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Digital Platforms as a Catalyst for Youth Job Creation: A Cross-Regional Analysis of Higher Learning Institutions in Tanzania

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ABSTRACT

As the global gig economy expands, digital platforms have emerged as potential catalysts for youth employment in Sub-Saharan Africa. This study investigated the relationship between digital literacy, institutional support, and job creation success among youth in Tanzanian Higher Learning Institutions (HLIs). Utilising a cross-sectional descriptive design, quantitative data were collected from 150 participants across three regions: Arusha, Dar es Salaam, and Mbeya (n=50 per region). Data were analysed using IBM SPSS (Version 26), employing Pearson Correlation, One-Way ANOVA, and Multiple Linear Regression. The results revealed a significant positive correlation between digital literacy and job creation success ($r = 0.64$, $p < 0.01$). However, a critical "skills-utilisation gap" was identified: while 95% of respondents possessed smartphones, only 20% demonstrated the advanced technical competencies required for high-value online work. Furthermore, 76% of participants reported that existing university curricula do not sufficiently align with the demands of the digital market. ANOVA results indicated regional variations in income patterns, influenced by local economic structures. The study concludes that while digitalisation offers a "new hope" for economic independence, its potential is hindered by structural barriers and educational misalignment. Recommendations include the modernisation of HLI curricula through competency-based digital training and the implementation of government subsidies for digital infrastructure to foster a more inclusive digital economy.

1. Introduction

Tanzania is currently characterised by a significant "youth bulge," with over 60% of its population under the age of 25 (Daily News, 2025). This demographic reality presents a profound socio-economic challenge: while Higher Learning Institutions (HLIs) graduate thousands of students annually, the formal labour market's capacity to absorb them has diminished. Data from the National Bureau of Statistics (NBS, 2024) indicates that approximately 800,000 graduates enter the workforce each year, yet the economy generates fewer than 300,000 formal positions. This staggering discrepancy leaves a mass of new entrants annually vying for limited opportunities (TICGL, 2025), leading to high rates of underemployment and the saturation of traditional formal sectors.

In response to this employment crisis, the "Digital Revolution" has introduced a transformative shift from traditional employment to the "gig economy" - a decentralised labour market characterised by freelance work and short-term contracts facilitated by digital platforms (Ministry of Education, Science and Technology, 2024). Platforms such as Upwork, Instagram, LinkedIn, and Jumia have emerged as vital vehicles for trade, skill-sharing, and professional networking. This transition is anchored by the *Tanzania Digital Economy Strategic Framework (2024–2034)* and the *National ICT Policy of 2024*, both of which position digitalisation as a core pillar for economic resilience. These policy shifts are further bolstered by the expansion of the National ICT Broadband Backbone (NICTBB), which has made digital work infrastructure more accessible than ever before.

However, the transition to becoming a successful "digital earner" is a multifaceted process that extends beyond mere infrastructural access. It necessitates a synergy of digital literacy, advanced technical skills, and entrepreneurial zeal (Bawany & Singh, 2023; Ng'weno & Porteous, 2018). While global platforms and localised variants demonstrate significant potential for scaling micro-entrepreneurship and peer-to-peer services, the extent to which HLI students effectively leverage these tools for sustainable livelihoods remains under-researched in Tanzania (Mtebe & Raisamo, 2014; Surman et al., 2020). This paper addresses this critical knowledge gap by exploring the nexus between HLI students and the digital economy. Specifically, it examines the role of universities as incubators for digital career paths and investigates regional variations in institutional preparedness across three strategic economic centres: Arusha, Dar es Salaam and Mbeya.

2. Literature Review

2.1 The Gig Economy and Global Labour Dynamics

The integration of digital platforms into the labour market, termed the "Gig Economy," represents a fundamental shift in labour organisation (Kenney & Zysman, 2016). For youth in developing nations, digital labour platforms serve as vital tools to transcend

local economic stagnation by connecting them directly to global demand (Graham et al., 2017). In Sub-Saharan Africa, these platforms act as "institutional void" fillers, providing market access where physical infrastructure and traditional hiring processes are often absent or inefficient. Studies suggest that such online platforms can significantly increase labour force participation and productivity, making them relevant in regions facing a "youth bulge" where traditional sectors cannot absorb the annual influx of graduates (Manyika et al., 2016; Filmer & Fox, 2014).

