Macrothink Institute™

International Journal of Social Science Research
ISSN 2327-5510
2025, Vol. 13, No. 1

The Effects of Cognitive Bias Awareness, Feedback, Confidence, Academic Expectations, Study Habits, and Self-Perceived Knowledge on Decision-Making Behaviors of Students

Sutap Kumar Ghosh (Corresponding author)

Associate Professor

Department of Finance and Banking

Islamic University, Kushtia-7003, Bangladesh

E-mail: ansutap@gmail.com

Sazzad Hossain Khan

Lecturer

Finance, Banking & Insurance

Anandapur Degree College, adarsa sadar, Cumilla, Bangladesh

E-mail: shuvo.khan.iubd@gmail.com

Partho Sarathi Laskar

Associate Professor

Department of Economics

Islamic University, Kushtia-7003, Bangladesh

E-mail: parthoiu1982@gmail.com

Received: December 5, 2024 Accepted: January 14, 2025 Published: February 6, 2025

doi:10.5296/ijssr.v13i1.22515 URL: https://doi.org/10.5296/ijssr.v13i1.22515

Abstract

This study investigates the effects of cognitive bias awareness, feedback and adaptation, career confidence, academic expectations, study habits, and self-perceived knowledge on the decision-making and risk-taking behaviors of students at a higher educational level. For the study's purposes, the data were collected through a structured questionnaire from a sample of 435 respondents from the tertiary students of Bangladesh, who were chosen through the stratified random sample technique to produce a diverse representation. Then, demographic analyses were conducted, and a multiple regression approach was used to estimate the significance of the predictors. We found significant impacts on decision-making behavior from cognitive bias awareness, feedback and adaptation, future career confidence, study habits and effort, and self-perceived knowledge. The results indicate a need for educational interventions in the area of self-assessment, study skills, and cognitive bias awareness. This research is significant in that it provides information for policymakers, educators, and institutions that can be used to develop programs that raise their students' preparedness and their orientation towards success.

Keywords: Cognitive bias, Self-perceived knowledge, Career Confidence, Study Habits, Academic Expectations, Decision-making and risk-taking

1. Introduction

Today, higher education, including secondary education, has a significant status in modern education by influencing the teaching technology and by the appointed work of the mental, social and physical health of students (Oleksandra & Valentyna, 2023). Higher education procedures are also influenced by stakeholders and past actions. Social justice and continuous improvement are promoted among students in higher education (Sánchez & Pérez, 2023), and it is a means of enhancing the growth of an economy (Chakrabarty & Singh, 2023). The COVID-19 epidemic has had a profound impact on higher education, forcing a reassessment of enrollment, retention and learners' rights. Overall, higher learning has helped people become better people, better society, and ready people for a changeable future (Wrońska-Bukalska, 2016).

Student decision-making and risk-taking behaviors are important factors in understanding the landscape of higher education and therefore it is important to figure out what could facilitate academic success and personal growth. Human behavior has been long described in terms of systematic deviations from rationality of judgment and decision-making, known as cognitive biases (Maldonato & Dell'Orco, 2011). In the context of higher education, these biases deeply affect the academic and future choices of students and too often decide on suboptimal courses and increased risk-taking. In addition, feedback mechanisms (e.g., when students find out about their performance and progress) help students' decision-making and risk-taking behavior (Acciarini et al., 2020).

Similarly to cognitive biases and feedback mechanisms, students' confidence in their future careers has the capability to affect students' decision-making and risk-taking behavior. People may be who they are because of their career confidence, and the higher the career confidence, the higher the amount of risk that is taken or the bolder decisions that are made, while those who have less career confidence may be more cautious and less likely to take risks (Burns et al., 2013).

In addition, students' study habits and self-perceived knowledge also influence them in decision-making and risk-taking behaviors. So it can genuinely facilitate more alert and focused study habits like active learning, spaced repetition, and self-reflection, all of which can help students more deeply understand course material and deepen confidence that leads to better informed decision making.

