

# MEASURING SOCIAL IMPACT IN SOCIAL ENTREPRENEURSHIP: AN EMPIRICAL STUDY

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## Abstract

The absence of a common and standardized measurement metrics for assessing social impact remains a significant gap in the literature. This study aims to identify the factors that measure social impact created by social enterprises. The study adopted an exploratory and descriptive research design. Education was considered as the social enterprise context, and one university was selected for the study. The sample consisted of 250 beneficiaries, specifically students. Data were collected using a self-reported measurement scale developed based on an extensive review of the literature. Exploratory Factor Analysis (EFA) was employed to identify the factors of social impact, and the analysis was performed using SPSS version 24. The EFA revealed five factors of social impact, namely, Human Capital, Social Capital, Natural Capital, Financial Capital and Physical Capital. The study found that social impact is created when there is a change observed in these capitals. The policy implication of this paper are that social enterprises should be facilitated for working on the development of these capitals. The study also offers managerial implications, emphasizing that social enterprises should systematically measure and report outcomes related to these dimensions to enable a standardized assessment of social impact. Integrating these factors into policy frameworks and evaluation guidelines can enhance accountability and improve the comparability of social impact across social enterprises. The developed and validated social impact matrix provides a robust, standardized tool for measuring social impact in the education sector, which can be applied to other organizations in future research. These findings have important implications, underscoring the need for structured frameworks to integrate social impact assessment into accreditation and funding mechanisms.

**Keywords:** Human Capital, Social Capital, Financial Capital, Social Impact Scale, Exploratory Factor Analysis, SPSS-24.

## 1. Introduction

Social entrepreneurship (SE) plays a vital role in addressing societal challenges by creating innovative solutions that generate social value. Unlike traditional businesses focused solely on profit, social enterprises aim to achieve a balance between financial sustainability and positive social impact. Through various interventions, SE fosters social development by enhancing social, human, natural, and economic capital, thereby contributing to long-term community well-being and are called as social entrepreneurship capitals. The effectiveness of social enterprises can ultimately be evaluated by the extent of social impact they generate, as their success is intrinsically linked to the positive changes they create in communities.

The concept of social impact has been extensively discussed in literature, with scholars defining it as the measurable outcomes of interventions that lead to positive changes in the lives of the beneficiaries. Social impact is often assessed through frameworks measuring various forms of capital social, human, natural, and economic. A key gap in the literature, as identified by Feor et al. (2023), is the lack of a holistic framework that captures the breadth, width, and depth of social impact across multiple dimensions. Most studies emphasize limited indicators, failing to provide a universal approach to assessing social impact

comprehensively. Furthermore, Musinguzi et al., (2023) highlights the need for contextual studies, particularly focusing on regional and rural social enterprises, to understand localized impacts better.

This study aims to bridge these gaps by developing a social impact assessment scale of social enterprises based on Sustainable Development Goals (SDGs). The scale, adapted from previous research (such as the study by Dam), integrates key indicators that measure various forms of capital holistically. To enhance the robustness of this assessment, stakeholders including beneficiaries, intervention moderators, and employees were actively involved in data collection. Additionally, both positive and negative narratives were examined using expert validation through Cohen's Kappa methodology to ensure a balanced perspective on social impact.

The importance of standardizing social impact measurement lies in its ability to achieve two main objectives: (1) ensuring alignment with sustainable development goals and (2) enhancing accountability in social interventions. By addressing existing challenges and incorporating a robust framework through identification of factors, this study contributes to the evolving discourse on social impact assessment and its role in driving meaningful societal change.

The remainder of this paper is structured as follows. Section 2 provides the theoretical framework. This is followed by Section 3, which details the methodology used in the study. Section 4 shows the findings of the study. Section 5 includes a discussion of the findings. Section 6 states the Conclusion.