2.2. Barriers to Digital Inclusion in Tanzania

In the Tanzanian context, the proliferation of smartphones and mobile money systems has lowered entry barriers for digital entrepreneurship (The Citizen, 2025). However, a persistent "Digital Divide" remains, shifting from a lack of hardware to a lack of quality access. The International Telecommunication Union (ITU, 2023) and recent surveys indicate that high data costs remain a prohibitive factor, with nearly 82% of youth citing connectivity expenses as a major hindrance to consistent online work (World Bank, 2024).

Furthermore, a significant "skills gap" exists between HLI academic curricula and the practical demands of the digital economy (Mtebe & Raisamo, 2014). While graduates often possess basic ICT skills, such as email management, they frequently lack intermediate and advanced competencies, including Search Engine Optimisation (SEO), data analytics, and digital copywriting, required to compete effectively in the global gig market (Raphael, 2022). This misalignment creates graduates who are academically qualified but lack market-relevant, platform-specific skills (Oketch, 2016).

2.3. Theoretical Framework

This study is grounded in the Technology Acceptance Model (TAM), the Resource-Based View (RBV) and Social Capital Theory. This multi-theoretical approach illustrates the relationship between the resources available to students and their eventual success in the digital marketplace.

2.3.1. Technology Acceptance Model (TAM)

Originally proposed by Davis (1989), the Technology Acceptance Model is the most widely applied theory in explaining how users come to accept and use a technology. In the context of this study, TAM posits that a student's decision to engage with a digital platform is determined by two primary factors: -

a) Perceived Usefulness (PU): The degree to which a graduate believes that using a platform (e.g., LinkedIn or Upwork) will enhance their job prospects.
b) Perceived Ease of Use (PEoU): The extent to which the student finds the platform intuitive and accessible, which is often hindered by high data costs or poor User Interface (UI) and User Experience (UX).

2.3.2. Resource-Based View (RBV)

Resource-Based View by Barney (1991) suggests that individuals or firms achieve a competitive advantage by possessing resources that are *valuable*, *rare, inimitable*, and *non-substitutable*. In this study, RBV is applied at the individual level: a student's "resources" include their digital literacy, specialised skills (e.g., coding or graphic design) and access to high-speed hardware. The theory argues that simply having access to a platform is insufficient; graduates must possess unique digital "capabilities" to compete in the global gig market (Wade & Hulland, 2004).

2.3.3. Social Capital Theory

Social Capital Theory, fundamentally advanced by Bourdieu (1986) and Putnam (2000), posits that social networks constitute a valuable resource, where the relationships and norms of reciprocity within these networks facilitate collective and individual action. In the context of the digital economy, these networks are no longer confined by geography but are amplified by digital mediation. For Tanzanian graduates, digital platforms serve as critical infrastructure for the cultivation of two distinct forms of capital: -

a) Bridging Social Capital: This refers to "weak ties" that connect individuals across diverse social or geographic groups (Putnam, 2000). For students in Tanzanian HLIs, digital platforms enable them to transcend local economic constraints, providing access to international labour demands and professional information that would otherwise be inaccessible.
b) Bonding Social Capital: This encompasses "strong ties" within more homogenous groups, such as peer networks within universities or local entrepreneurship circles. These digital connections provide the emotional support and shared local resources necessary for graduates to navigate the early, precarious stages of digital self-employment (Lin, 2017).

By leveraging these platforms, graduates convert their digital interactions into "social resources," effectively lowering the barriers to entry in the gig economy and creating a decentralised safety net in a saturated formal labour market.

