



Human Capital, Material Capital, and Social Capital as the Factors of Socioeconomic Status: A Theoretical Review

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Research Article

Abstract

Traditionally, social behavior has been explained separately in terms of human capital, material capital, and social capital as components of Socioeconomic Status (SES). However, these simple linear regression models very often show negligible or weak explanatory power. Recent studies suggest that integrating human capital, material capital, and social capital within SES (the CAPSES model) offers more explanatory power in predicting social behavior. This study aims to apply the integrated CAPSES model, which underpins sociological perspectives, empirical evidence, and explanatory power, in the context of social scientific research. For this purpose, the study examines whether the triangulation of the CAPSES model, based on three sociological perspectives, can contribute to increased explanatory power in the context of the poverty reduction index among the Rohingya population in Cox's Bazar, Bangladesh. The study findings, based on 385 respondents, reveal that the explanatory power of the model based solely on human capital ($R^2 = 0.493$) or the model based on human capital and material capital ($R^2 = 0.673$) is less than that of the integrated CAPSES model ($R^2 = 0.754$). The study hence recommends that social researchers apply the integrated CAPSES model for a better understanding of social phenomena (e.g., poverty reduction index, health-seeking behavior).

Keywords: Human Capital, Material Capital, Social Capital, SES, CAPSES

1. Introduction

Socioeconomic status (SES) is a fundamental construct that has been extensively theorized across diverse sociological paradigms. This is widely acknowledged as a predictor of health-seeking behavior (Adler et al., 2016) and has recently been suggested to apply in other realms of social behavior (See Oakes and Rossi, 2003). The structural functionalist paradigm conceives of SES from the aspect of human capital, including education, occupational status, and skill sets (Furnée et al., 2011). On the contrary, the conflict paradigm

posits that social inequality is a product of material capital, arguing that individuals with a high level of wealth and income tend to experience better health outcomes (Navarro, 2009). The symbolic interactionist paradigm, meanwhile, focuses on social capital encompassing interpersonal networks, trust, and perceived prestige that shape social behavior (Kawachi & Berkman, 2000).

These theoretical postulates are substantiated in numerous empirical research studies. Claver-Cortés et al. (2015) speculate that SES is primarily determined by human capital, which includes indicators like knowledge, competency, and educational attainment. Oakes and Rossi (2003) emphasize material capital, encompassing tangible and financial assets, which involve property, income from employment and investments, and convertible holdings (i.e., gold, equities, and foreign currencies). Oakes and Rossi also incorporate social capital, which includes social networks, prestige, and trustworthiness as important indicators. Blau and Duncan (1967) assume that family origin has a significant influence on a child's educational attainment. Subsequent findings suggest that parental social standing has a significant influence on their children's educational choices. Furthermore, Hossler and Gallagher (1987) show the interaction effect of human capital, material capital, and social capital on children's educational choices and decisions at the post-secondary level. Oakes and Rossi (2003) integrated these three aspects into the CAPSES model. The study by Adedeji (2023) highlights that socioeconomic status and social capital jointly influence well-being, suggesting that poverty reduction strategies should consider both material and relational dimensions. Fei (2025) noted that integrating multiple forms of capital is increasingly recognized as essential in explaining socioeconomic outcomes. By combining human, material, and social capital, the study enhances its theoretical depth and empirical rigor. Thus, this research aims to assess whether the triangulated CAPSES model offers greater explanatory power in evaluating poverty reduction among the Rohingya population in Cox's Bazar, Bangladesh. Specifically, it contrasts the efficacy of a single-perspective SES model, such as human capital from the structural functionalist tradition, with a composite model integrating material capital (conflict theory) and social capital (symbolic interactionism).