## 2. Theoretical Framework

### *Social Impact Defined*

The domain of social impact lacks a uniform definition, with its interpretation varying throughout the literature. Initial definitions, including those by Burdge and Vanclay (1995), concentrated on the extensive societal ramifications of actions without directly associating them with particular organizations. Since then, scholars such as Clark et al. (2004) have delineated social impact concerning organizational activities, particularly emphasizing the significance of inputs, outputs, and outcomes in generating quantifiable change. Recent scholarship has further refined this understanding, aligning definitions with sustainable development principles and highlighting the triple bottom line of social, economic, and environmental outcomes (Siegener et al., 2021). The field is now moving towards a more holistic view that acknowledges both qualitative and quantitative data to capture the full picture of an organization's influence (Feor et al., 2023). A key challenge, as highlighted by multiple studies, is the deficiency that persists in articulating and quantifying its collective and community-level effects due to the inherent complexity of social issues (Resonance Global, 2024). This study defines social impact as the beneficial change resulting from intentional interventions designed to improve societal well-being across various domains. Despite the widespread acknowledgment of the multidimensional aspects of social impact, a deficiency persists in articulating and quantifying its collective and community-level effects. This study defines social impact as the beneficial change resulting from intentional interventions designed to improve societal well-being across various domains.

### *Social Entrepreneurship and Social Impact Assessment*

The relationship between social entrepreneurship and social impact has been widely studied in academic literature. Social enterprises operate with a dual mission of generating financial returns while addressing societal challenges (Dees, 2008). These organizations leverage innovative business models to create sustainable solutions that lead to measurable social impact (Mair & Martí, 2006). Unlike traditional non-profits, social enterprises reinvest profits into their social missions, ensuring long-term sustainability and community benefit (Austin et al., 2006). Zahra (2022) highlight that social enterprises contribute to systemic change by addressing root causes of social issues rather than just symptoms. They emphasize that the effectiveness of social enterprises is often tied to their ability to leverage cross-sector collaborations and policy advocacy. Similarly, Hertel et al., 2022 argue that social enterprises play a crucial role in institutional change, influencing policy and societal norms to create long-term sustainable impact.

Social impact refers to tangible and intangible outcomes that enhance community well-being and serve as key measures of social enterprise success (Hertel et al., 2022; Ebrahim & Rangan, 2014). Assessing social impact ensures mission fulfilment, tracks interventions, informs policy, and attracts funders (Feor et al., 2023; Nicholls, 2009). RSI frameworks and qualitative methods strengthen evaluation (Ebrahim & Rangan, 2014), while generative AI enhances measurement (Vazquez-Maguirre et al., 2018). However, impact reporting often overlooks negative consequences. Social, human, and Financial Capital sustain social impact (Borzaga &

Defourny, 2001), but research typically examines specific forms rather than adopting a comprehensive approach.

Foer *et al.* (2023) explain that there are two different approaches when measuring impact: standardized and customized. Existing studies reveal that social enterprises face challenges in standardizing impact assessment due to the diversity of interventions and stakeholders involved (Rawhouser *et al.*, 2019). Measurement frameworks often differ based on the type of enterprise, geographic region, and sector (Nicholls, 2009) that can be referred to the customised approach. Furthermore,

Recent literature emphasizes the need for a multidimensional approach to social impact assessment. Musinguzi *et al.*, (2023) argues that context-specific studies, particularly in regional and rural areas, are necessary to capture localized effects. Past literature has provided the methods of assessing the social enterprises; however, those are time consuming and complex methods (Musinguzi *et al.*, 2023; Foer *et al.* 2023; Bagmet & Haponova, 2018). Foer *et al.* (2023) explained that largely the literature have included SDG indicators to assess the impact. For instance, Lazzarini *et al.*, (2018) found that SDG indicators are used by entrepreneurs and impact investors. Foer *et al.*, (2023) identify a gap in the literature, stating that key indicators of social impact are varied and often underexplored. They advocate for a framework that integrates multiple capitals and measures the depth, breadth, and width of social impact.