2.4. Conceptual Framework

This conceptual framework suggests that Successful Youth Job Creation is driven by three core Independent Variables: reliable *Infrastructure, Individual Skills and Institutional Support* (government policy and university-led initiatives). These drivers do not act in isolation; their impact is channelled through Mediating Variables derived from the Technology Acceptance Model: *Perceived Ease of Use and Perceived Usefulness*. These perceptions directly dictate the frequency and intensity with which youth engage with digital platforms for economic purposes, ultimately determining the platforms' efficacy as catalysts for employment, as presented in Figure 1 below: -

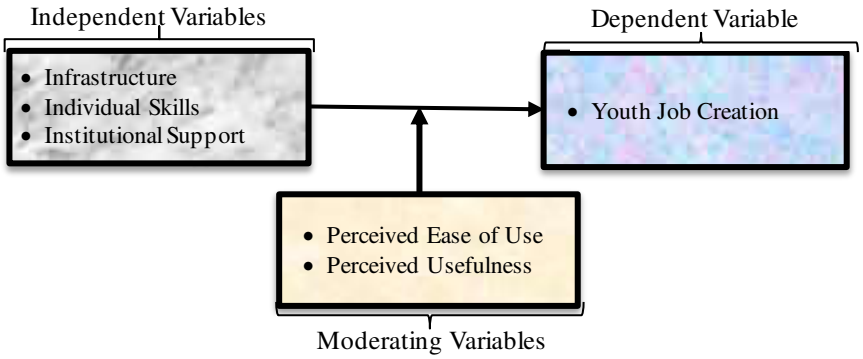

Fig 1: Conceptual framework

3. Methodology

This section outlines the systematic approach employed to investigate the role of digital platforms as a catalyst for youth job creation in Tanzania. By integrating a structured research design with rigorous sampling and data collection protocols, the study aims to provide a reliable empirical basis for understanding how technological and institutional factors influence socio-economic outcomes for the youth. The following subsections detail the research design, the selection of the study area, the sampling frame and the instruments utilised for data acquisition.

3.1. Research Design

The study utilised a cross-sectional research design, which facilitates the collection of data from a defined population at a single point in time to analyse the prevalence of specific characteristics and identify associations between variables (Creswell & Creswell, 2018). This approach was strategically chosen to provide a comprehensive "snapshot" of the digital employment landscape across Tanzania's diverse economic zones simultaneously.

3.2 Study Area

To ensure geographic and economic representativeness, the research was conducted across three Higher Learning Institutions (HLIs) located in strategic regional hubs: Dar es Salaam - the primary commercial capital, Arusha - the northern tourism and administrative centre, and Mbeya - the southern agricultural and transit gateway. This regional diversity allows for a nuanced examination of how varied local economic drivers influence digital platform adoption. To maintain ethical standards and participant confidentiality, the specific names of the HLIs have been anonymised.

3.3 Population and Sampling Technique

The target population comprised approximately 9,000 students across the three selected institutions. A probability sampling approach was adopted to minimise selection bias and ensure that every member of the population possessed a known, non-zero chance of inclusion (Kothari, 2004). Specifically, simple random sampling was employed to select 150 respondents distributed equally with 50 participants per institution. This method enhances the generalizability of the findings within the context of Tanzanian higher education.

3.4 Data Collection Instruments

Data were gathered using a mixed-methods approach to capture both breadth and depth. Structured Questionnaires served as the primary quantitative tool, providing standardised data on digital literacy, platform usage patterns, and perceived barriers. Semi-Structured questionnaires were utilised to complement the quantitative data, offering qualitative insights into the lived experiences of youth navigating the digital economy (Saunders et al., 2019).

3.5 Data Analysis

The collected data were subjected to rigorous preprocessing and subsequently analysed using both descriptive and inferential statistical techniques. Descriptive statistics were employed to summarise key trends in the data, while inferential methods were used to examine the relationships between digital infrastructure, digital skills, and job creation outcomes. A comparative analysis was conducted using one-way analysis of variance (ANOVA) to test the null hypothesis regarding group differences. In addition, a multiple linear regression model was estimated to identify significant predictors of digital job creation. Inferential analysis based on Pearson's product–moment correlation coefficient was further applied to assess the strength and direction of the association between digital literacy levels and the relevant outcome variables (Hair et al., 2019).

