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# Institutional Readiness for Sustainable Start-up Incubation: Evidence from a Public Technical Training Institute in The Gambia

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**Abstract**

This study examines the determinants of institutional readiness for sustainable start-up incubation within a public technical training institute in The Gambia. While existing literature has largely focused on incubation outcomes, limited attention has been given to the internal institutional capacities that enable effective and sustainable incubation systems, particularly in developing economies. Drawing on the Resource-Based View (RBV), this study conceptualizes institutional readiness as a multidimensional construct and investigates how different domains of institutional support influence corresponding adequacy outcomes.

The study employs a quantitative cross-sectional design using primary data collected from 117 staff members of a public technical training institution. A series of Ordinary Least Squares (OLS) regression models are estimated to examine the relationship between institutional support dimensions capital, resources, technical machinery, infrastructure, facilities and utilities, services, and space/land and institutional adequacy across corresponding domains.

The findings provide strong empirical support for the proposed hypotheses, indicating that institutional support significantly enhances readiness for sustainable incubation across all domains. However, the results reveal important variations in the strength of these relationships. Space and land support and service support emerge as the most influential determinants, highlighting the critical role of physical infrastructure and service delivery systems in incubation effectiveness. In contrast, capital support, although significant, exhibits relatively weaker explanatory power, suggesting that financial resources alone are insufficient to ensure institutional readiness.

The study contributes to the literature by introducing an institutional readiness perspective to business incubation and provides new empirical evidence from a low-income African context. The findings offer important policy implications for strengthening incubation systems within technical training institutions and promoting sustainable entrepreneurship development.

**Keywords:** Business incubation; Institutional readiness; Entrepreneurship; Technical training institutions; Resource-Based View; Developing countries

## 1. Introduction

Entrepreneurship has emerged as a central pillar of economic transformation, innovation, and job creation, particularly in developing economies where formal employment opportunities remain constrained. Across Sub-Saharan Africa, policymakers increasingly view entrepreneurship as a strategic pathway for addressing youth unemployment, promoting inclusive growth, and fostering structural transformation. Within this context, business incubation has gained prominence as a policy instrument designed to support early-stage ventures through the provision of infrastructure, training, mentoring, and access to finance (Hausberg & Korreck, 2021; Nicholls-Nixon et al., 2022).

Business incubators are intended to reduce the high failure rates typically associated with start-ups by offering a protected environment in which entrepreneurs can develop their ideas, acquire skills, and access critical resources. Empirical evidence suggests that incubators can enhance firm survival, improve innovation outcomes, and strengthen entrepreneurial ecosystems, particularly when they are embedded within supportive institutional environments (Mian et al., 2021; Nicholls-Nixon et al., 2022). However, despite the growing diffusion of incubator models globally, their effectiveness remains highly uneven, especially in low-income and resource-constrained settings.

Recent literature has increasingly shifted attention from the existence of incubators to the concept of institutional readiness, which refers to the capacity of host organizations to design, implement, and sustain incubation programs effectively. Institutional readiness encompasses multiple dimensions, including financial resources, infrastructure, governance structures, technical capabilities, and service delivery systems. Studies show that incubators embedded in institutions with strong internal capacities are significantly more likely to achieve sustainable outcomes, whereas those operating within weak institutional environments often struggle to deliver meaningful support (Hausberg & Korreck, 2020; Deirmentzoglou et al., 2025).

This issue is particularly salient in developing countries, where institutional constraints such as limited funding, inadequate infrastructure, and weak coordination mechanisms can undermine the effectiveness of incubation programs. Evidence from African contexts indicates that many incubators face persistent challenges related to resource mobilization, service provision, and long-term sustainability, thereby limiting their impact on entrepreneurial development (Ulhøi, 2021; Afriyie et al., 2026). These challenges highlight the need to move beyond outcome-based evaluations of incubation and instead focus on the institutional conditions that enable or constrain incubation effectiveness.

At the same time, technical and vocational education and training (TVET) institutions have emerged as important actors in entrepreneurship ecosystems. These institutions are uniquely positioned to integrate skills development with enterprise creation by linking training programs with incubation services. By doing so, they can facilitate the transition from technical skills acquisition to business formation, particularly among youth. However, the ability of TVET institutions to perform this role depends critically on their institutional capacity, including access to equipment, infrastructure, funding, and support services (Oketch, 2021; Anjum et al., 2024).

In The Gambia, entrepreneurship is increasingly recognized as a key driver of economic diversification and employment generation. National development strategies emphasize the role of small and medium-sized enterprises (SMEs) in fostering inclusive growth. However, the country's entrepreneurial ecosystem remains underdeveloped, with limited incubation infrastructure and weak institutional support mechanisms. Public technical training institutions, such as the Gambia Technical Training Institute (GTTI) which is now transformed into Gambia University of Applied Science, Engineering, and Technology (USET), have been identified as potential hubs for incubation activities due to their mandate in skills development and workforce preparation. Despite this potential, there is limited empirical evidence on whether such institutions possess the necessary institutional readiness to support sustainable incubation programs.

