Capital Factors of Socioeconomic Status and the Epistemological Shift of Madrasa Students in Bangladesh: PLS-SEM Analysis

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Abstract : This study aims to examine the association between the epistemological shift (ESHIFT) of madrasa students in Bangladesh and their family origin or social class. Using snowball sampling technique, the data were collected from 120 madrasa students shifted to general education at tertiary level. The respondents were interviewed based on 7 point-Likert scale. After collecting data, SmartPLS software (Windows Version-3) was used to measure the validity and reliability of data. Finally, the study developed Partial Least Square based Structural Equation Model to predict the ESHIFT of the study population. The study results reveal that the coefficient of determination (R^2) is 0.522 for the 'ESHIFT' endogenous latent variable. This means that the two latent variables (HC & SC) together explain 52.2 percent of the variance in ESHIFT. Overall, the model has moderate predictive power and relevance (Q^2 value of 0.508).

Keywords: Epistemological shift. Family Origin or Social Class. Madrasa students of Bangladesh.

I.   INTRODUCTION

Madrasa education is one of the three conventional education systems in Bangladesh. The General and English medium curricula are rooted on scientific notion, positivism in Comtean philosophy, while the madrasa education is entrenched on the dictates of the Quran and the hadith or the philosophy of Hazrat Muhammad (SM) as well as the duties and responsibilities of a true Muslim (Azad, 2017). Azad (2018) linked this traditional phase of madrasa education with Auguste Comte's 'theological stage'. The next phase of madrasa education began during the British raj with the establishment of Calcutta alia madrasa. In that period, both alia and qoumi systems were the major trends of madrasa in the Indian sub-continent. Since the British period, the alia system modernized the curriculum incorporating general subjects along with religious ones and so was metaphysical (i.e., a bridge between theological and positive stage) in Comtean sense. On the contrary, the qoumi system has been theological till today. Recently, alia madrasa students are found to be shifting from their madrasa education to general one (Comte's positive stage) though the alia madrasa education systems in Bangladesh still remains in Comte's metaphysical stage. Azad (2018) called this shifting of madrasa students in Bangladesh 'epistemological shift' (ESHIFT). He operationalized this ESHIFT as the evolution of madrasa students from traditional and religious based madrasa education, theological stage, to the empirically need based scientific or general education, positive stage, followed by metaphysical (mixture of religious and general education) stage (p. 41). This ESHIFT can be evident from Dhaka University Admission Record, 2016. (Graph-1).
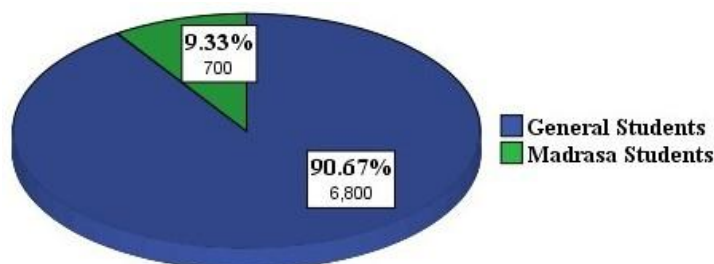
Graph-1: Distribution of Dhaka University Students Enrolled in General
Subjects by Educational Background (Session-2015)

[Source: Adopted from (Azad, 2017)]