3.5.1 Descriptive and Correlation Analysis

Initial data screening involved descriptive statistics, including frequencies (f), percentage (%) and mean scores (M), to characterise the demographic profile and digital platform usage patterns of the 150 participants. Subsequently, a Pearson Product-Moment Correlation (r) was executed to assess the strength and direction of the linear relationship between Digital Literacy (X)

and Job Creation Success *(Y)*. This bivariate analysis served as a prerequisite to identify significant associations before proceeding to multivariate modelling (Pallant, 2020).

3.5.2 Comparative Analysis

To investigate the impact of geographic location on economic outcomes, a One-Way Analysis of Variance (ANOVA) was employed. This test evaluated the null hypothesis *(H_0)* that no statistically significant difference exists in mean income levels across the three study regions (Arusha, Dar es Salaam, and Mbeya). The *F*-statistic was derived by comparing the variance between regional groups against the variance within groups.

$$F = \frac{MS_{between}}{MS_{within}}$$

In the event of a significant *F*-ratio ($p<.05$), Tukey's Honestly Significant Difference (HSD) post-hoc test was utilised to pinpoint specific inter-regional variations.

3.5.3 Predictive Modelling (Multiple Linear Regression)

A Multiple Linear Regression (MLR) model was constructed to identify the primary predictors of digital job creation potential. This inferential approach allows for the estimation of the individual contribution of each independent variable while controlling for confounding factors (Field, 2018). The predictive power of the model was tested using the following equation:

$Y=\beta_0+\beta_1X_1+\beta_2X_2+\epsilon$

Where:

- Y: Success in Digital Job Creation (Dependent Variable)
- β_0: Regression Constant
- β_1, β_2: Standardised Beta Coefficients for Infrastructure Access and Institutional Support, respectively
- ϵ: Stochastic error term

To ensure the validity of the regression results, diagnostic tests for multicollinearity (Variance Inflation Factor < 10), homoscedasticity, and normality of residuals were conducted.

4. Findings

4.1. Digitalisation and Perceived Career Prospects

Empirical evidence suggests a strong positive perception of digital economic integration among university students. Approximately 82% of respondents indicated that digitalisation has significantly expanded their employment prospects. However, the application of these technologies varied by regional economic drivers (TICGL, 2025). In Dar es Salaam, the commercial hub, youth primarily engaged in "social commerce" via Instagram and WhatsApp. Conversely, in Arusha and Mbeya, a notable shift toward the global gig economy was observed, with increasing participation on freelance platforms such as Upwork and Fiverr.

4.2. The Skills-Utilisation and Proficiency Gap

A critical discrepancy, termed the "skills-utilisation gap," was identified. While smartphone penetration is near-universal among the sample (95%), advanced technical proficiency remains low; only 20% of respondents possessed the specialised skills required for high-tier digital labour. This finding correlates with the Digital Skills Gap Index, which assigns Tanzania a score of 3.3/10, underscoring an urgent need for targeted pedagogical interventions (The Guardian, 2024).

4.3. Structural Barriers to Digital Participations

Despite high levels of digital awareness, the study identified prohibitive data costs and unreliable infrastructure as the primary inhibitors of sustained digital engagement. These findings are contextualised by Tanzania's national internet penetration rate of 46%, which suggests that while awareness is high, the "cost of connectivity" remains a major boundary to entering the platform economy (Alexander, 2021).

4.4. Curriculum-Market Alignment in Higher Education

The data reveals a stark misalignment between academic training and market requirements. 76% of respondents reported that their current university curricula are inadequate for the demands of the "Gig Economy." This 76% dissatisfaction rate highlights a fundamental gap in African higher education, where traditional academic frameworks often struggle to keep pace with the rapid evolution of digital labour markets and technological advancements.

4.5. Regional Socio-Economic Variations and Opportunities

The One-Way ANOVA Post-hoc tests revealed a statistically significant difference in income levels between the regions (F (2, 147) = 14.32, $p < .001$) in digital platform potential and barriers. While digital platforms offer a "new hope" for Tanzanian youth, bridging gaps where the formal sector fails, this hope is unevenly distributed across the country. These regional variations likely reflect differences in infrastructure development, economic structure, and local market conditions. Dar es Salaam's position as a commercial centre provides different digital platform opportunities compared to Arusha's tourism focus or Mbeya's agricultural and mining economy.