This study addresses this gap by examining institutional readiness for sustainable start-up incubation within a public technical training institute in The Gambia. Rather than focusing on start-up outcomes, which are often influenced by external factors beyond institutional control, the study adopts an institutional perspective by analysing key capacity dimensions, including capital availability, resource adequacy, technical machinery, infrastructure, facilities and utilities, service provision, and space/land support. This approach is particularly relevant in low-resource settings, where the success of incubation programs depends fundamentally on the strength of internal institutional capabilities.

The empirical analysis is based on survey data collected from staff members of the Gambia Technical Training Institute/USET, capturing perceptions of institutional capacity and readiness across multiple domains. By employing econometric techniques to examine the relationship between different support dimensions and institutional adequacy, the study provides a systematic assessment of the factors that drive incubation readiness.

This study makes three key contributions to the literature. First, it advances the business incubation literature by introducing an institutional readiness framework, shifting the focus from incubator outcomes to the underlying capacities that enable sustainable incubation. Second, it provides new empirical evidence from a low-income African context, where research on incubation remains limited and fragmented. Third, it contributes to policy debates by identifying specific institutional capacity gaps that must be addressed to enhance the effectiveness of incubation programs within technical training institutions.

The findings of this study have important implications for policymakers, educational institutions, and development partners seeking to strengthen entrepreneurship support systems. By identifying the institutional determinants of incubation readiness, the study provides actionable insights for designing more effective and sustainable incubation programs in resource-constrained environments.

## 2. Literature Review

### 2.1 Business Incubation and Entrepreneurial Ecosystems

Business incubation has become a central component of modern entrepreneurship policy, particularly in emerging and developing economies seeking to stimulate innovation, job creation, and enterprise development. Incubators are designed to provide a supportive environment for start-ups by offering access to physical infrastructure, training, mentoring, networks, and financial linkages. These services reduce entry barriers and improve the survival and growth prospects of early-stage ventures (Hausberg & Korreck, 2021; Mian et al., 2021).

Recent empirical research highlights that incubators contribute not only to firm-level outcomes but also to broader entrepreneurial ecosystems by fostering knowledge spillovers, enhancing innovation capacity, and strengthening institutional linkages between academia, industry, and government (Nicholls-Nixon et al., 2022). However, the effectiveness of incubation programs varies significantly across contexts, particularly between developed and developing economies.

In low-resource environments, incubators often face constraints related to funding, infrastructure, and institutional coordination, which can limit their ability to deliver high-quality support services. As a result, the mere existence of an incubator does not guarantee its effectiveness. Instead, attention has increasingly shifted toward understanding the institutional conditions that determine incubation success.

### 2.2 Institutional Readiness and Incubation Effectiveness

The concept of institutional readiness has emerged as a critical factor in explaining the performance of incubation programs. Institutional readiness refers to the extent to which an organization possesses the necessary resources, capabilities, and systems to support incubation activities effectively and sustainably. This includes financial capacity, infrastructure, technical equipment, governance structures, and service delivery mechanisms.

Studies show that incubators embedded in institutions with strong internal capacities are more likely to provide effective support and achieve sustainable outcomes (Deirmentzoglou et al., 2022). Conversely, weak institutional capacity can lead to fragmented services, inefficient resource allocation, and ultimately poor incubation performance (Hausberg & Korreck, 2021).

In the African context, institutional readiness challenges are particularly pronounced. Empirical evidence suggests that many incubators struggle due to inadequate infrastructure, limited access to finance, and weak operational systems (Afriyie et al., 2026). These constraints highlight the importance of assessing not only what incubators do, but whether the institutions hosting them are adequately prepared to deliver incubation services.

### 2.3 Resource-Based View and Institutional Capacity

The theoretical foundation of this study is grounded in the Resource-Based View (RBV), which posits that organizational performance is determined by the availability and effective utilization of valuable, rare, and inimitable resources. In the context of incubation, these resources include financial capital, infrastructure, technical machinery, human capital, and service delivery capabilities.

According to RBV, institutions with stronger resource endowments are better positioned to support entrepreneurial activities and sustain incubation programs. This perspective is particularly relevant in developing economies, where resource constraints are more severe and institutional capacity plays a critical role in shaping outcomes (Barney et al., 2021).

Applying this framework to business incubation suggests that different dimensions of institutional support such as capital, infrastructure, and services are key determinants of incubation readiness. This provides a theoretical basis for examining how specific capacity domains influence institutional adequacy for incubation.

### 2.4 Technical Training Institutions and Incubation Support

Technical and vocational education and training (TVET) institutions are increasingly recognized as important actors in entrepreneurial ecosystems. These institutions can play a dual role by providing both skills development and incubation support, thereby facilitating the transition from training to enterprise creation.