According to the statistics of the last admission test (held in 2017), 200 students got chance to get themselves admitted into the same university from merely one madrasa where most of them wanted to enroll in general subjects (Azad, 2017). Sarker (2018) quoted the Dean of Law Faculty, University of Dhaka that 78 percent enrolment at Law department last year was with the students having madrasa background while 60 percent madrasa students got enrolled in the University of Dhaka (Morning Tea, 28 January 2018). Barakat (2011, 2016) found that madrasa students were interested to study general subjects (Graph-2). According to Azad's (2018) survey conducted on 384 students at Alim (equivalent to HSC) level, nearly 90 percent wanted to get enrolled in the general subjects (Graph-3). While measuring the magnitude of the ESHIFT of madrasa students, Azad (2018) also conducted a pilot survey on 120 madrasa students, got admitted into general subjects of both public and private universities of Bangladesh, based on 5 point-Likert scale (strongly disagree=1, disagree=2, neutral=3, Agree=4, strongly agree=5). When they were asked to tell if their epistemology had been shifted for job purposes, out of 120 students, 52.5 % students agreed with the idea; 25.8% were somewhat agree and 15% of strongly agree (Table-1). Azad's (2017) study also inquired the background of the madrasa students who have been enrolled in the general subjects. The report showed that 94 percent were alia madrasa background students while the remaining 6 percent were qoumi madrasa background but 100 percent of them passed Dakhil and Alim examinations to qualify for the admission test of Dhaka University (Morning Tea, December 1, 2017).
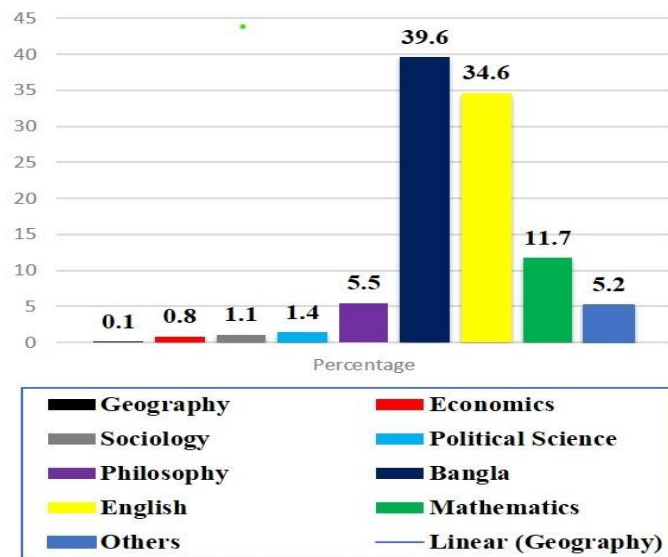
Graph-2: Distribution of Madrasa Students up to alim by their Study Interests

[**Source:** Adopted from (Azad, 2017)]
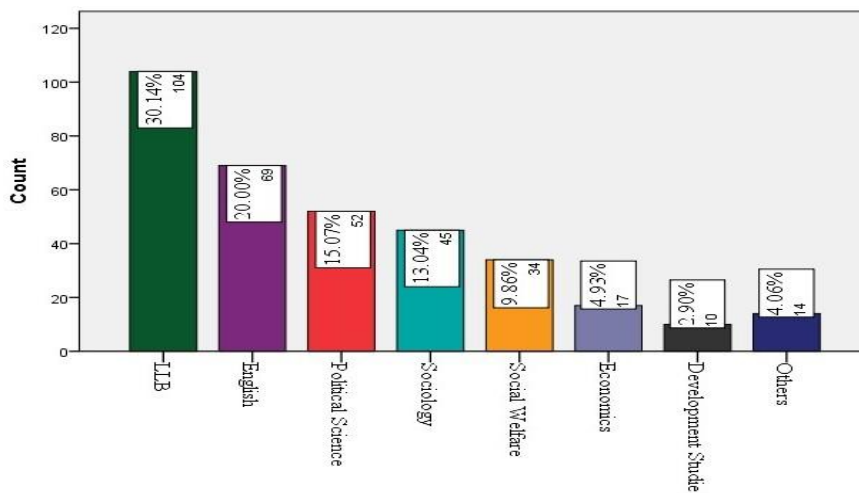
Graph-3: Distribution of Madrasa Students by their Study Interests in General Subjects

[**Source:** Adopted from (Azad 2018)]

Table-1: Magnitude of ESHIFT of Madrasa Students for Job Purposes

Magnitude of ESHIFT	n (%)
Strongly disagree=1	0 (0%)
Disagree=2	0 (0%)
Somewhat disagree=3	0 (0%)
Neither agree nor disagree=4	8 (6.7%)
Somewhat agree=5	31 (25.8%)
Agree=6	63 (52.5 %)
Strongly agree=7	18 (15%)

[**Source:** Azad 2018]

