear of school fees. Therefore, enrolment, retention, and equity in TVET learning ensure skill acquisition for sustainable development. This is because learners do not fear terminating their goals in career advancement due to funding challenges. The study acknowledges that finances contribute to the efficient purchase of materials and hiring of the required personnel for the learning and instructional materials.

The study inferences align scholars' work on the aim of donor funding: to support beneficiaries and learners to earn efficient skills for sustainable livelihoods and economic prosperity. This is achieved through cash grants (direct funding) or kind support to vulnerable learners. Therefore, funding TVET programs is Project-centered and time-bound. This means that education programs and objectives might not be fully attained if funding programs are not appropriately utilized.

### 5.2 Conclusion

HELB funding is an important aspect in transforming economic development since it influences the general outcome at Technical, Vocational education, and Training institutions. Individual financing is crucial for enrolment and learners' retention in TVET institutes. However, it is accompanied by poor coping mechanisms since some guardians might dispose of their assets to fund the education programs. Donors funding is crucial for retaining learners in respective programs with a limited impact on course completion. Therefore, insufficient

funding for TVET programs undermines enrolment, retention, and equity across the TVET programs.

### **5.3 Recommendations**

The issue of funding TVET programs to transform the economy should be practiced across all levels in the following manner:

#### ***5.3.1 At the government Level***

1. Review avenues for scaling up tertiary education financing, thus sustaining more potential beneficiaries. Also, they should ensure timeliness in the disbursement of loans and bursaries for learners' assurance to complete their courses.
2. Create vibrant synergies between the industry and training providers, majorly in the governance of TVET programs
3. Initiate an enabling environment (political and economic) for the TVET programs to thrive
4. Reinforce trainers and the managers' competencies
5. Perform periodic reviews at the labor markets so that the training conforms to current economic trends
6. Implement quality assurance practices
7. Create awareness of the essence and value of TVET, notably through communicating with the community on the role and efficiency of TVET programs in transforming the economy

#### ***5.3.2 At the Institutional Level***

1. School managers must re-strategize on alternative avenues where learners could improve their skills, for instance, through industrial attachments for the acquisition of relevant skills
2. Ensure financial viability through stabilizing the financial mix for effective resource mobilization across the public, private, and international levels to cater to stakeholders' expenses
3. Technical viability that is linking learners with the skills that fit the prevailing labor market conditions, with the best equipment for the quality experience

4. Social viability links the TVET institutions to major stakeholders within the environment, hence organizational recognition for partnership and Institutional development.
5. Institutional viability involves choosing the appropriate leadership system and legal capabilities to cope with the current institutional environment.

Families and students could also contribute to funding TVET at a small amount to increase self-esteem and sustainability. In this case, Kenya can introduce "Study first, Pay later" schemes for vulnerable learners. Also, a "payment in kind" strategy where workers work at the end of training produces items that the organization could sell, thus a mutual benefit among the stakeholders. Project managers in NGOs must also create a multi-year funding strategy that promotes sustainability across the TVET institutions.

#### **5.4 Significance of the Study**

The finding from the research shall enhance policy-making across the county and national governments in Kenya. The research proves a significant relationship between funding TVET programs and enrolment and retaining them across various programs. The HELB can understand how their funding programs are relevant for future economic growth and sustainable development from the current objectives. We hope that the Higher Education Loans Board shall standardize the funding approach based on disbursements and loan recoveries from the findings. Also, understanding the relationship between self-financing and TVET performance shall issue stakeholders enough evidence on why to adjust the fee ceiling for technical and vocational institutes (Onyango et al., n.d). Donors could also rely on this information to understand how their charitable practices significantly contribute to economic growth and the achievement of the development agenda.

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