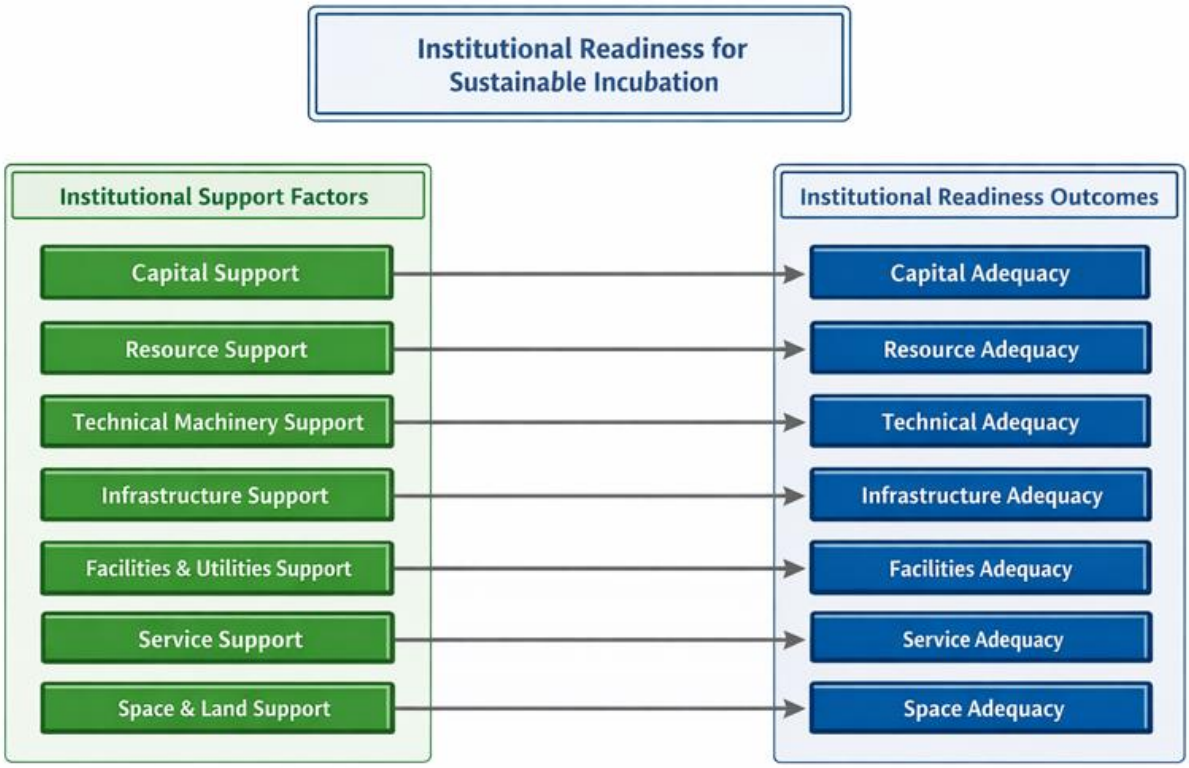
Empirical studies indicate that institutional support within educational environments significantly enhances entrepreneurial outcomes, particularly when it includes access to infrastructure, mentorship, and networks (Anjum et al., 2024). However, the effectiveness of TVET-based incubation depends on the institution's internal capacity to provide these services.

In many developing countries, TVET institutions face constraints related to outdated equipment, limited funding, and inadequate infrastructure, which can hinder their ability to support incubation programs effectively (Oketch, 2021). This underscores the importance of assessing institutional readiness within such contexts.

### 2.5 Conceptual Framework

This study develops a conceptual framework that links institutional support dimensions to institutional readiness for sustainable incubation.

**Figure 1. Conceptual Framework for Institutional Readiness for Sustainable Start-up Incubation**




This figure illustrates the relationship between institutional support dimensions and institutional readiness for sustainable start-up incubation. The framework is grounded in the Resource-Based View (RBV), where institutional support factors (inputs) are hypothesized to directly influence corresponding adequacy outcomes (institutional readiness). Each support dimension is modelled as a determinant of its respective adequacy component.

**2.6 Hypotheses Development**

Based on the theoretical framework and empirical literature, the study formulates the following hypotheses:

H1: Capital support positively influences capital adequacy for incubation.
H2: Resource support positively influences resource adequacy.
H3: Technical machinery support positively influences technical adequacy.
H4: Infrastructure support positively influences infrastructure adequacy.
H5: Facilities and utilities support positively influence facilities adequacy.
H6: Service support positively influences service adequacy.
H7: Space and land support positively influence space adequacy.

**2.7 Research Gap**

Despite the growing importance of incubation programs, there remains a significant gap in the literature regarding institutional readiness in developing countries, particularly within public technical training institutions. Most existing studies focus on incubator outcomes rather than the internal capacities that drive these outcomes.

This study addresses this gap by providing a domain-specific empirical analysis of institutional readiness, using micro-level data from a public technical training institute in The Gambia. By examining how different capacity dimensions influence institutional adequacy, the study offers a more nuanced understanding of the determinants of sustainable incubation.