The Pearson Correlation showed a strong positive relationship between institutional ICT support and job creation success ($r = 0.64$, $p < 0.01$), suggesting that students at institutions with better lab facilities and Wi-Fi were more likely to secure digital work. Table 1 presents a clear regional variation in how youth utilise digital platforms for employment.

Table 1: Specific Regional Variation in Digital Utilisation Breakdown

Parameter	Dar es Salaam (n=50)	Arusha (n=50)	Mbeya (n=50)
Leading Platform	E-commerce & Content Creation	E-Tourism & Freelancing	Agribusiness & E-trading
Avg. Daily Hours Online	6.5 Hours	4.2 Hours	3.1 Hours
Primary Device Used	Smartphone & Laptop (Mixed)	Smartphone (Primary)	Smartphone (Primary)
Income > 100k TZS/mo)	48%	34%	22%

Source: Research Data, 2025

- Dar es Salaam: This region showed the highest "digital maturity." Respondents utilised platforms like Instagram and TikTok not just for social interaction, but as storefronts for Social Commerce. The presence of 5G connectivity and higher digital literacy facilitated more sophisticated gig work, such as remote software testing and digital marketing.
- Arusha: The focus in Arusha was highly specialised toward the service and tourism industry. Students reported using LinkedIn and specialised freelance platforms to offer photography, tour planning, and translation services. However, seasonal fluctuations in tourism directly impacted their digital income stability.
- Mbeya: Digital platform usage in Mbeya was largely centred on WhatsApp Trading and Facebook Marketplace. Students acted as intermediaries, connecting local agricultural produce to buyers in other regions. While innovative, these users faced the highest technical challenges, including frequent power outages and poor 4G penetration in some outlying areas.

5. Conclusion

Despite the rigorous methodology employed, the data relied on self-reported measures regarding income and platform engagement, which are susceptible to social desirability bias. Respondents may have overestimated their earnings or digital proficiency to align with perceived social norms. Finally, the study is bounded by the temporal nature of technological flux. The digital platform economy is characterised by rapid evolution; therefore, specific findings regarding platform preferences (e.g., Upwork or WhatsApp) may shift as new technologies and market dynamics emerge. Future longitudinal studies are encouraged to track these trends over time and include a broader demographic of rural-based students to provide a more holistic national perspective.

6. Recommendations

6.1 For Policymakers and Government Agencies

Responsible ministries should collaborate with telecommunication providers to establish "zero-rated" educational and freelance platforms. Reducing the prohibitive cost of data for university students is essential to bridge the accessibility gap identified in this study. The government should formally integrate "Digital Labour" into the *National Youth Development Policy*. This includes creating legal frameworks that protect gig workers and providing tax incentives for youth-led digital startups to formalise the informal digital trade sector.

6.2 For Higher Learning Institutions (HLIs)

HLIs must speed up the transition from theoretical frameworks to competency-based learning. It is recommended that universities integrate "Digital Micro-credentials" into degree programmes, focusing on high-demand skills such as data analytics, SEO, and full-stack development to close the 76% curriculum-market alignment gap. Universities should move beyond computer labs and establish dedicated innovation hubs that mirror the global gig environment. These hubs should provide high-speed connectivity and mentorship for students navigating platforms.

6.3 For the Private Sector and Industry

Private tech firms should partner with HLIs to offer "Industry-Integrated Projects." By providing students with real-world digital tasks during their studies, the industry can help reduce the "skills-utilisation gap" and ensure graduates are "market-ready" upon completion.

6.4 For Youth and Aspiring Digital Entrepreneurs

Youth must take proactive ownership of their digital trajectories. Beyond basic social media literacy, aspiring entrepreneurs should utilise Open Educational Resources (OERs) to master advanced technical skills that command higher wages in the global marketplace.

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