### ***Theory of Social Change***

The present study uses theory of social change to explain the measurement of social impact created by social entrepreneurs. Social change theory explains how structural and behavioural shifts occur within societies due to economic, cultural, and institutional influences (Smith, 2010). Social enterprises drive such change by addressing systemic issues and fostering sustainable development through various forms of capital human, social, natural, economic, and mental capital—which collectively enhance social impact. Estrin *et al.*, (2016) explain social enterprises improve skills, education, and employment, empower marginalized communities and foster economic mobility contribute to Human Capital. Zahra, (2020) explain Social Capital in the form of strong community networks, trust, and collective action, enhancing resilience and cooperation. Siegner *et al.*, (2021) explain that by adopting sustainable practices, social enterprises contribute to environmental conservation and responsible resource management leading to generation of Natural Capital. Yunus, (2011) explain that SE contribute to economic capital when they communities result in financial inclusion, employment, and investment in underserved communities, reducing economic disparity. SE play an important role in the mental development as indicated by Haugh & Talwar, (2016) when their activities include mental health initiatives that fosters individual and societal growth.

### **3. Research Method**

#### ***Questionnaire Development***

The study aims to identify the factors that measure the social impact created by the social entrepreneurs in Education sector. It is relevant to enhance the evaluation of social enterprises in this sector and gain in-depth insight of what does social impact include. This study referred to The United Nations Development Programme Sustainable Livelihoods Framework (UNSLF) which “encompasses the skills, assets (both material and social) and the approaches which will be used by individuals and communities in order to survive. The sustainability element implies that these individuals or communities can confront and overcome moments of stress and/or crisis, and that they are able to maintain or even improve current and future skills and assets without exploiting their supply of natural resources”. The SLF adopts a systems approach to its understanding of livelihoods, and provides a way of conceptualising this through an analysis of different types of capital assets generated namely, Human Capital, Natural Capital, Social Capital, Financial Capital and Physical Capital.

During the instrument development, items were developed on the basis of the activities that the institute is doing. The institute is a social entrepreneurial unit since the objective of the institute is not to earn profits but to serve larger. The student activities were identified on the basis of which items of the questionnaire were developed on Likert scale. Then, experts from academics, team of auditors from government organization were involved for validating the questionnaire developed and 46 relevant items were retained after deletion of 12 duplicate items in the questionnaire. The items were developed based on the UNSLF with respect to an educational institution.

This participants in the study included third year under graduate students enrolled for different courses in Dayalbagh Educational Institute, Agra. The number of third year students in the institute is 4900. Instrument

was shared through google form with the students. We received 1260 responses out of which only 260 were found to be suitable for further analysis. Of the participants, 165 (64%) were female and 95 (36%) were male. We obtained the required permissions to administer the questionnaire from the authorities. We did not receive any funding for this research.

### Data Analysis

In this study, a self-reported questionnaire for measuring social impact was utilised, and factor analysis was required to assess the construct validity. The study used exploratory factor analysis (EFA) in SPSS 27 as part of a systematic data analysis methodology. To make sure that every construct was measured correctly, the measurement scales were first evaluated for one-dimensionality using EFA. Factor analysis is a data reduction technique that efficiently groups the most associated elements into discrete factors and streamlines additional analysis, as explained by Brown (2015). After EFA, we combined the original variables into principal components using Principal Component Analysis (PCA). By converting variables into linear combinations, this approach improves interpretability and allows for a more lucid representation of the data structure. Cronbach's alpha reliability study revealed good internal consistency across constructs, confirming the measuring scales' dependability and bolstering the validity of further investigations.

## 4. Findings

### 4.1 Exploratory Factor Analysis (EFA)

#### 4.1.2 Reliability Analysis

The reliability of the measurement scale was assessed using Cronbach's alpha. The results indicate a Cronbach's alpha value of 0.932 for the 35-item scale which is well above the recommended threshold of 0.70. This demonstrates a high level of internal consistency among the items suggesting that the scale is reliable and that the items consistently measure the underlying construct.

**Table 1: Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .932             | .932   | 35         |

#### 4.1.3 Sampling Adequacy test

The KMO value of **0.940** indicates excellent sampling adequacy, confirming that the data are highly suitable for factor analysis. Bartlett's Test of Sphericity is significant ( $\chi^2 = 6.986 \times 10^3$ ,  $df = 1035$ ,  $p < 0.001$ ) showing that the variables are sufficiently correlated. Together, these results confirm the appropriateness of conducting factor analysis on the dataset.