So, this is the high time to know why the epistemology of madrasa students is being shifted from theological or metaphysical to positive stage. According to Comte's Laws of Three Stages, the order of society changes over time in a progressive, positive direction. A new social order succeeds an existing social order. In Comte's law of human progress, society had moved from the stage of theological to metaphysical and then to positivistic (See Comte 1855). For Herbert Spencer, social dynamics is a progressive evolutionary process: from homogeneous to heterogeneous. As society progresses, new elements of social structure are created; unfit elements decay and drop away; the division of labour becomes more complex; and increased stratification leads greater differentiation (See Spencer 1877). To Durkheim, in industrialized/modern societies, education teaches the skills needed to perform specialized occupational roles for the emergence of division of labour in the production of goods (See Durkheim 1956). Traditionally, the relationship between child's education and social class (family origin) has been well-established (Blau and Duncan 1967; R. Breen 2004; Jencks et al. 1972; Shavit and Blossfield 1993). That is, children of higher strata are likely to enroll in academic tracks and those of lower strata in vocational tracks. Most of these studies reveal that parental vertical position affects child's horizontal choice of educational track/field of study. Hossler and Gallagher (1987) used the three types of capital (economic, human, and social) to examine college choice. In the recent years, social researchers have conducted child's education based on socio-economic status (SES) based on three kinds of capital: material capital (MC), human capital (HC) and social capital (SC) what Oakes and Rossi (2003) called together CAPSES scale that is very often used in behavioural and social sciences. Human capital refers to 'the quality of individual competences, knowledge and personality attributes possessed which enables one to perform labour to produce economic value' (Claver-Cortés et al. 2015). Carneiro, Hansen, and Heckman (2003) showed the relationship between parental education levels and child's choice of education (Cameron and Heckman 1998; Chevalier and Lanot 2002). Jaeger (2009) in his 'Equal Access but Unequal Outcomes: Cultural Capital and Educational Choice in a Meritocratic Society' found that educational choice was associated to child's academic ability and cultural capital. Lyons et al. (2003) found that parental choice and experience of school in Ireland is largely determined by their ability to compete in the education market. Coons and Sugarman (1978) told that differences in philosophic and religious values among families were associated with educational track choice. However, since the initiation of the market system, the selection of educational institution has been being determined by material capital e.g., wealth of parents (Astin 1993; McDonough 1997; Paulsen and St. John 2002) instead of one's merit what Browne (1997) calls 'the ideology of parentocracy' (Lauder 1999, 29). Some research works conducted by Akee, Copeland, Keeler, et al. (2010) examined the effects of family income from earning/investment on education and found the significant effect at the lower end of the income scale and negligible effect at the middle and higher income families (Bratti 2002; Crosnoe and Cooper. 2010). The review of Krueger and Kumar (2004) also supported the financial constraints as to be significantly associated with educational attainment. Smith and Noble (1995) in their 'Material factors in schooling' identified that money makes possible for parents to provide such things as books, healthier diets, educational toys etc. Schools charge for trips, material and equipment put pupils of wealthy parents at an advantage. Schools in affluent areas tend to be more successful and attract more pupils- more funding. Accordingly, educational choice is dependent on the income or property of family. Reay, Crozier, and Clayton (2009) in their "Material factors and higher education conclusion" found that more than a 1/4 of children at private schools received extra private tuition to help them get into the best universities. Those pupils who have less money are more likely to apply to local universities to reduce travel costs. Students from poorer backgrounds often must work part-time to fund their studies, more difficult for them to get higher-class degrees. St. John, Paulsen, and Starkey (1996) found that some students chose their colleges because of the availability of high aid or low tuition (e g. Jackson 1990; Manski and Wise 1983). Others chose their colleges, so they could cut costs and expenses, or so they could continue to work while attending college. Kingdon and Cassen (2007) found the educational choice of the poor families to be associated with the factors such as free school meals, low levels of family employment, single parent families and poor educational qualifications of parents. Callender and Jackson (2004) used survey research to examine