Hence, the main purpose of this research paper will be to investigate how cognitive biases, feedback mechanisms, future career confidence, study habits and self-perceived knowledge affect student decision-making and risk-taking behaviors. Specifically, it focuses on the relationship between the above factors and rational decision-making, and to the extent that these factors are taken one by one and together, their individual and combined impact, and some ideas on promoting students' choice. Also, it highlights the demographic characteristics of the respondents.

The study makes an academic contribution by combining the psychological and academic factors to model behavioral decisions and providing practical implications on the basis of what

educators and policymakers can do to design interventions that will promote critical thinking, self-awareness and effective study habits. The study also has fitting its relevance to society since it makes students to become rational decision makers as they transition up to academic performance and general lifestyle choices. However, the study is limited to students from tertiary education from specific academic settings, and data collection is restricted to certain demographics and to self-reported measures where there are limited data to be gathered. Familiar or societal pressures plus a vigorous external impact are neglected to make the study tractable and manageable, but to form a base for further research.

2. Review of Literature

Cognitive biases had a significant impact on the students' decision-making and risk-taking behaviors. According to research, gifted secondary students' cognitive biases are negatively correlated with their decision-making skills (Al-Dhahri et al., 2020). These biases include above average effect, insensitivity to prior results and insufficient adjustment on the part of university students – leaving them unable to make rational decisions. Curricula for entrepreneurship education are susceptible to other specific biases like the prior gain effect and degree of risk, suggesting that these curricula can tackle bounded rationality in high-risk settings (Zichella & Reichstein, 2022). Expected outcomes, as well as risk percepts, influence improvised decision-making via the cognitive biases. The framing effect influences expected outcomes positively, but overconfidence and representativeness negatively influence risk perception. Certain biases are shown to mediate a relationship with risk behavior in the context of improvised decision-making (Xue et al., 2015). These confirm the importance of counteracting cognitive biases in educational settings for better ability of students to make decisions.

Research on how the relationship between students' self-assessment, their decision-making, and their risk-taking behaviors is complicated. Mixed results were found by other studies but self-efficacy proved to be a major factor in risk-taking decisions (Wyatt, 1990). It was significantly negatively associated with risk perception and risk-taking behavior (Dao et al., 2018), especially risk-taking behavior in construction workers. In fact, another study did not even find a link between risk-taking and self-confidence among university students (Bayat et al., 2019). Rocket scientists are specifically hypothesizing that this psychological characteristic, namely curiosity, optimism, and courage, can impact decision-making in different conditions of risk self-orientation (Liang et al., 2022). These findings yield that the relationship between self-assessment and risk-taking may be multifaceted and susceptible to being affected by varying self-efficacy, risk perception, and some psychological characteristics. We still have not fully understood these complex interactions across a number of population and contextual settings; more research is required.

Differences in risk-taking and decision-making with students have been found to have a complex relationship with academic expectations. Despite their deprived background and lower school bonding, lower academic and social risk, students with higher educational aspirations exceeding and students with lower educational aspirations below expectancy have generally performed poorly academically (Boxer et al., 2011). Business students tend to take

risks and it may impact their innovative decision-making and business strategy adaptation (Cekuls & Cekule, 2022). Research has also shown that students with different risk statuses and genders make different career decisions and occupational preferences in early adolescence (Rojewski & Hill, 1998). In particular, classical conceptions of rational decision making based on future labor market prospects (Andersson, 2016) are also troubled by inherent uncertainty in the education choice. Focusing on multiple dimensions of academic expectations and the relation they foster between students' risk-taking and choice-making habits and with the need for target support and direction in scholastic settings, these results underscore the need for targeted support and direction in academic settings.