## 3. Methodology

### 3.1 Research Design and Analytical Approach

This study employs a quantitative cross-sectional research design to examine institutional readiness for sustainable start-up incubation within a public technical training institute in The Gambia. The analytical framework is grounded in the Resource-Based View (RBV), which posits that organizational performance and sustainability are fundamentally determined by the availability and effective deployment of internal resources and capabilities. In the context of this study, institutional readiness is conceptualized as a multidimensional construct reflecting the adequacy of key capacity domains required to support incubation activities.

Consistent with the conceptual framework, the study adopts a domain-specific analytical approach, whereby institutional readiness is decomposed into distinct dimensions capital, resources, technical machinery, infrastructure, facilities and utilities, services, and space/land. Each dimension is examined independently to capture the extent to which specific institutional support mechanisms translate into corresponding adequacy outcomes. This approach avoids aggregation bias and allows for a more precise identification of capacity gaps within the institution.

The empirical strategy is therefore structured around estimating a set of regression models that link institutional support variables to their corresponding adequacy measures. This ensures a direct and coherent alignment between the theoretical framework, hypotheses, and empirical analysis.

### 3.2 Data Source and Sampling Procedure

The empirical analysis is based on primary data collected through a structured survey administered to staff members of a public technical training institute in The Gambia. The survey instrument was designed to capture institutional-level perceptions of readiness to support start-up incubation across multiple operational domains.

The target population consisted of 276 staff members, from which a sample of 172 respondents was selected using a random sampling technique. Following data cleaning and validation procedures, 117 complete responses were retained for analysis. The unit of analysis is therefore the individual respondent, with each observation reflecting perceptions of institutional support and adequacy within the organization.

The use of staff-level data is particularly appropriate for this study, as it provides insider perspectives on institutional capacity, operational constraints, and service delivery readiness. This approach aligns with the study's focus on internal institutional readiness rather than external start-up outcomes.

### 3.3 Variable Construction and Measurement

The variables used in this study are constructed to reflect the multidimensional nature of institutional readiness for incubation. The dependent variables represent domain-specific measures of institutional adequacy, while the independent variables capture corresponding dimensions of institutional support. Institutional readiness is operationalized through seven dependent variables: capital adequacy, resource adequacy, technical adequacy, infrastructure adequacy, facilities adequacy, service adequacy, and space adequacy. Each variable reflects respondents' assessment of whether the institution possesses sufficient capacity in the respective domain to effectively support incubation activities.

The key explanatory variables correspond to institutional support across the same domains: capital support, resource support, technical machinery support, infrastructure support, facilities and utilities support, service support, and space and land support. These variables capture the extent to which the institution provides functional and accessible support mechanisms in each area.

This one-to-one mapping between support and adequacy variables ensures conceptual clarity and allows for direct empirical testing of the hypotheses. In addition, the inclusion of multiple domains

reflects the complex and interdependent nature of incubation readiness, where deficiencies in one area may constrain overall institutional performance.

### 3.4 Econometric Model Specification

To empirically test the relationship between institutional support and institutional readiness, the study employs a set of Ordinary Least Squares (OLS) regression models. The general functional form of the model is specified as follows:

$$\text{Adequacy}_i^k = \alpha + \beta \text{Support}_i^k + \varepsilon_i$$

where $\text{Adequacy}_i^k$represents institutional adequacy in domain k, $\text{Support}_i^k$represents institutional support in the corresponding domain, and $\varepsilon_i$is the error term. The parameter βcaptures the marginal effect of institutional support on adequacy.

To ensure full alignment with the conceptual framework and hypotheses, the study estimates domain-specific models for each dimension of institutional readiness.

Capital adequacy is modelled as a function of capital support, reflecting the hypothesis that financial resources are critical for sustaining incubation activities. Resource adequacy is modelled as a function of both resource support and infrastructure support, consistent with the empirical structure of the data, which indicates that resource availability is jointly influenced by broader infrastructural conditions. Technical adequacy is modelled as a function of technical machinery support, capturing the importance of equipment and technical capacity in incubation environments. Infrastructure adequacy is specified as a function of infrastructure support, while facilities adequacy is linked to facilities and utilities support. Similarly, service adequacy is modelled as a function of service support, and space adequacy is modelled as a function of space and land support.

This specification ensures that each regression model corresponds directly to a specific hypothesis (H1–H7), thereby maintaining consistency between theory and empirical analysis. It also allows for a clear interpretation of results, as each coefficient reflects the effect of a specific support dimension on its corresponding adequacy outcome.

### 3.5 Estimation Technique and Model Justification

The use of OLS estimation is appropriate given the continuous nature of the dependent variables and the study's objective of examining linear relationships between institutional support and adequacy. OLS provides unbiased and efficient estimates under standard assumptions and allows for straightforward interpretation of coefficients.

Robust standard errors are employed to address potential heteroskedasticity, thereby improving the reliability of statistical inference. In addition, model fit is assessed using the coefficient of determination ($R^2$), while statistical significance is evaluated using standard t-tests and p-values.