the effects of the introduction of tuition fees and found potential applicants from poorer backgrounds to be afraid of leaving universities with a high debt. Bowles and Gintis (1976) found that education operated in the interests of those who control the work force-capitalist class. Werfhorst and Luijkx (2010) told that educational field choices are influenced by the occupational domain of the parents (Jonsson et al. 2009). According to recent scholarship, social class action often takes place at the occupational, rather than 'big class' level (Grusky and Sørensen 1998; Grusky and Weeden 2001; Weeden and Grusky 2005). Ball and Gewritz (1995) found that within the education markets, material capital is required to cover the transport and financial costs of sending children to school. Some research works have linked the choice of study to the fungible goods of family. Barakat et al. (2011) and Barakat (2016) found 77 percent students in Bangladesh who were enrolled in madrasa due to their poverty and inability to bear the expenses of general education. Coleman (1988) shows that human and financial capitals of parents are "made available to children through their family social capital". He, while measuring social capital, used indicators such as family structure, parent-child discussions, and intergenerational closure that affects education (Coleman 1988; Furstenberg and Hughes 1995; Teachman, Paasch, and Carver 1997; Hofferth, Boisjoly, and Duncan 1999; Morgan and Sorensen 1999; Sandefur, Meier, and Campbell 2006; Bassani 2007a). Coleman (1988) believed that knowledge or information could be acquired with the use of social relations or network. Stanton-Salazaar (1997) suggested college choice to be associated with the relations between and among actors. Lin (2000) explained the study track choice in terms of obligations, expectations and trustworthiness of social structures. Lareau (1987) found the influence of parental social status on student aspirations. Additionally, low socio-economic status (SES) of parents are more likely to view lower levels of education compared to parents from higher SES. Students from low SES backgrounds often enrol in institutions that are less competitive (Bowen and Bok 1998; Hearn 1984). According to Person and Rosenbaum (2006), these friends and family members served as primary social contacts that provided information about the institution and application process, as well as provided support upon arriving at the institution. In Bangladeshi context, Barakat et al. (2011) and Barakat (2016) found more than 50 percent of madrasa students in Bangladesh who came of lower middle class while 44 percent came of middle class and very few of them were from upper class families. Most of the madrasa students were found to be poor in Barakat's study. Barakat et al. (2011) and Barakat (2016) linked madrasa education with socioeconomic determinants. Azad (2017) raised the issue of the ESHIFT of madrasa students in Bangladesh in his 'Shifting Epistemology of Madrasa Students in Bangladesh: On the Way of Positive Stage' and recommended for conducting rigorous studies on the ESHIFT of madrasa students relating to material, human and social capital. Azad (2018) in his 'Epistemological Shift of Madrasa Students in Bangladesh: A Multi-Level Analysis' explored the nature, magnitude and reasons of ESHIFT of madrasa students at secondary, higher secondary and tertiary levels. Most of the students- at tertiary level (65.51%) and higher secondary level (65%)- reported their ESHIFT as the demand of general education in the market whereas 60 percent at secondary level students reported their ESHIFT as their family decision. However, none have examined the association between the ESHIFT of madrasa students in Bangladesh and their social class or family origin. So, the study has an endeavour to examine the effects of their social class in terms of Human Capital, Social Capital and Material Capital on the ESHIFT of madrasa students in Bangladesh (See Fig-1 for Hypothesized model).
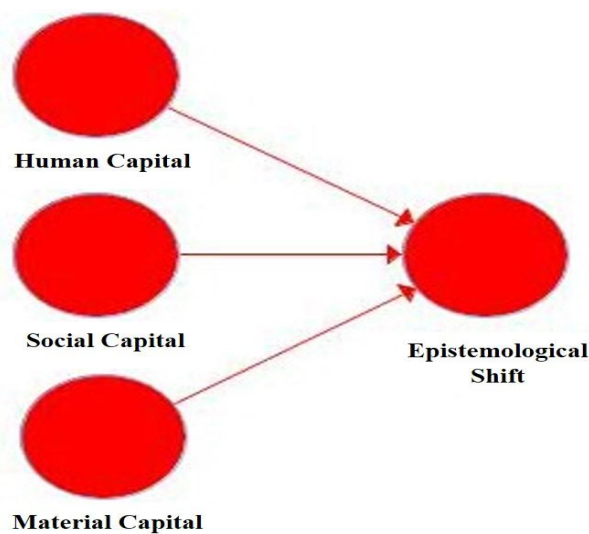

Fig-1: Hypothesized Model

In this study, ESHIFT has been defined as the evolution of madrasa students both physically and mentally from theological (traditional madrasa education) to positive stage (general education) followed by

metaphysical/transitional stage (Azad 2017, 2018). Human capital includes individual competency, knowledge (Claver-Cortés et al. 2015), physical abilities (Oakes and Rossi 2003) and academic experience/achievement (Jaeg 2014; Lyons 2003). Material capital refers to the real property (e g. home land), income from earning (e g. wages/salaries, tips and other taxable employee pay/self-employment), income from investment (e.g., interest payments, dividends and capital gains collected upon the sale of a security) and fungible goods e g. gold, company shares, bonds, other precious metals and currencies (Oakes and Rossi 2003). Social capital includes social network, trustworthiness, status and power (Oakes and Rossi 2003).

II. MATERIALS AND METHODS

Questionnaire Design

For collecting data, the study conducted a survey consisting of 4 sections. The first section covered the basic information of the study participants such as gender, age, family size, religion, and ethnicity. The other sections of the questionnaire were: (1) Social Capital (SC); (2) Material Capital (MC); (3) Human Capital (HC); and (4) Epistemological shift (SHIFT) of madrasa students in the study areas. For quantification and scorekeeping, the study used a 5 point-Likert Scale starting from strongly disagree to strongly agree (Strongly Disagree=1, Disagree=2, Neutral=3, Disagree=4, & Strongly Agree=5). Beside the questionnaire for basic information, the study also included 13 statements based on 13 indicators (see Appendix-A).

Participants

The study was conducted on 120 madrasa students who have got admitted into general subjects of both Public and Private Universities in Dhaka City. A sample size of 120 was drawn from 5 Universities of Dhaka City (University of Dhaka, Jahangirnagar University, Jagannath University, BRAC University and North South University) according to the thumb rule 10 cases per indicators (Bentler & Chou 1987, Bollen 1989), each containing 24. The participants were personally contacted using snowball sampling technique due to the unavailability of database of madrasa students enrolled in different universities of Bangladesh.