2. Theoretical Roots of the CAPSES Model

Though the CAPSES model is not obviously entrenched within classical sociological theories, its indicators echo with key assumptions of Marx's economic determinism (Marx, 2000), Durkheim's educational theory and division of labor (See Durkheim, 1956), and Weber's theory of social action (See Weber, 1978). The CAPSES constructs refer to the SES based on three aspects of capital: human capital, material capital, and social capital. The SES was previously conceptualized as social class, which acts as an indicator for placing individuals within the social ladder (Krieger, 1997; Wright, 1985). Blau and Duncan (1967), while defining SES in the United States, developed the Socioeconomic Index (SEI) based on education, occupation, and income. Galobardes et al. (2006) stated that, in European scholarships, the preferred terminology is "socioeconomic position" (SEP). Glanz et al. (2008) stated that other operational measures of SES were the Household Prestige Scale (HPS), Occupational Status Score (OSS), Cambridge Social Interaction and Stratification Scale (CAMSIS), and the National Statistics Socioeconomic Classification (NS-SEC). Xu (2025) showed that human capital not only enhances individual productivity but also facilitates social integration. Recent efforts, such as Sacre et al. (2023), have developed and validated a composite SES scale (SES-C) in Lebanon, emphasizing the need for multifaceted measurement of socioeconomic position rather than single-indicator approaches.

2.1 Structural Functionalist Perspective

The leading proponent of this paradigm was Emile Durkheim, who understood societal change with functional differentiation. Durkheim envisioned social change as a functional shift from traditional societies, characterized by mechanical solidarity, to modern societies, exemplified by *organic solidarity*.

This shift, theorized by Durkheim, refers to the movement from homogeneity to heterogeneity in terms of educational differentiation and the resulting division of labor (Durkheim, 1956). The present study attempts to apply this framework in explaining the poverty index of the Rohingya population in Cox's Bazar.

Human capital, from this perspective, refers to the aggregate of individual competencies, cognitive resources, and personality traits that enable productive labor and contribute to the creation of economic value (Claver-Cortés et al., 2015). Empirical studies support this view: Jaeger (2009), in his investigation of meritocratic educational systems, identified a significant relationship between cultural capital and academic performance. Similarly, Lyons et al. (2003) emphasized the role of parental engagement in the education market as a determinant of school choice and educational experiences in Ireland. Social ties and peer networks have been shown to mediate the link between SES and perceived quality of life (Zhang et al., 2022). Consistent with Nutakor (2023) and Zhang et al. (2022), this study confirms that social capital mediates the effects of SES on human development outcomes.

2.2 Conflict Perspective

Karl Marx serves as the main advocate of the conflict perspective. The historical political economy (materialistic dialectics) is the source of any behavior that is the result of social inequality and discrimination, according to this perspective. Using dialectics to comprehend social reality is the methodology of this perspective (Marx, 2000). Marx identified class struggle within historical social systems that contain private property and classes, as he stated, "The history of all, hitherto, existing society is the history of class struggle" (Marx, 2000). This insight was derived from his dialectical materialism. The social reality that Marx discovered was embodied in capitalism, feudalism, and servitude. Two primary divisions were present in each of these social systems: the possessory and the deprived. Feudalism was characterized by the existence of a ruler and a serf, in contrast to slavery, which had a master and a slave. Capitalism is characterized by the existence of the proletariat and the affluent (Marx, 2000). Marx foresaw communism as a classless society and socialism as a transitional state between capitalism and communism. Marx also asserted that the have-not class had been maintained under false consciousness (class-in-itself) to maintain the primary status quo of the have class. Nevertheless, class struggle commenced and persisted until the emergence of a new social system (refer to Fig. 1), as there was no genuine consciousness of class (class-for-itself). Marxist Sociology explains that any social problem is the result of private property and class (See Marx, 2000).