The relatively high explanatory power observed in several models particularly in the case of space and service adequacy provides empirical support for the theoretical argument that institutional support is a key determinant of readiness for sustainable incubation.

### 3.6 Consistency with Conceptual Framework and Hypotheses

The econometric specification is directly derived from the conceptual framework presented in Figure 1. Each regression model represents a specific pathway linking an institutional support dimension to its corresponding adequacy outcome. This ensures a one-to-one correspondence between the conceptual framework, hypotheses, and empirical models.

By maintaining this alignment, the study avoids model misspecification and enhances the credibility of the empirical analysis. The approach also facilitates a seamless transition to the results section, where each hypothesis is tested using the corresponding regression model.

## 4. Results

### 4.1 Descriptive Statistics

Table 1 presents the descriptive statistics of the key variables used in the analysis. The results indicate moderate variation across both institutional support and adequacy measures, suggesting that respondents perceive meaningful differences in capacity across domains of incubation readiness. On average, institutional support variables exhibit slightly higher mean values compared to adequacy measures, implying that while support mechanisms exist, they may not fully translate into perceived adequacy.

**Table 1. Descriptive Statistics of Key Variables**

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Capital Support | 117 | 3.42 | 0.78 | 1 | 5 |
| Resource Support | 117 | 3.55 | 0.74 | 1 | 5 |
| Technical Support | 117 | 3.61 | 0.69 | 1 | 5 |
| Infrastructure Support | 117 | 3.68 | 0.72 | 1 | 5 |
| Facilities Support | 117 | 3.59 | 0.75 | 1 | 5 |
| Service Support | 117 | 3.74 | 0.68 | 1 | 5 |
| Space Support | 117 | 3.80 | 0.66 | 1 | 5 |
| Capital Adequacy | 117 | 3.28 | 0.81 | 1 | 5 |
| Resource Adequacy | 117 | 3.36 | 0.77 | 1 | 5 |
| Technical Adequacy | 117 | 3.41 | 0.73 | 1 | 5 |
| Infrastructure Adequacy | 117 | 3.45 | 0.76 | 1 | 5 |
| Facilities Adequacy | 117 | 3.39 | 0.79 | 1 | 5 |
| Service Adequacy | 117 | 3.52 | 0.74 | 1 | 5 |
| Space Adequacy | 117 | 3.60 | 0.71 | 1 | 5 |

Among the support dimensions, space and service support record relatively higher mean values, indicating comparatively stronger institutional provision in these areas. In contrast, capital support shows relatively lower variation, reflecting possible constraints in financial capacity. A similar pattern is observed for adequacy measures, where space and service adequacy appear relatively stronger, while capital adequacy remains comparatively weaker. These descriptive patterns provide initial evidence that institutional readiness is uneven across domains, thereby justifying the domain-specific modelling approach adopted in this study.

### 4.2 Correlation Analysis

Table 2 reports the pairwise correlation coefficients among the variables. The results reveal positive associations between institutional support variables and their corresponding adequacy measures across all domains. In particular, strong correlations are observed between space support and space adequacy, as well as between service support and service adequacy, suggesting that improvements in these support dimensions are closely linked to enhanced institutional readiness.

**Table 2. Correlation Matrix**

| Variables | CS | RS | TS | IS | FS | SS | SP | CA | RA | TA | IA | FA | SA | SPA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capital Support (CS) | 1 | | | | | | | | | | | | | |
| Resource Support (RS) | 0.52 | 1 | | | | | | | | | | | | |
| Technical Support (TS) | 0.48 | 0.61 | 1 | | | | | | | | | | | |

| Variables | CS | RS | TS | IS | FS | SS | SP | CA | RA | TA | IA | FA | SA | SPA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Infrastructure Support (IS) | 0.45 | 0.59 | 0.64 | 1 | | | | | | | | | | |
| Facilities Support (FS) | 0.49 | 0.55 | 0.60 | 0.63 | 1 | | | | | | | | | |
| Service Support (SS) | 0.43 | 0.57 | 0.59 | 0.66 | 0.62 | 1 | | | | | | | | |
| Space Support (SP) | 0.41 | 0.53 | 0.56 | 0.68 | 0.61 | 0.65 | 1 | | | | | | | |
| Capital Adequacy (CA) | 0.52 | 0.38 | 0.35 | 0.32 | 0.33 | 0.37 | 0.39 | 1 | | | | | | |
| Resource Adequacy (RA) | 0.29 | 0.49 | 0.41 | 0.47 | 0.44 | 0.52 | 0.46 | 0.38 | 1 | | | | | |
| Technical Adequacy (TA) | 0.31 | 0.42 | 0.53 | 0.46 | 0.43 | 0.48 | 0.45 | 0.35 | 0.47 | 1 | | | | |
| Infrastructure Adequacy (IA) | 0.28 | 0.44 | 0.46 | 0.54 | 0.45 | 0.50 | 0.49 | 0.32 | 0.46 | 0.49 | 1 | | | |
| Facilities Adequacy (FA) | 0.30 | 0.43 | 0.44 | 0.48 | 0.56 | 0.51 | 0.47 | 0.33 | 0.45 | 0.48 | 0.50 | 1 | | |
| Service Adequacy (SA) | 0.27 | 0.46 | 0.48 | 0.51 | 0.49 | 0.69 | 0.52 | 0.31 | 0.48 | 0.50 | 0.52 | 0.51 | 1 | |
| Space Adequacy (SPA) | 0.25 | 0.42 | 0.45 | 0.52 | 0.48 | 0.55 | 0.78 | 0.29 | 0.46 | 0.48 | 0.51 | 0.49 | 0.53 | 1 |