Research Instrument and Statistical Analysis

The face validity and content validity of the indicators of 4 constructs (i.e., both exogenous and endogenous latent variables) were properly measured before conducting survey. Social capital was measured with 4 contents: social network, trustworthiness, status and domination. Material capital was measured with contents: real property, income from earning to bear costs, income from investment and fungible goods. Human capital was measured with 4 contents: individual competency, physical ability, knowledge and academic achievement. Similarly, epistemological shift (ESHIFT) was measured with merely one item i.e., shift from theological to metaphysical to positive stage (madrasa education to general education). After collecting data from the field, the study used Smart PLS software to analyze both measurement model (see Wong 2013; J. F. Hair et al. 2010, 2011, 2014, 2016; Nunnally and Bernstein 1994; Urbach and Ahlemann 2010) and the structural model. For evaluating measurement model, both reliability and validity of those data were checked. In this case, for measuring internal consistency reliability, indicator loadings and composite reliability (CR) were evaluated; for measuring convergent validity, each latent variable's average variance extracted (AVE) was evaluated; and for discriminant validity, cross loadings, Fornell-Larcker criterion (the square root of AVE) and Heterotrait-Monotrait (HTMT) ratio were evaluated. Then, the structural model was evaluated through collinearity assessment, standardized path coefficients, T-statistics/P values, coefficient of determination (R^2), effect size of exogenous constructs on endogenous constructs (f^2), predictive power/relevance of endogenous construct (Q^2) and predictive contribution of exogenous to endogenous constructs (q^2).

Ethical Consideration

Voluntary sharing of the respondents as well as confidentiality of their information was strictly maintained. While interviewing the respondents, force and coercion had been avoided. Their privacy had also been safeguarded.

III. ANALYSIS AND RESULTS

Demographic Characteristics of the study participants

Table-2 shows that 55.83 percent of the respondents were above 20 years and the remaining were up to 20 years. In terms of gender, 88.17 percent were male. As reported by nearly 75 percent respondents, their family members exceeded 4. With regards to ethnicity and religion, 100 percent respondents were found Bengali and Muslim.

Table-2 Socio-demographic and economic characteristics of the respondents

Demographics		N	%
Age	Upto 20 Years	53	44.17 %
	Above 20 Years	67	55.83 %
Gender	Female	13	11.83 %
	Male	107	88.17 %
Family size	Upto 4	31	25.83 %
	Above 4	89	74.17 %
Ethnicity	Bengali	120	100.0 %
	Others	0	0.0 %
Religion	Muslim	120	100.0 %
	Others	0	0.0 %

Measurement Model Results

After confirmatory factor analyses (**Fig-2**), the PLS-SEM has been redeveloped (**Fig-3**) and accordingly the reliability and validity of data have been measured (See the Appendix A & Appendix B for the constructs and items of the model).
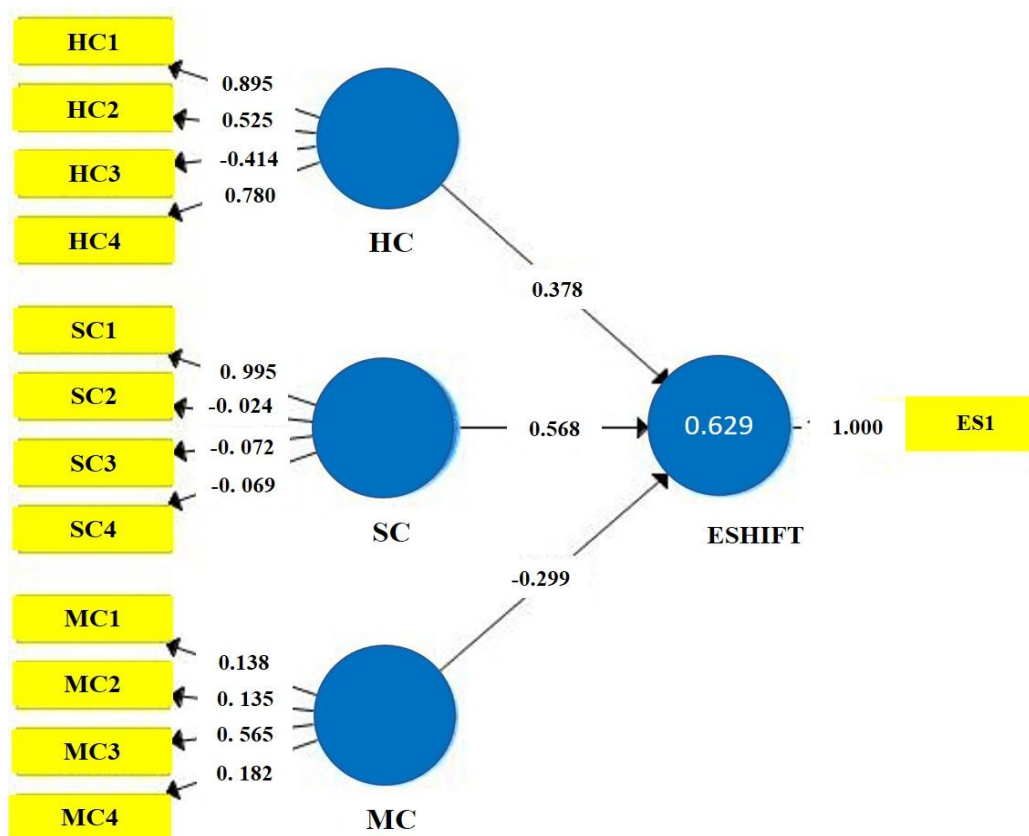