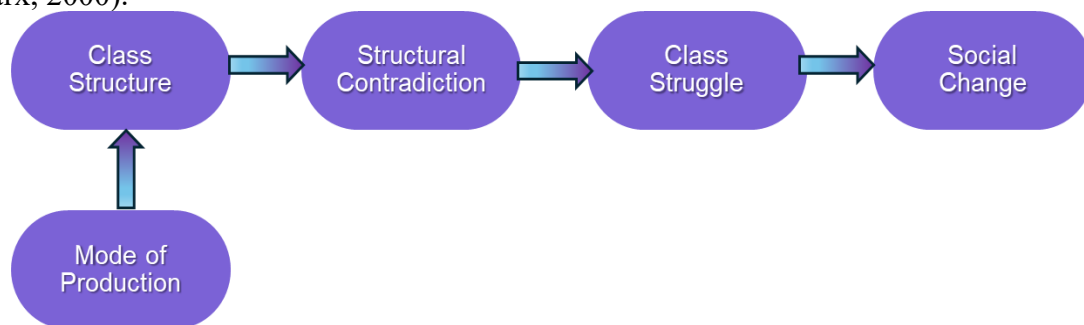


Fig. 1: Marxist Model of Class Struggle

2.3 Symbolic Interactionist Perspective

Weber is the main proponent of symbolic interactionism. This paradigm conceptualizes social capital as an emergent property of everyday interpersonal interactions, shared meanings, and symbolic exchanges. Rather than viewing social capital as a fixed asset, this perspective emphasizes its dynamic construction through micro-level social processes (i.e., greetings, rituals, and community participation) that foster trust, reciprocity, and collective identity (See Weber, 1978). Thus, individuals' interpretations of their social roles, interactions, behavior, values, and relationships shape social capital. To summarize, the symbolic interactionist paradigm elucidates how social capital is manifested in the real world, taking into account the role of individual agency in shaping social networks (Fine, 2001).

2. Measurement of Constructs and Hypothesized Models

While measuring the three constructs — human capital, material capital, and social capital — the study used indicators on a five-point Likert scale. Human capital was measured through the indicators encompassing individual competency, knowledge (Claver-Cortés et al., 2015), educational attainment (Jaeger, 2014; Lyons et al., 2003), and physical capabilities (Oakes & Rossi, 2003). While measuring material capital, the study utilized indicators such as land, housing, dividends, interest, income from salaries, and gold, as well as stocks and currencies (Oakes & Rossi, 2003).