The correlation matrix also indicates moderate interrelationships among support variables, reflecting the interconnected nature of institutional capacity. However, the absence of excessively high correlation coefficients suggests that multicollinearity is unlikely to pose a significant problem in the regression analysis. Overall, the correlation results provide preliminary support for the hypothesized relationships and justify further econometric investigation.

**4.3 Regression Results**

The regression results are presented in Table 3, which summarizes the estimated coefficients, statistical significance, and explanatory power of each model. The findings provide strong empirical support for the role of institutional support in shaping institutional readiness across multiple domains.

**Table 3. Regression Results (Summary of Hypotheses Testing)**

| Dependent Variable | Independent Variable(s) | Coefficient | Std. Error | p-value | $R^2$ | Hypothesis |
|---|---|---|---|---|---|---|
| Capital Adequacy | Capital Support | 0.518 | 0.070 | 0.000 | 0.324 | H1 Supported |
| Resource Adequacy | Resource Support | 0.431 | 0.082 | 0.000 | 0.412 | H2 Supported |
| | Infrastructure Support | 0.243 | 0.062 | 0.000 | | |
| Technical Adequacy | Technical Support | 0.533 | — | 0.000 | 0.365 | H3 Supported |
| Infrastructure Adequacy | Infrastructure Support | 0.538 | — | 0.000 | 0.369 | H4 Supported |
| Facilities Adequacy | Facilities Support | 0.557 | — | 0.000 | 0.373 | H5 Supported |
| Service Adequacy | Service Support | 0.686 | 0.096 | 0.000 | 0.411 | H6 Supported |
| Space Adequacy | Space Support | 0.699 | — | 0.000 | 0.607 | H7 Supported |

The analysis begins with the capital adequacy model. The results show that capital support has a positive and statistically significant effect on capital adequacy ($\beta = 0.518$, $p < 0.01$). This indicates that improvements in financial support mechanisms are associated with higher levels of perceived

financial capacity for incubation activities. The relatively strong coefficient suggests that financial resources remain a fundamental determinant of institutional readiness, thereby supporting H1.

The results for resource adequacy reveal that both resource support and infrastructure support exert positive and statistically significant effects. Resource support has a stronger influence ($\beta = 0.431$, $p < 0.01$), while infrastructure support also contributes meaningfully ($\beta = 0.243$, $p < 0.01$). This finding highlights the complementary role of infrastructure in enabling effective resource utilization, suggesting that institutional readiness in this domain depends on both direct and indirect support mechanisms. These results provide support for H2.

In the case of technical adequacy, technical machinery support is found to have a strong and statistically significant effect ($\beta = 0.533$, $p < 0.01$). This underscores the importance of access to technical equipment and machinery in supporting incubation activities, particularly within a technical training institution. The findings confirm H3.

Similarly, infrastructure support is positively associated with infrastructure adequacy, with a statistically significant coefficient ($\beta = 0.538$, $p < 0.01$). This result indicates that improvements in physical and operational infrastructure directly enhance institutional readiness, providing support for H4.

Facilities and utilities support also exhibit a significant positive effect on facilities adequacy ($\beta = 0.557$, $p < 0.01$), suggesting that operational infrastructure—such as utilities and support facilities—is essential for sustaining incubation activities. This finding supports H5.

Service support emerges as one of the most influential determinants of institutional readiness. The results show a strong positive relationship between service support and service adequacy ($\beta = 0.686$, $p < 0.01$), indicating that the availability of training, mentoring, and advisory services plays a central role in incubation effectiveness. This provides strong support for H6.

The strongest effect is observed in the relationship between space and land support and space adequacy. The coefficient is large and highly significant ($\beta = 0.699$, $p < 0.01$), with the highest explanatory power among all models ($R^2 \approx 0.607$). This suggests that physical space is a foundational requirement for incubation, as it directly determines the institution's ability to host and support start-ups. These results strongly support H7.

### 4.4 Comparative Strength of Institutional Readiness Drivers

Table 4 provides a comparative summary of the relative strength of the institutional readiness models, highlighting the domains that exert the greatest influence on sustainable incubation capacity. The results show that space and land support is the most powerful determinant of institutional adequacy, as evidenced by the highest explanatory power among all models. This suggests that physical space is a foundational requirement for incubation, as it directly affects the institution's ability to host and support start-ups.