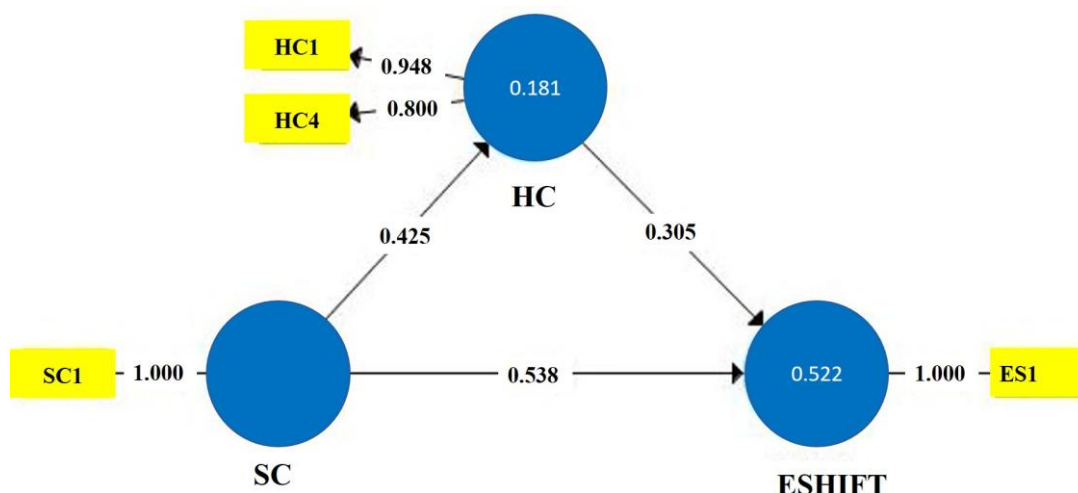**Fig-2:** Confirmatory Factor Analysis

Fig-3: Final Structural Model

First, the internal consistency is evaluated through the values of indicator reliability and composite reliability. From Table-3, we find that all the values of indicator reliability and composite reliability (CR) are much higher than the threshold value of 0.70 (Wong 2013; J. F. Hair et al. 2010, 2011, 2014, 2016; Nunnally and Bernstein 1994; Urbach and Ahlemann 2010). So, the internal consistency of data is confirmed. Secondly, to confirm convergent validity, average variance extracted (AVE) of each latent variable is evaluated (Table-3) where we found that all the AVE values are much greater than the acceptable threshold of 0.5 (Wong 2013; J. F. Hair et al. 2010, 2011, 2014, 2016; Nunnally and Bernstein 1994; Urbach and Ahlemann 2010; Bagozzi and Yi, 1988). So, convergent validity is also confirmed. Thirdly, to check discriminant validity, the analyses of Fornell-Larcker criterion and HTMT ratios have been done. Table-4 shows that the square root of AVE of each latent variable is greater than other values in the corresponding columns and rows (Fornell and Larcker, 1981). From Table-5, we find that all the HTMT ratios are much lesser than the threshold value of 0.85 (Clark and Watson 1995; Kline 2011) or 0.90 (Gold, Malhotra, and Segars 2001; Teo et al. 2008). So, considering Fornell-Larcker criterion and HTMT ratio, the discriminant validity of data is confirmed.