**Table 2: KMO and Bartlett's Test**

|  |                    |         |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. |                    | .940    |
| Bartlett's Test of Sphericity                    | Approx. Chi-Square | 6.986E3 |
|  | Df                 | 1035    |
|  | Sig.               | .000    |

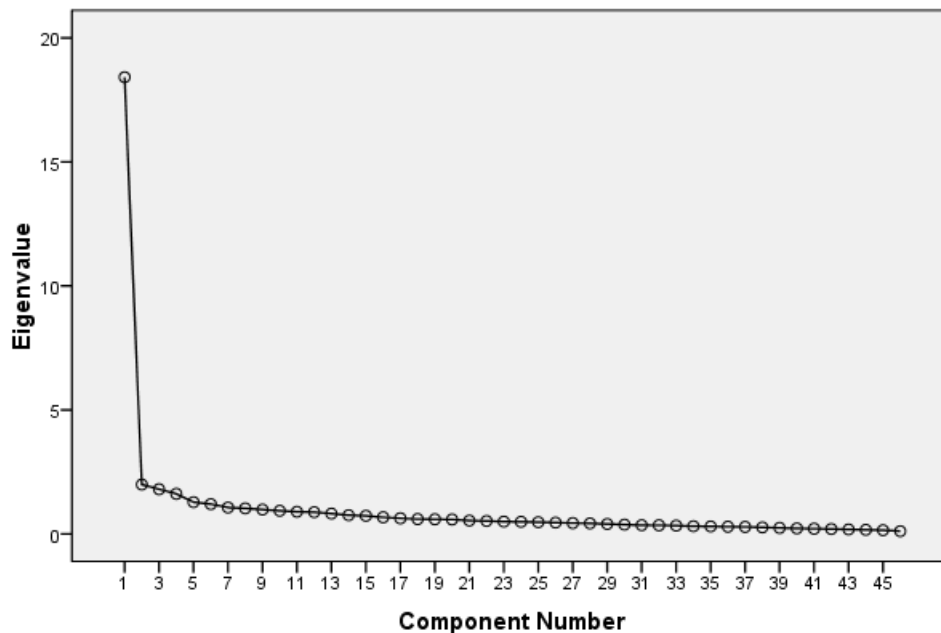
#### 4.1.4 Factor loading and the number of variables

According to the KMO criterion, factors (or components) are considered acceptable if their eigenvalues are greater than one. Table 3 displays the number of factors and the factor loadings that correspond to them. Five components were identified based on the results, and they account for 54.57% of the SIS construction. The EFA result conformity with theory of social theory indicates the technique's adequate validity.

**Table 3: Total Variance explained for Social Impact Scale (SIS)**

| Component | Initial Eigenvalues |               |              | Extraction Sums of Squared Loadings |               |              | Rotation Sums of Squared Loadings |               |              |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
|           | Total               | % of Variance | Cumulative % | Total                               | % of Variance | Cumulative % | Total                             | % of Variance | Cumulative % |
| 1         | 18.41               | 40.03         | 40.03        | 18.4                                | 40.03         | 40.03        | 6.00                              | 13.04         | 13.04        |
| 2         | 1.99                | 4.32          | 44.36        | 1.99                                | 4.32          | 44.36        | 5.58                              | 12.14         | 25.19        |
| 3         | 1.80                | 3.91          | 48.28        | 1.80                                | 3.91          | 48.28        | 5.49                              | 11.93         | 37.13        |
| 4         | 1.61                | 3.51          | 51.79        | 1.61                                | 3.51          | 51.79        | 4.31                              | 9.38          | 46.51        |
| 5         | 1.28                | 2.78          | 54.57        | 1.28                                | 2.78          | 54.57        | 3.70                              | 8.05          | 54.57        |

**Scree Plot**



**Figure 1: Scree Plot**

Furthermore, Fig. 1 illustrates the Scree Plot. In order to minimize data and classify variables according to their internal relationships and differences with other components, the varimax method of factor rotation was employed. Each variable's loading, or how much it contributes to the factor, is likewise ascertained using this method. Table 3 shows that, with the largest loading of 40%, Human Capital comes first, followed by Social Capital, Natural Capital, Financial Capital, and Physical Capital.