The relationship between study habits, decision-making and risk-taking behaviors has been researched and found to be complex. As reported by Al Ubaidi and Tukan (2020), positive change in decision-making happens through effective habits, especially in secondary school students' critical educational stages. Cekuls and Cekule (2022) discover that in entrepreneurial decision-making, risk is correlated, and that when business students' are presented with risk-taking, there is a large correlation between risk-taking and innovative decision-making that could prove to have a great impact on future business strategy. Additionally, Babakr and Fatahi (2023) also demonstrate that the decision-making conducted by college students regarding risks is influenced by personality traits, such as agreeableness, neuroticism and conscientiousness and men are more risk-seeking. Dornbusch et al. (1990) prove that, in turn, results in academics are a function of the dynamics of the family decision-making and so, behavior and academic performance of students are positively related to student effort and better grades – supporting the idea that positive environments can change the behavior and the achievements of students.

Studies have been carried out over the past few years to understand how self-confidence relates to a student's risk-taking behavior and other relating factors amongst students at the university. Nevertheless, other studies found a correlation between taking risks and self-confidence, while one study could not establish a clear relationship between them (Bayat et al. 2019). Karahan and Patir (2021) found that students with more levels of innovativeness also had more high self-confidence and risk-taking methods. As reported by Abdwllah and Hussein (2023), we also established that self-confidence positively correlates with risk-taking behavior. Moreover, these factors have been examined by Villanueva and Martins (2022) in an entrepreneurial context, as they are related to entrepreneurial intention: overconfidence, risk taking, risk capacity. They also found that risk evaluation was associated with overconfidence, fear of failure and risk capacity. Gender and economic status did not affect risk-taking behavior or self-confidence (Abdwllah & Hussein, 2023). These results provide insight into how students act and how they make decisions in both an academic and entrepreneurial context.

Several factors affect not only career decision-making and risk-taking, but also students' work status. Prestige is one of the factors that predicts the levels of career decision-making and self-efficacy, which in turn is, as a result, related to preferring seeking high risk options (Ye, 2014). Overconfidence, fear of failure and risk capacity influence the risk evaluation and

entrepreneurial intention (EI) of undergraduate students (Villanueva & Martins, 2022). In business (Cekuls & Cekule, 2022), entrepreneurial development desire is related with having willingness to take risks in business learning among students. Perceived work opportunities, professional self-efficacy and self-conception clarity are strong predictors of senior college students' career decision-making (Teixeira & Gomes, 2005). Finally, these results point to the importance of practical educational studies at the university level aimed at reinforcing the self and self-efficacy of the students and the process of their mastery of strategies of successful transition to the labor field and to the setting of professional goals (Teixeira & Gomes, 2005).

3. Research Gap

Most of the existing research is related to Western or developed countries (Al-Dhahri et al. 2020; Cekuls & Cekule 2022; Teixeira & Gomes 2005). Very little work has been done on how these factors interact in a developing economy such as Bangladesh, where socio-economic, cultural and educational structures are different. Despite demonstrated global effects of the framing effect, overconfidence, and representativeness bias on decision-making, their nuances in Bangladeshi student contexts (stoked by particular societal and educational pressures) remain underexplored. Feedback as a curriculum element has been treasured to help shape students' adaptability and decision-making. Ultimately, though, their feedback mechanisms work differently in Bangladeshi academic environments, where traditional teaching is prevalent alongside minimal student-teacher interaction. Career confidence and its relation with risk-taking behaviors have been studied globally, however, the role of economic instability and the limited job market opportunity for the Bangladeshi student's career confidence and related decision-making are yet to be examined in a detailed manner. Research has found evidence that study habits and academic expectations influence decision-making (Boxer et al., 2011; Al Ubaidi & Tukan, 2020). However, in Bangladesh, with its large student community facing resource scarcities and social pressures of conformity, there is little understanding the effect that these factors have on decision-making. Different studies also link self-perceived knowledge to decision-making (Wyatt, 1990; Dao et al., 2018). However, knowledge of the Bangladeshi students' perception of their knowledge and how this perspective influences their willingness to take risks in academic and career decisions has not been examined yet.