Table-3: Result Summary of Internal Consistency

Construct	Indicator Loadings	Indicator Reliability (Loadings2)	Composite Reliability (CR)	Average Variance Extracted (AVE)
HC	SSC1=0.948	0.898	0.869	0.770
	SSC4=0.800	0.640		
SC	SSC5= 1.000	1.000	1.000	1.000
ESHIFT	1.000	1.000	1.000	1.000

Table-4: Fornell-Larcker Criterion Analysis					**Table-5** Heterotrait-Monotrait (HTMT) Ratio			

	ESHIFT	HC	SC
ESHIFT	1.000		
HC	0.534	0.877	
SC	0.668	0.425	1.000

	ESHIFT	HC	SC
ESHIFT			
HC	0.571		
SC	0.668	0.474	

Structural Model Results

Since the study is partial least square based SEM and the purpose is to develop a theory, Smart PLS software has been used to evaluate structural model. In this regard, the study considers collinearity assessment, path coefficients, T-statistics and P values, coefficients of determination (R^2), effect size of exogenous constructs on endogenous constructs (f^2), predictive power/relevance of endogenous construct (Q^2) and predictive contribution of exogenous to endogenous constructs (q^2). First, to assess collinearity, the variance inflation factor (VIF) values are checked where no VIF values are found to be greater than 3. So, the latent variables have no problem of multi-collinearity (J. F. Hair et al. 2010, 2011, 2014, 2016; Kock and Lynn 2012; Diamantopoulos and Siguaw 2006) (Table-6). Secondly, to check the path coefficient effect, we find from **fig-3** that SC has the strongest effect on ESHIFT (0.538) of madrasa students in Bangladesh mediated by HC (0.305).

So, the hypothesized path relationships between ESHIFT and SC and HC are statistically significant since the standardized path coefficients are greater than the threshold value of 0.1 (Wong 2013). Thirdly, to check structural path significance, bootstrap method has been selected by taking the large number of subsamples of 5000. Then, after calculating T-statistics and P values using a two-tailed t-test with a significance level of 5%, we find that all the linkages are statistically significant since all the T-statistics are greater than 1.96 and the P values are smaller than 0.05 (Table-7). Fourthly, to explain the target endogenous variable variance, coefficient of determination, R^2, is evaluated where the R^2 of 0.522 for the ESHIFT endogenous latent variable means that the SC latent variable, mediated through HC, moderately explain 52.2 percent of the variance in ESHIFT (see Wynne W. Chin 1998, 2010) **(Fig-3)**. Fifthly, the table-8 shows that the effects (f^2) of HC (0.275), MC (0.357) and SES (0.272) on the 'ESHIFT' (endogenous latent variable) are moderate. On the other hand, MC has the large effect on SES since the f^2 value is 0.467 while the effects of SC (0.283) and HC (0.126) on the same are respectively moderate and small (Cohen 1998). Sixthly, in addition to evaluate the magnitude of R^2 values as criterion of predictive accuracy, the study has also examined Stone-Geisser's Q^2 value (Geisser 1975; Stone 1974). That is, to measure the model's predictive power or predictive relevance of endogenous construct 'ESHIFT', the value of Q^2 has been calculated using Blindfolding method. From the table-9, we find that ESHIFT as an endogenous construct, has a predictive power and relevance since the Q^2 value is 0.508 that is greater than the threshold value of 0 (Geisser 1975; Stone 1974). Similarly, SC mediated through HC is found to have predictive power and relevance (Q^2 of 0.118). To check the specific predictive contribution of exogenous construct on endogenous construct, the study has evaluated the effect size of HC on the ESHIFT in terms of relative measure of predictive power or relevance (q^2 of 0.792). This value of q^2 indicates the large contribution of SC mediated through HC to the predictive power and relevance of ESHIFT.

Table-6: Collinearity (Inner VIF)

	ESHIFT	HC	SC
ESHIFT			
HC	1.221		
SC	1.221	1.000	

Table-8: Effect Size (f^2)

	ESHIFT	HC	SC
ESHIFT			
HC	0.160		
SC	0.497	0.221	

Table-7: Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
HC -> ESHIFT	0.305	0.310	0.060	5.057	0.000
SC ->ESHIFT	0.538	0.536	0.078	6.915	0.000
SC -> HC	0.425	0.428	0.080	5.335	0.000

Table-9: Q^2 Predictive Power or Relevance for Endogenous Construct (ESHIFT)

	SSO	SSE	Q² (=1-SSE/SSO)	q² for HC on ESHIFT
ESHIFT	120.000	59.038	0.508	(0.508- 0.118)/1-0.508
HC	240.000	211.620	0.118	= 0.39/0.492
SC	120.000	120.000		= 0.792