Table 3 shows the rotated component matrix of the social impact scale, which comprises of final 35 items into five primary components: Human Capital (8 items), Social Capital (8 items), Natural Capital (7 items), Financial Capital (7 items), and Physical Capital (5 items).

**Table 4: Rotated Component Matrix with Items of Social Impact Scale**

| <i>Code</i> | <i>Items/Components</i>   | <i>Human Capital</i> | <i>Social Capital</i> | <i>Natural Capital</i> | <i>Financial Capital</i> | <i>Physical Capital</i> |
|-------------|---|----------------------|-----------------------|------------------------|--------------------------|-------------------------|
|             |   | <i>1</i>             | <i>2</i>              | <i>3</i>               | <i>4</i>                 | <i>5</i>                |
| HC1         | The programs have improved my knowledge and learning abilities.                           | 0.66                 |                       |                        |                          |                         |
| HC2         | I have gained practical skills that help in studies, work, or daily life.                 | 0.629                |                       |                        |                          |                         |
| HC3         | The organization has strengthened my confidence and self-esteem.                          | 0.622                |                       |                        |                          |                         |
| HC4         | Activities have helped me develop leadership qualities.                                   | 0.6                  |                       |                        |                          |                         |
| HC5         | I am better at solving problems and making decisions because of my participation.         | 0.584                |                       |                        |                          |                         |
| HC6         | The programs encourage me to think creatively and be innovative.                          | 0.583                |                       |                        |                          |                         |
| HC7         | I feel more motivated to continue lifelong learning.                                      | 0.536                |                       |                        |                          |                         |
| HC8         | The organization supports my overall personality and character development.               | 0.505                |                       |                        |                          |                         |
| SC1         | The organization helps me build useful networks and friendships.                          |                      | 0.691                 |                        |                          |                         |
| SC2         | I feel more connected to my community because of its activities.                          |                      | 0.67                  |                        |                          |                         |
| SC3         | Programs encourage cooperation and teamwork among participants.                           |                      | 0.651                 |                        |                          |                         |
| SC4         | The organization promotes trust and harmony between people of different backgrounds.      |                      | 0.614                 |                        |                          |                         |
| SC5         | I get opportunities to collaborate with local organizations through its initiatives.      |                      | 0.612                 |                        |                          |                         |
| SC6         | I feel a stronger sense of belonging to society as a result of my involvement.            |                      | 0.586                 |                        |                          |                         |
| SC7         | The organization encourages active participation in community service and social causes.  |                      | 0.517                 |                        |                          |                         |
| SC8         | I believe these programs have increased mutual respect and understanding in my community. |                      | 0.514                 |                        |                          |                         |
| NC1         | The organization teaches us about protecting the environment.                             |                      |                       | 0.733                  |                          |                         |

|     |   |  |  |       |       |       |
|-----|---|--|--|-------|-------|-------|
| NC2 | We are encouraged to adopt eco-friendly practices (waste management, recycling, energy saving). |  |  | 0.666 |       |       |
| NC3 | Environmental activities (tree planting, clean-up drives) have improved my surroundings.        |  |  | 0.642 |       |       |
| NC4 | I have learned how sustainable practices can improve community health.                          |  |  | 0.623 |       |       |
| NC5 | Programs have created awareness about conserving natural resources like water and soil.         |  |  | 0.558 |       |       |
| NC6 | I feel more responsible towards nature after participating in these initiatives.                |  |  | 0.552 |       |       |
| NC7 | The organization motivates us to take action for climate and environmental sustainability.      |  |  | 0.55  |       |       |
| FC1 | The organization provides scholarships, loans, or aid that reduce financial barriers.           |  |  |       | 0.671 |       |
| FC2 | Opportunities like “earn while you learn” help me support my education and family.              |  |  |       | 0.661 |       |
| FC3 | Affordable services (e.g., canteen, uniforms, transport) reduce my daily expenses.              |  |  |       | 0.658 |       |
| FC4 | I have learned to manage money better through financial literacy programs.                      |  |  |       | 0.548 |       |
| FC5 | The organization connects us with livelihood or employment opportunities.                       |  |  |       | 0.526 |       |
| FC6 | Support received here reduces my family’s financial stress.                                     |  |  |       | 0.512 |       |
| FC7 | I feel more economically secure because of the organization’s support.                          |  |  |       | 0.504 |       |
| PC1 | The organization provides good classrooms, labs, and study facilities.                          |  |  |       |       | 0.628 |
| PC2 | Digital resources and technology are available to improve learning.                             |  |  |       |       | 0.563 |
| PC3 | Health and hygiene facilities (toilets, drinking water, medical care) support my wellbeing.     |  |  |       |       | 0.56  |
| PC4 | Transport and accommodation facilities make access to education easier.                         |  |  |       |       | 0.534 |