> The study of students' decision-making in higher education in the Bangladeshi context has been very incomplete thus far, particularly in its understanding of the interplay between cognitive biases, feedback mechanisms, career confidence, study habits, academic expectations and self-perceived knowledge. Therefore, the lack of evidence of these relationships, and their implications to educational policy and student support systems also underscores the need for targeted research into these relationships.

4. Research Methodology

This study employed a descriptive approach to research to examine how participants perceive their knowledge, study habits, decision-making, risk-taking behavior, feedback and adaptation, confidence in future job opportunities, and awareness of cognitive biases. To ensure equitable coverage from many demographic categories, including gender, academic discipline, age, and

the degree of education (undergraduate or postgraduate), a stratified random sample technique has been used. However, an aggregate of 435 students were selected to strengthen the efficacy of this study, following Fisher et al.'s (1998) formula. To obtain pupils' views on each of the important topics, a structured questionnaire was designed. There were seven sections to the questionnaire: Study Habits, Decision Making and Risk Tendency, Perceptions of Knowledge, Feedback and Adaptability, Academic Performance Expectations, Confidence in Future Career Prospects and Awareness of Cognitive Biases. For each of the sections, there were four questions for assessing the students' perception on a scale such as 1 (strongly disagree) to 5 (very strongly agree). A closer understanding of their views was achieved through semi-structured interviews of the range of students. Each interview took about thirty to thirty-five minutes. Designed with tested techniques and from the literature of educational psychology and behavioral science, the questionnaire was developed. A pilot test was conducted with 67 students to ensure transparency and reliability. Modifications were made based on the pilot feedback. In our research, Likert scale data were summed to create composite variables, which are treated as continuous variables. With this treatment, we conducted a multiple regression analysis and tested for normality.

The results of pilot study are given below:

Table 1. Reliability Test Results from Pilot Study

Measure	Value
Cronbach's Alpha	0.81
Standardized Alpha	0.76
G6(smc)	0.91
Average Inter-item Correlation (r)	0.086
Signal-to-Noise Ratio (S/N)	3.2
Mean	3.1
Standard Deviation	0.38

Note. Confidence Intervals (95%): Lower Bound: 0.73; Upper Bound: 0.8.

Source: Research own analysis using Rstudio.

A reliability of 0.81 was demonstrated by Cronbach's alpha value and 0.91 by G6(smc), and that indicates high reliability. Also, the signal to noise ratio of 3.2 for the scale indicates that the scale was reliable. The confidence intervals at the 95% level also verified the reliability of the measurement — its lower bound exceeds 0.7, which was considered a threshold for acceptable reliability. Construct validity and content validity were ascertained through consultation with academic experts in educational psychology and decision-making.

4.1 Selection of Variables

- **Dependent Variable (DV):** The dependent variable is students' academic decision-making and risk-taking tendencies (denoted as DR).
- **Independent Variables (IVs):**

- **KC:** Knowledge of Cognitive Biases.
- **FA:** Feedback and Adaptation.
- **FC:** Confidence in Future Career Prospects.
- **SH:** Study Habits and Effort.
- **AP:** Academic Performance Expectations.
- **SP:** Self-perceived Knowledge.

4.2 Model Specification

The model used for analysis is a multiple regression model, specified as:

$$DR=\beta0+\beta1\cdot KC+\beta2\cdot FA+\beta3\cdot FC+\beta4\cdot SH+\beta5\cdot AP+\beta6\cdot SP+\epsilon \quad (1)$$

Where:

- DR is the dependent variable (academic decision-making and risk-taking tendencies),
- KC,FA,FC,SH,AP,SP are the independent variables,
- β0 is the intercept,
- ϵ is the error term.