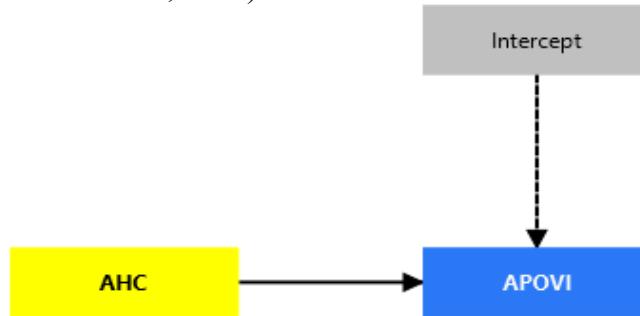


Fig. 2: Human Capital-Based Hypothesized Model

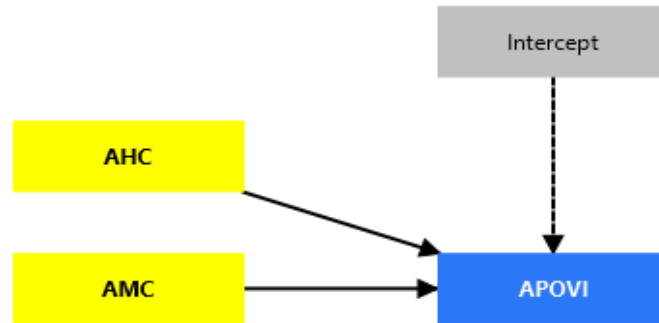


Fig. 3: Human Capital and Material Capital-Based Hypothesized Model

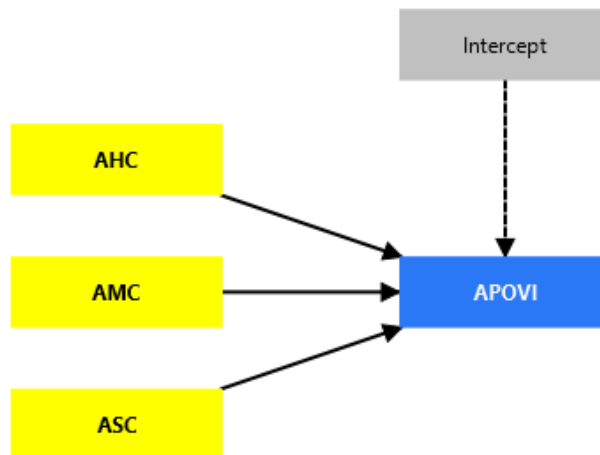


Fig. 4: Human, Material, and Social Capital-Based Hypothesized Model

The study also measures social capital through trustworthiness, influence, social status, and social networks (Oakes & Rossi, 2003). Empirical evidence suggests that social capital mediates the relationship between SES and quality of life (Nutakor, 2023). Thus, the study measured those constructs with indicators. Then, averaging the indicators, the study sets the average of human capital (AHC), the average of material capital (AMC), and the average of social capital (ASC) as independent variables to examine the average of poverty reduction index (APOVI) (See Fig. 2, Fig. 3, and Fig. 4).

4. Research Design, Materials, and Methods

This research is grounded in an ontological research philosophy (i.e., positivism), which is aligned with a quantitative research approach and an experimental research design. Considering the time dimension, the study employed a cross-sectional survey. While collecting data and determining the sample size, the study used Cochran's formula to estimate the population proportion. It drew a sample of 385 from the Rohingya population residing in Jamtoli, Patibunia, and Kutupalong refugee camps. These camps were chosen considering easy access. A purposive sampling method was employed, as it aligns with the study's primary objective. The community leaders (Majhis) and volunteers were trained to collect data using structured questionnaires. The sample size was determined to ensure that the results would be statistically valid and representative of the broader Rohingya population.

The data were analyzed using a combination of descriptive and inferential statistical techniques. Initially, the data were cleaned, coded, and analyzed using SPSS software (Version 25). To assess the explanatory power of the CAPSES model, three regression models were developed using SmartPLS software (Version 4).

Before conducting the survey, the study took ethical clearance and permission from the Refugee Relief and Repatriation Commissioner (RRRC) and the assisting NGOs. Informed consent was also secured from all participants, ensuring confidentiality and the right to withdraw from the study at any stage. Special attention was given to the sensitive context of the Rohingya population, with measures taken to respect their dignity and cultural values.

5. Study Results

Many studies have been conducted on social behavior, examining the impact of human capital, material capital, and social capital as separate variables in both global and regional contexts. However, very few studies have been conducted on the interaction effect of human capital, material capital, and social capital in social science research. In this regard, Azad (2018) has examined health-seeking behavior and the choice of education, using the CAPSES model, and found the interaction effect of human capital, material capital, and social capital to be more explanatory. The present study, while examining the explanatory power of the human capital-based model (Fig. 5), found a value of R^2 of 0.493, indicating that this model can explain 49.3% of the variation in the poverty reduction index among the Rohingya people.