|     |  |  |  |  |  |       |
|-----|--|--|--|--|--|-------|
| PC5 | The infrastructure is safe, inclusive, and accessible for all, including differently-abled people. |  |  |  |  | 0.529 |
|-----|--|--|--|--|--|-------|

#### 4.2 Confirmatory factor analysis

Exploratory Factor Analysis (EFA) identified five capitals. To validate and confirm this factor structure, Confirmatory Factor Analysis (CFA) was subsequently employed. CFA was used because it allows for testing whether the empirically identified factors adequately fit the data based on a theoretically specified measurement model. The analysis enabled the assessment of factor loadings, construct validity, and overall model fit, thereby confirming the robustness of the five factors.

##### 4.2.1 Measurement Model

###### 4.2.1.1 Construct Reliability and Validity

The reliability and validity statistics of the measurement model were examined to assess the internal reliability and convergent validity of all latent constructs. The results in Table 5 show that Cronbach’s alpha values for all constructs lie between 0.753 and 0.859, which are well above the recommended threshold of 0.70. This indicates that all the scale items used for measuring the constructs are internally reliable in representing their respective variables. Moreover, the composite reliability values also support this finding, ranging from 0.821 to 0.920. Since all the composite reliability scores exceed the acceptable limit of 0.70 and are below 0.95, it can be concluded that there is a high level of internal consistency without redundancy among the indicators of each construct.

In addition, the average variance extracted (AVE) values, which range from 0.554 to 0.675, are all above the minimum acceptable level of 0.50. This demonstrates that more than 50% of the variance in the indicators is captured by their underlying latent constructs, thus establishing convergent validity. In other words, the items associated with each construct are strongly correlated and effectively represent the same theoretical concept.

**Table 5: Construct reliability and validity**

|    | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|----|------------------|-------------------------------|-------------------------------|----------------------------------|
| FC | 0.753            | 0.920                         | 0.830                         | 0.554                            |
| HC | 0.859            | 0.904                         | 0.887                         | 0.570                            |
| PC | 0.804            | 0.821                         | 0.870                         | 0.626                            |
| SC | 0.845            | 0.885                         | 0.892                         | 0.675                            |

These results confirm that the measurement model exhibits adequate reliability and validity. The constructs demonstrate both strong internal consistency and sufficient convergence, indicating that the measurement indicators used in the study are statistically sound and suitable for further analysis. Therefore, the model provides a reliable foundation for proceeding to the next stages of evaluation, such as discriminant validity testing using HTMT ratio.

###### 4.2.1.2 Discriminant validity

**Table 6: Htmt Statistics**

|    | FC    | HC    | PC    | NC    | SC |
|----|-------|-------|-------|-------|----|
| FC |       |       |       |       |    |
| HC | 0.725 |       |       |       |    |
| PC | 0.861 | 0.700 |       |       |    |
| NC | 0.485 | 0.524 | 0.512 |       |    |
| SC | 0.867 | 0.788 | 0.764 | 0.448 |    |

To examine discriminant validity among the latent constructs, the Heterotrait-Monotrait ratio (HTMT) of correlations was analyzed. Discriminant validity ensures that each construct in the model measures a unique concept and is empirically distinct from other constructs. According to Henseler, Ringle, and Sarstedt (2015), the HTMT value should be less than 0.85 (strict criterion) or 0.90 (more lenient criterion) to confirm discriminant validity.