4.3 Statistical Analysis

The regression was done using the RStudio package. In interpreting the results, we used the estimated coefficients, standard errors, t-values, p-values and significance levels. The significance codes used were 0, 0.001, 0.01, 0.05 and 1. Model explanatory power was also assessed with multiple R-squared and adjusted R-squared values.

4.4 Diagnostic Analysis

Several diagnostic checks were performed to validate the regression assumptions:

- Linearity: The linearity of the relationship was checked using residuals vs. fitted plot. The residuals were almost randomly distributed, indicating the linear assumption holds.
- Normality of Residuals: The normality of residuals was assessed with a Q-Q plot. Backwards runs did not show significant deviation at the extremes, implying that approximately normality has been met, and the residuals almost followed a line virtually along the diagonal.
- Homoscedasticity: To put only one more nail in, we evaluated homoscedasticity with a scale-location plot. There seemed to be no issues with heteroscedasticity as the residuals plotted fairly constantly across the spread.
- Independence of Errors: Independence of errors was verified by the residuals vs. leverage plot and the Durbin-Watson test.

4.5 Additional Tests

- Shapiro-Wilk Test for Normality: To formally check its normality, this test was used.
- Durbin-Watson Test for Independence: Autocorrelation in residuals was checked for using the Durbin-Watson statistic.
- Variance Inflation Factor (VIF): The predictor multicollinearity was checked by assessing VIF values of each predictor.

4.6 Ethical Considerations

- **Informed Consent:** Every participant has been informed of the aim of the study and their voluntary participation. For participation in surveys and interviews, consent has been acquired.
- **Confidentiality:** To maintain privacy, participants' answers have been anonymized. Just the study team will have access to securely kept data.

5. Analysis and Discussion

Figure 1 shows the demographic Analysis of the respondents.