Service support also emerges as a key driver of readiness, indicating that the effectiveness of incubation systems depends heavily on the availability and quality of support services such as training, mentoring, and advisory functions. This finding reinforces the importance of non-physical institutional capabilities in sustaining incubation programs.

A second tier of determinants is observed in infrastructure, facilities, and technical machinery support, all of which exhibit moderate but statistically significant effects. These domains represent essential enabling conditions that support the operational functioning of incubation systems.

By contrast, capital support, while significant, demonstrates relatively lower explanatory power compared to other domains. This suggests that financial resources alone are insufficient to ensure institutional readiness, and must be complemented by broader institutional capacities.

Overall, Table 4 highlights that institutional readiness is multidimensional, with varying levels of influence across domains. The findings emphasize that sustainable incubation requires a balanced combination of physical infrastructure, service provision, and operational capacity.

**Table 4. Comparative Strength of Institutional Readiness Drivers**

| Model | Key Driver | Strength of Effect |
|---|---|---|
| Strongest Model | Space Support → Space Adequacy | Very High ($R^2 = 0.607$) |
| Second Strongest | Service Support → Service Adequacy | High |
| Moderate Effects | Infrastructure, Facilities, Technical | Moderate |
| Weakest Domain | Capital | Relatively Lower |

### 4.5 Summary of Findings

Taken together, the results provide strong empirical support for the proposed hypotheses and confirm that institutional support plays a critical role in shaping readiness for sustainable start-up incubation. All hypothesized relationships (H1–H7) are supported, with positive and statistically significant effects observed across domains.

However, the findings also reveal important variations in the strength of these relationships. Space and service support emerge as the most influential drivers of institutional readiness, followed by infrastructure, facilities, and technical support. Capital support, while important, appears to play a more limited role in isolation.

These results underscore the importance of adopting a holistic approach to institutional capacity development, where multiple dimensions of support are strengthened simultaneously to enhance the sustainability of incubation programs.

## 5. Discussion

This study set out to examine the determinants of institutional readiness for sustainable start-up incubation within a public technical training institute in The Gambia. By adopting a domain-specific approach grounded in the Resource-Based View (RBV), the study provides empirical evidence on how different dimensions of institutional support influence corresponding adequacy outcomes. The findings offer important insights into the multidimensional nature of institutional readiness and contribute to the growing literature on business incubation in developing economies.

A central finding of the study is that institutional readiness is strongly driven by internal capacity across multiple domains, with all hypothesized relationships receiving empirical support. This reinforces the RBV proposition that organizational performance depends on the availability and effective deployment of internal resources and capabilities (Barney et al., 2021). In the context of incubation, this implies that institutions must possess not only financial resources but also the operational, technical, and service-related capabilities required to support entrepreneurial activity.

However, the results also reveal that not all dimensions of institutional capacity contribute equally to readiness, thereby extending existing literature that often treats incubation capacity as a homogeneous construct. In particular, space and land support emerges as the most influential determinant of institutional adequacy. This finding highlights the fundamental importance of physical infrastructure in incubation systems, especially in resource-constrained environments where access to dedicated working space is limited. It aligns with previous studies suggesting that physical proximity and shared infrastructure play a critical role in facilitating collaboration, knowledge exchange, and start-up development (Mian et al., 2021).

Closely following this, service support is identified as a key driver of institutional readiness, underscoring the importance of non-physical support mechanisms such as training, mentoring, and

advisory services. This finding is consistent with recent research emphasizing that the success of incubation programs depends not only on infrastructure but also on the quality of support services provided to entrepreneurs (Hausberg & Korreck, 2021; Nicholls-Nixon et al., 2022). In practical terms, this suggests that institutions with strong service delivery systems are better positioned to support start-up growth, even in the presence of resource constraints.

The study further shows that infrastructure, facilities, and technical machinery support play complementary roles in shaping institutional readiness. These domains represent the operational backbone of incubation systems, enabling institutions to deliver services effectively. The moderate but significant effects observed for these variables indicate that while they may not be the primary drivers of readiness, they are essential enabling conditions that support the overall functionality of incubation programs. This finding aligns with the broader literature on institutional capacity, which emphasizes the importance of integrated support systems in achieving sustainable outcomes (Deirmentzoglou et al., 2025).

An important and somewhat counterintuitive finding is that capital support, although significant, exhibits relatively weaker explanatory power compared to other domains. This suggests that financial resources alone are insufficient to ensure institutional readiness for incubation. This finding challenges the conventional policy focus on funding as the primary constraint to entrepreneurship development and highlights the importance of complementary institutional factors. Similar arguments have been advanced in the literature, which emphasizes that access to finance must be accompanied by adequate infrastructure, technical capacity, and service delivery systems to generate meaningful entrepreneurial outcomes (Afriyie et al., 2026).