In the present study, the HTMT values among all constructs were found to be below the threshold of 0.90, indicating satisfactory discriminant validity. Specifically, the HTMT ratios between FC and PC (0.861), FC and SC (0.867), HC and SC (0.788), and PC and SC (0.764) are comparatively higher than other pairs but still remain within the acceptable range. These values suggest moderate interrelationships among the constructs but no significant overlap, implying that each construct captures a distinct dimension of the model.

Further, the relationships among HC and PC (0.700), HC and FC (0.725), and NC with HC (0.524) or PC (0.512) also demonstrate acceptable discriminant validity, as all values are clearly below the 0.90 threshold. The HTMT analysis confirms that discriminant validity is well established across all constructs. None of the inter-construct correlation ratios exceed the recommended limits, indicating that each latent variable uniquely contributes to the measurement model without significant redundancy or multicollinearity concerns.

## 5. Discussion

The factors measuring the social impact are identified on the basis of theory of social change using UNSR framework, which underwent a thorough evaluation of psychometric properties. These are analysed on their content and construct validity and reliability using EFA and CFA.

Table 4 presents the rotated component matrix of the Social Impact Scale derived from beneficiaries' responses. The factor analysis resulted in five distinct components Human Capital, Social Capital, Natural Capital, Financial Capital, and Physical Capital each represented by items with acceptable to strong factor loadings ( $\geq 0.50$ ). This confirms the construct validity of the scale and demonstrate that social impact as experienced by beneficiaries is multidimensional in nature.

Human Capital emerges as a critical factor in measuring social impact, particularly from the beneficiary's perspective. Human Capital refers to the enhancement of beneficiaries' knowledge, skills, competencies, and personal capabilities resulting from the interventions of the education institute functioning as a social enterprise. The moderate to strong factor loadings of Human Capital items such as HC1 (0.66), HC2 (0.629), HC3 (0.622), and HC4 (0.60) indicate that improvements in learning ability, practical skills, self-confidence, and leadership qualities are central outcomes of the programs. Items such as "The programs have improved my knowledge and learning abilities" demonstrate that the initiatives significantly contribute to the development of beneficiaries intellectual and personal capacities. This reflects the core principle of social enterprises operating in the education sector which prioritizes capacity building and empowerment over purely economic outcomes. The development of self-confidence, leadership qualities, work-related skills, and overall competencies among beneficiaries highlights the development of Human Capital. Prior studies also emphasize that investment in human capabilities leads to sustained social impact by enabling individuals to actively participate in economic and social life (Becker, 1964; Sen, 1999). This supports the findings of (Becker, 1975; Cisi, M., & Centrone, F. A. (2021); Shiyuan et al., 2022) which explains that Human Capital serves as a foundational factor in assessing social impact, as it directly influences the personality development and future opportunities of beneficiaries (Becker, 1975; Cisi, M., & Centrone, F. A. (2021); Shiyuan et al., 2022).

The study found that factors social enterprise initiatives for strengthening relationships, networks, trust, collective participation represent social capital. The factor loadings reported in Table 4 demonstrate that Social Capital is a significant dimension of social impact. Items such as SC5 (0.612) indicate collaboration with local organizations, while SC6 (0.586) reflects an increased sense of belonging to society in beneficiaries. Further, SC7 (0.517) captures active participation in community service and social causes, and SC8 (0.514) highlights improved mutual respect and understanding within the community. From the beneficiaries' standpoint these outcomes indicate that the programs foster social inclusion, cooperation, and shared values. Institutional legitimacy and social embeddedness are essential for the acceptance and scalability of social initiatives and the strengthening of Social Capital helps achieve these objectives. This argument is supported by institutional theory, which posits that institutional support and shared norms are crucial for sustaining social initiatives (DiMaggio & Powell, 1983). Strong Social Capital enables beneficiaries to leverage social networks and collective resources, thereby amplifying the overall social impact of the programs.