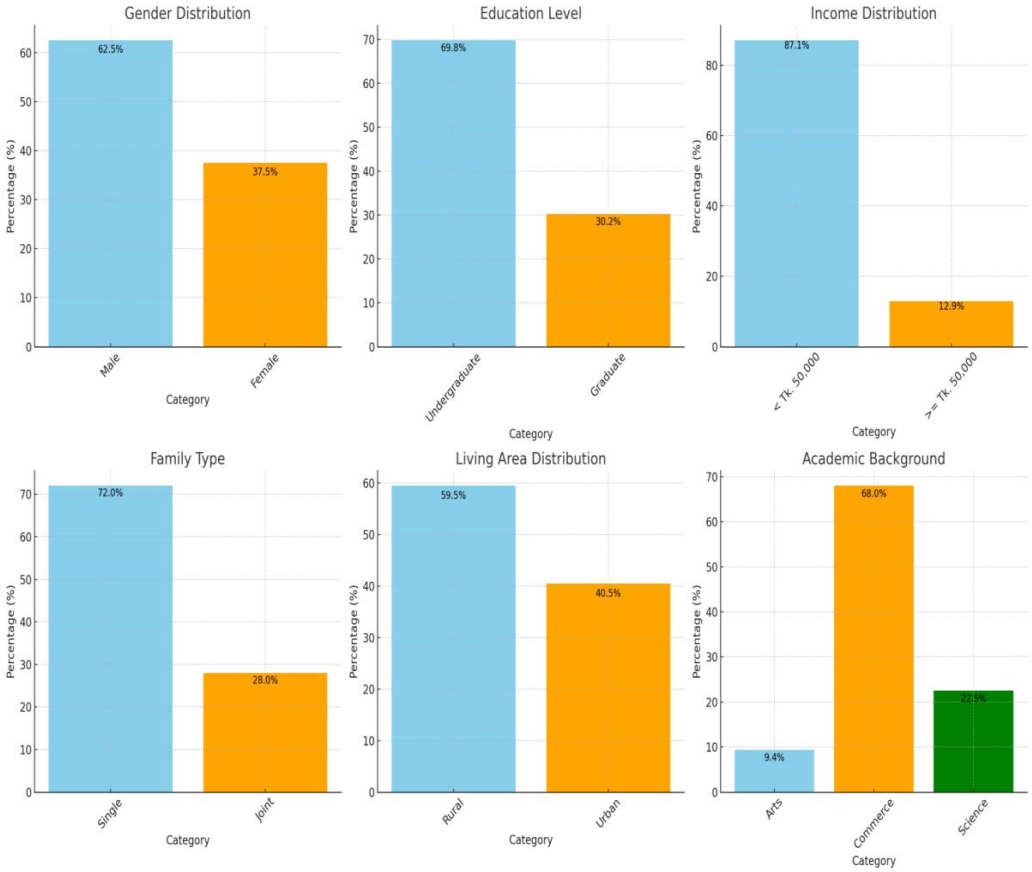

Figure 1. the demographic Analysis of the respondents

The demographic data for the sample population are presented in Figure 1, along with gender, education, income, family type, living environment and educational background. The sample is 62.5% males and 37.5% females, of which 69.8% are undergraduates and 30.2% are graduates. Most of the population earns less than Tk. 50 thousand, 72.0% from a single family and 28.0% from a joint family. Nearly 59.5% of the population lives in rural areas and only 40.5% in urban areas. Moreover, most of the students are from commerce backgrounds. The above data presents the socioeconomic and demographic characteristics of the sample group in a comprehensive way.

Table 2. The results of multiple regression

Predictor	Estimate	Std. Error	t value	p-value	Significance
Intercept	0.43890	0.27147	1.617	0.106823	
KC	0.11929	0.05241	2.276	0.023443	*
FA	0.19271	0.05618	3.430	0.000674	***
FC	0.17055	0.04396	3.879	0.000125	***
SH	0.16202	0.03347	4.841	1.94e-06	***
AP	-0.02119	0.04800	-0.441	0.659166	
Sp	0.25974	0.05507	4.716	3.46e-06	***

Note. *Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1; Residual standard error: 0.4725 on 354 degrees of freedom; Multiple R-squared: 0.3534, Adjusted R-squared: 0.3424; F-statistic: 32.24 on 6 and 354 DF, p-value: < 2.2e-16.*

Source: Research own analysis using Rstudio.

The regression model is specified as follows: The basic formula is DR = β0 + β1.KC + β2.FA + β3.FC + β4.SH + β5.AP + β6.SP + ϵ. When all independent variables are zero, the expected value of DR was 0.4389. Although the p-value (p = 0.1068) shows that this was not significant at the 5% level statistically. However, p < 2.2e−16 indicated that the model as a whole was statistically significant for a value of F = 32.24. Since the p-value was really small, the model is extremely significant.

So, the 1-unit increases in:

KC: It has improved DR on average by 0.11929 units.
FA: At an average increase of 0.19271 units in DR.
FC: On average it increases DR by 0.17055 units.
SH: It increases DR on average by 0.16202 units.
SP: On average, increases DR by 0.25974 units.
AP: AP is not a statistically significant predictor for DR, p = 0.6592.

The percent of DR variation explained by the model is 35.34%; this is given by multiple R-squared of 0.35340. The model has moderate explanatory power and adjusted R-squared of 0.3424.

Diagnostic analysis of the model

Figure 2 shows the residuals vs. fitted plot, Q-Q plot, scale-location plot and residuals vs. leverage.