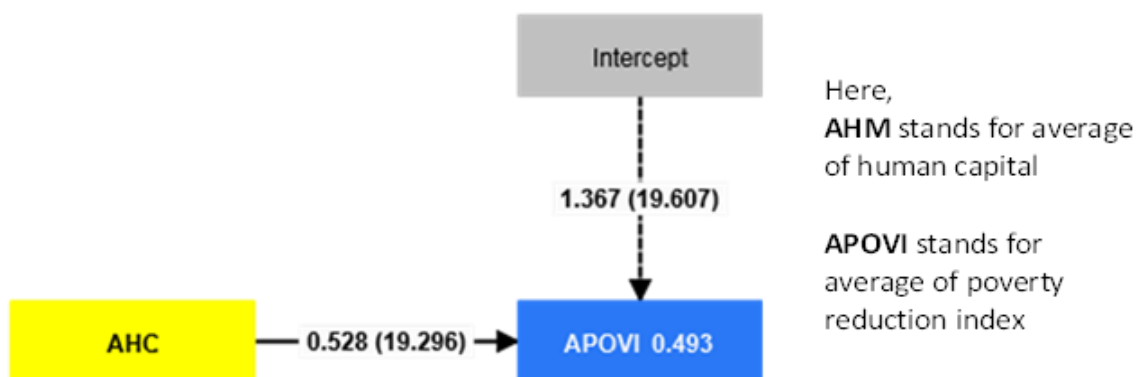


Fig. 5: Explanatory Power of Human Capital-Based Model

The second model (Fig. 6), based on the interaction effect of human capital and material capital, has a better explanatory power compared to model 1 (Fig. 5). That is, the R^2 of the second model is 0.673, which indicates that human capital and material capital taken together explain 67.3 percent of the poverty reduction index of Rohingya people.



Fig. 6: Explanatory Power of Human and Material Capital-Based Model

Source: Field Study

Finally, the third model (Fig. 7), which examines the interaction effect of human capital, material capital, and social capital on the poverty reduction index of the Rohingya people, yields the highest R-squared value (0.754). That is, the final model can explain 75.4% of the variation in the poverty reduction index for the Rohingya people (Fig. 7).



Fig. 7: Explanatory Power of Human, Material, and Social Capital-Based Model

Source: Field Study

6. Conclusion

The primary objective of this study was to investigate the theoretical and empirical validity of the CAPSES model in explaining poverty reduction among the Rohingya population in Cox's Bazar, Bangladesh. In this regard, the study assessed the individual role of human capital, the combined effect of human and material capital, and the integrated impact of human, material, and social capital on the poverty reduction index. The empirical analysis showed different magnitudes of explanatory power across the SES models. The coefficient of determination for Model 1 (R^2), based on AHC, is 0.493, indicating that the model explains 49.3% of the variation in respondents' poverty levels, as measured by AHC. In combination with AHC and AMC, the coefficient of determination for model 2 (R^2) yields a value of 0.673, indicating that the model can explain 67.3% of the variation in respondents' poverty levels based on AHC and AMC. Finally, the

interaction effect of AHC, AMC, and ASC revealed the highest explanatory power, with an R^2 of 0.754, indicating that the CAPSES model, in combination with AHC, AMC, and ASC, can explain 75.4% of the variation in respondents' poverty levels. Thus, the study results confirm that each of the three CAPSES constructs — average human capital (AHC), average material capital (AMC), and average social capital (ASC) — has a significant impact on the average poverty reduction index (APOVI) among the Rohingya population in Cox's Bazar. The CAPSES model, as suggested by Oakes and Rossi (2003), is functional and practical for understanding poverty-related social behavior within the context of the Rohingya population in Cox's Bazar, Bangladesh.

7. Limitations and Directions for Future Research

Though the study is practical in the context of Rohingya refugees living in Cox's Bazar, they are not nationally representative for Bangladesh. Therefore, future researchers should conduct rigorous studies that incorporate the entire Bangladeshi population or separate studies on a smaller scale. Secondly, the cross-sectional design of the study implies time constraints. So, future researchers should conduct time series analyses. Finally, the study is conducted merely following an experimental research design. Therefore, future researchers should address these drawbacks by employing a mixed-methods approach. In addition, future researchers should expand the application of the CAPSES model to other marginalized communities. This approach would then enhance the theoretical robustness and practical relevance of sociological inquiry into displacement and socioeconomic vulnerability.

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