Another factor as an indicator of social impact is Natural Capital found in the results. This represents beneficiaries' awareness of environmental sustainability and responsible use of ecological resources facilitated through social initiatives. The factor loadings for Natural Capital items in Table 4 indicate a strong

contribution to social impact. High loadings such as NC1 (0.733) reflect learning about environmental protection, while NC2 (0.666) and NC3 (0.642) indicate the adoption of eco-friendly practices and participation in environmental activities. Additional items such as NC4 (0.623), NC5 (0.558), NC6 (0.552), and NC7 (0.550) further demonstrate increased awareness of sustainability, conservation of natural resources, and personal responsibility toward the environment. Lower yet acceptable loadings for some items suggest that while environmental initiatives are impactful, there is scope for strengthening sustainability-focused interventions. Existing literature highlights that integrating environmental sustainability into social initiatives contributes to long-term societal well-being and resilience (Daly, 1990; Schaltegger & Wagner, 2011). Thus, Natural Capital plays a supportive yet important role in reinforcing sustainable development outcomes for beneficiaries.

Financial Capital is another capital as a measure of social impact found in the present study. It refers to the economic benefits experienced by beneficiaries through improved access to financial resources, income-generating opportunities, and economic security. The factor loadings in Table 4 show that Financial Capital contributes meaningfully to social impact. Items such as FC1 (0.671) indicate the role of scholarships, loans, and financial aid in reducing financial barriers, while FC2 (0.661) and FC3 (0.658) reflect the importance of earning opportunities and affordable services in supporting education and daily expenses. Items with relatively lower but acceptable loadings, such as FC4 (0.548), FC5 (0.526), FC6 (0.512), and FC7 (0.504), highlight outcomes related to financial literacy, livelihood connections, reduced financial stress, and improved economic security. These findings suggest that the organization contributes not only to short-term financial relief but also to long-term economic self-reliance among beneficiaries. This aligns with existing research that identifies financial empowerment as a core objective of social entrepreneurship initiatives (Kuratko, 2005).

Social Impact is also generated when infrastructure, facilities, and physical resources are provided by the social enterprise that support beneficiaries' access to education and well-being. This can be referred to the development of the Physical Capital. The factor loadings for Physical Capital items indicate a meaningful enabling role. PC1 (0.628) and PC2 (0.563) highlight the availability of quality classrooms, laboratories, and digital resources that enhance learning. PC3 (0.560) reflects the contribution of health and hygiene facilities to beneficiaries' well-being, while PC4 (0.534) indicates improved access to education through transport and accommodation facilities. PC5 (0.529) demonstrates the importance of safe, inclusive, and accessible infrastructure. The results indicate that it significantly strengthens the effectiveness and reach of social initiatives by providing a supportive environment for beneficiary's holistic development.

## 6. Conclusion

Based on the findings, the reliability and content validity indicate that the initial version of the questionnaire is well-suited for quantitative research. The Exploratory Factor Analysis results show that this tool has suitable construct validity and is consistent with previous tools. The understanding of the social impact depends on Human Capital, which includes abilities and leadership traits that a social venture is creating (Becker, 1964). It is important to note that social entrepreneurship can have positive outcome when it is empowering people. The instrument developed is appropriate for measuring social impact created in educational institutions operating on the grounds of serving the last. This study emphasises how social impact is multifaceted and how important each component is to the growth and influence of social enterprises.

This study highlights the need for structured policies that integrate social impact measurement frameworks within accreditation and funding criteria to ensure educational institutions prioritize Human Capital development, social empowerment, and sustainability. Policymakers should encourage initiatives that promote financial accessibility, such as scholarships, interest-free loans, and income-generating programs, fostering self-reliance among students. Additionally, investments in infrastructure, renewable energy, and digital learning should be incentivized to enhance physical and technological capital. From a managerial perspective, institutions should adopt a holistic approach to social impact by strengthening professional consultancy, financial literacy programs, and entrepreneurship-driven education. By embedding social impact assessment tools within institutional strategies, educational organizations can ensure sustainable development while aligning with broader socio-economic goals. Future research should test the developed questionnaire across diverse educational settings to validate its applicability and enhance its robustness in measuring social impact.

This study attempted to scale the social impact based on the higher education setting and it can be utilised to quantify social impact by other organizations in future research. However, students from a university considered to be of higher education participated in this study, which was conducted for the first time. As a result, variations within the statistical population may affect the outcomes. Therefore, it is advised that future research retest the tool in various environments.

## 7. Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this week the author(s) used CHATGPT in order to improve the language. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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