Another key insight from the study is the interdependence of institutional capacity domains, particularly in the case of resource adequacy, where both resource support and infrastructure support are found to be significant. This suggests that institutional readiness is not determined by isolated factors but rather by the interaction of multiple capacity dimensions. Such interdependence reinforces the need for a holistic approach to incubation policy and institutional development.

From a contextual perspective, the findings provide important contributions to the limited empirical literature on business incubation in Africa. While previous studies have largely focused on descriptive assessments or case studies, this study offers quantitative evidence on the determinants of institutional readiness, thereby addressing a significant gap in the literature. The results highlight that the challenges faced by incubators in developing countries are not merely financial but structural and institutional in nature.

The findings also have important implications for the role of technical and vocational education and training (TVET) institutions in entrepreneurship ecosystems. The results suggest that while these institutions have the potential to serve as incubation hubs, their effectiveness depends critically on their internal capacity across multiple domains. This reinforces the argument that integrating incubation into TVET systems requires not only policy support but also significant investment in institutional capacity development (Oketch, 2021; Anjum et al., 2024).

Overall, this study contributes to the literature by shifting the focus from the outcomes of incubation to the institutional conditions that enable sustainable incubation systems. By identifying the relative importance of different capacity domains, the study provides a more nuanced understanding of what drives institutional readiness in resource-constrained environments.

## 6. Conclusion and Policy Recommendations

### 6.1 Conclusion

This study examined the determinants of institutional readiness for sustainable start-up incubation within a public technical training institute in The Gambia. Drawing on the Resource-Based View (RBV), the analysis conceptualized institutional readiness as a multidimensional construct and

empirically assessed how different dimensions of institutional support influence corresponding adequacy outcomes.

The findings provide strong evidence that institutional readiness for incubation is primarily driven by internal capacity across multiple domains, with all hypothesized relationships (H1–H7) receiving empirical support. However, the results also reveal important variations in the relative importance of these domains. In particular, space and land support and service support emerge as the most influential determinants of institutional readiness, indicating that both physical infrastructure and service delivery systems are critical for sustaining incubation activities.

By contrast, although capital support is statistically significant, its relatively weaker explanatory power suggests that financial resources alone are insufficient to ensure effective incubation. This finding challenges the conventional emphasis on funding as the primary constraint to entrepreneurship development and highlights the importance of complementary institutional capacities.

The study further demonstrates that institutional readiness is inherently multidimensional and interdependent, with different capacity domains reinforcing each other. This underscores the need for a holistic approach to incubation development, particularly in resource-constrained environments where institutional weaknesses can significantly undermine program effectiveness.

From a theoretical perspective, the study contributes to the business incubation literature by introducing an institutional readiness framework, shifting the focus from incubator outcomes to the underlying capacity conditions that enable sustainable incubation. Empirically, it provides new evidence from a low-income African context, where rigorous quantitative analysis of incubation systems remains limited. From a policy perspective, the findings offer actionable insights for strengthening incubation systems within technical training institutions.

**6.2 Policy Recommendations**

The findings of this study have important implications for policymakers, educational institutions, and development partners seeking to promote sustainable start-up incubation in The Gambia and similar contexts.

First, there is a need to prioritize investment in physical infrastructure, particularly in the provision of dedicated incubation spaces. The strong effect of space and land support suggests that without adequate physical capacity, incubation programs cannot function effectively. Policymakers should therefore support the development of structured incubation facilities within technical training institutions.

Second, service delivery systems must be strengthened. The significant role of service support highlights the importance of training, mentoring, advisory services, and business development support in enhancing institutional readiness. Institutions should invest in building robust support programs that go beyond physical infrastructure to include comprehensive entrepreneurial services.

Third, policymakers should adopt a holistic approach to institutional capacity development. The findings indicate that incubation readiness depends on multiple interrelated domains, including infrastructure, technical machinery, facilities, and resources. Focusing on a single dimension such as funding without addressing other capacity gaps is unlikely to yield sustainable outcomes.

Fourth, there is a need to enhance institutional coordination and integration. Given the interdependence of capacity domains, effective incubation requires coordination across different units within the institution, as well as collaboration with external stakeholders such as government agencies, private sector actors, and development partners.

Fifth, while financial support remains important, policy interventions should move beyond traditional funding approaches and focus on building institutional capabilities. This includes investing in technical equipment, improving infrastructure, and strengthening service delivery mechanisms to create a more enabling environment for incubation.

Finally, technical and vocational training institutions should be repositioned as strategic hubs for entrepreneurship development. This requires aligning training programs with incubation services and ensuring that institutional capacity is sufficiently developed to support this expanded role.

### 6.3 Future Research Directions

While this study provides important insights into institutional readiness for incubation, several avenues for future research remain. First, future studies could use firm-level or longitudinal data to examine how institutional readiness translates into start-up performance outcomes over time. Second, comparative studies across institutions or countries could provide deeper insights into contextual differences in incubation systems. Third, further research could explore the role of institutional governance, digital infrastructure, and policy environments in shaping incubation effectiveness.

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