IV. DISCUSSION AND CONCLUSION

Discussion

This is the first study to explain and predict the ESHIFT of madrasa students in Bangladesh based on social class mobility (HC, SC & MC). The study finds that the hypothesized relationships between ESHIFT and SC (with T-statistics of 6.915 and P value of 0.000) and HC (with T-statistics of 5.057 and P value of 0.000) are statistically significant since the T-statistics are found to be greater than 1.96 and P values are smaller than 0.05 (Table-7). The explanatory power of the model (R^2 = 0.522) is 52.2 percent which is moderate to explain and predict the effects of the exogenous constructs on the ESHIFT of madrasa students in Bangladesh. However, the relative measure (q^2 value of 0.792) indicates the large contribution of SC mediated through HC to the predictive power and relevance of ESHIFT. The model has, by and large, the moderate predictive power and relevance that is evident from the Q^2 value (0.508) and R^2 value (0.522) of ESHIFT.

V. CONCLUSION AND RECOMMENDATIONS

The study explains and predicts the 'ESHIFT' of madrasa students in Bangladesh based on family origin or social class mobility in terms of SC and HC. After PLS-SEM analysis of empirical data, the study finds significant effects of SC and HC on the ESHIFT of madrasa students in Bangladesh. Overall, the model has predictive power and relevance as well as moderate explanatory power. Notably, the hypothesized model needs to be modified where the impact of MC on ESHIFT has been rejected while the influences of HC1, HC4 under human capital (HC) and of SC1 under social capital (SC) were found to be significant. However, the study as an underexplained phenomenon has some recommendations for future researchers to overcome the limitations of the study and to increase the explanatory power of the model. First, the future researchers should conduct rigorous research works along lines with occupational mobility considering the market demands of the graduates. Secondly, researchers should conduct further study using probability sampling technique to make the findings more representative. Finally, sociologists of Bangladesh should contribute to the pitch of Sociology of Education by creating a mega research project of the ESHIFT of madrasa students in Bangladesh.

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Appendix A: Questionnaire on the Capital Factors of Epistemological Shift of Madrasa Students in Bangladesh

SL	HUMAN CAPITAL FACTORS
1	**HC1**: INDIVIDUAL COMPETENCY
2	**HC2**: PHYSICAL ABILITY
3	**HC3**: KNOWLEDGE
4	**HC4**: ACADEMIC ACHIEVEMENT
	MATERIAL CAPITAL FACTORS
5	**MC1**: REAL PROPERTY
6	**MC2**: INCOME FROM EARNING TO BEAR COSTS
7	**MC3**: INCOME FROM INVESTMENT
8	**MC4**: FUNGIBLE GOODS
	SOCIAL CAPITAL FACTORS
9	**SC1**: SOCIAL NETWORK
10	**SC2**: TRUSTWORTHINESS
11	**SC3**: STATUS
12	**SC4**: DOMINATION
	ITEM OF EPISTEMOLOGICAL SHIFT
13	**ES1:** Epistemological Shift

Appendix B: Questionnaire on the Capital Factors of Epistemological Shift of Madrasa Students in Bangladesh

SL	Factors/Items of the constructs	5 Points-Likert scale				
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	HC1: I am individually competent to graduate from general subjects. [INDIVIDAL COMPETENCY]					
2	HC2: I am physically well to ensure any work/study. [PHYSICAL ABILITY]					
3	HC3: My previous knowledge obtained from both academia and others makes me confident to graduate from any subject. [KNOWLEDGE]					
4	HC4: My previous academic achievement makes me confident to graduate from any subject. [ACADEMIC ACHIEVEMENT]					
5	MC1: My household has sufficient home land. [REAL PROPERTY]					
6	MC2: My household has sufficient income from earning e.g., wages/salaries, tips, and other taxable employee pay, net earnings from self-employment to bear my educational costs.					

	[INCOME FROM EARNING TO BEAR COSTS]					
7	MC3: My household has income from investment e.g., interest payments, dividends, capital gains collected upon the sale of a security or other assets, and any other profit made through an investment vehicle of any kind. [INCOME FROM INVESTMENT]					
8	MC4: My household has other fungible goods like gold/company shares/bonds/other precious metals/currencies etc. [FUNGIBLE GOODS]					
9	SC1: I have a good network with my friends/family/relatives/career planning counsellors/reference groups/public opinion leaders etc. [SOCIAL NETWORK]					
10	SC2: I have a trust on the members of my social network. [TRUSTWORTHINESS]					
11	SC3: My parent owns a high status in my society. [STATUS]					
12	SC4: My family has domination in my society. [DOMINATION]					
13	ES1: I prefer General Education (GED)					