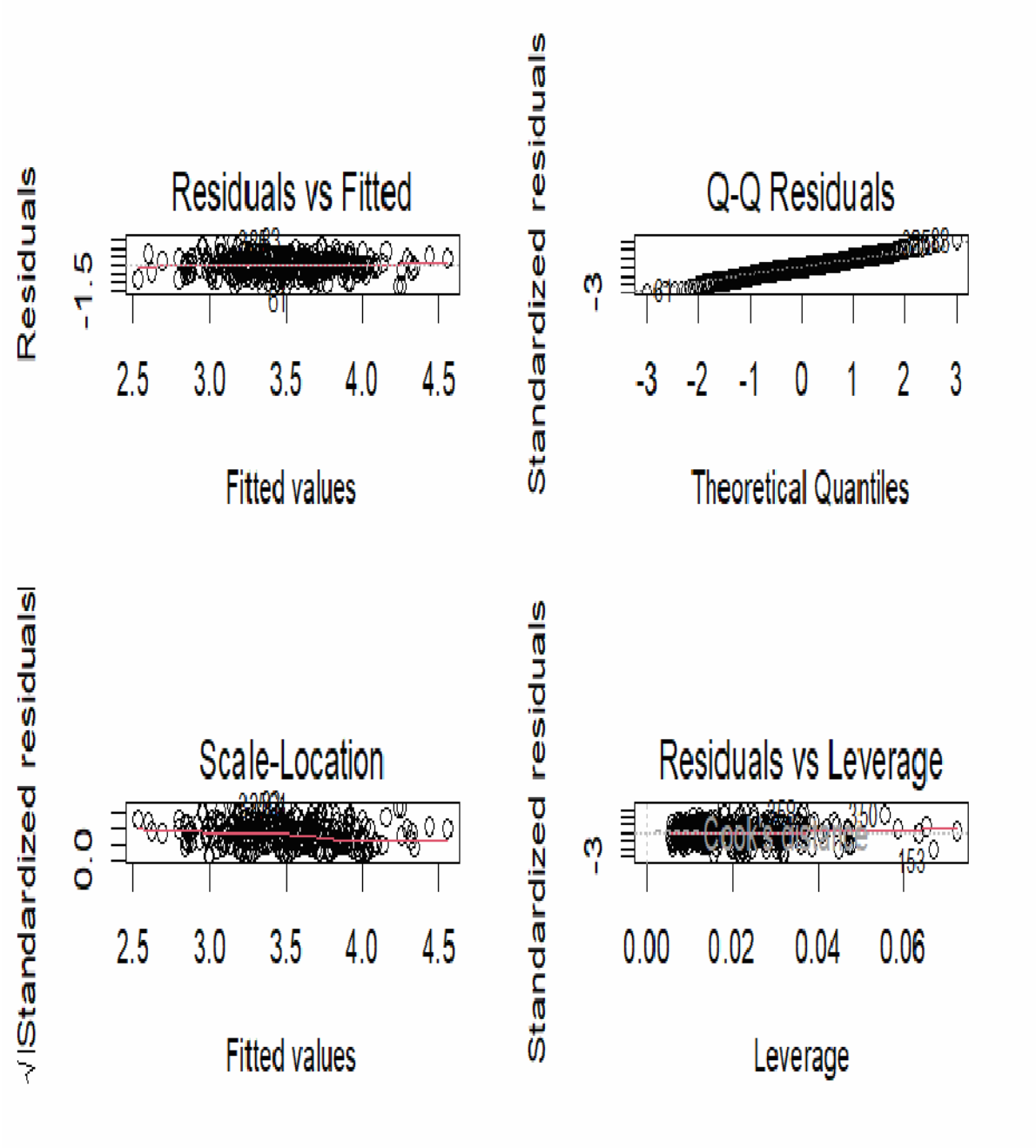

Figure 2. the residuals vs. fitted plot, Q-Q plot, scale-location plot and residuals vs. leverage.

Source: Research own analysis using Rstudio.

1) Linearity (Checked via residuals vs. fitted)

The residuals in the above plot don't seem to follow any pattern, i.e., they are randomly distributed with no curve or systematic trend (e.g., without a trend, not some pattern). Hence, it suggests that the linearity assumption is holding true.

2) **Normality of Residuals (Checked via Q-Q plot)**

The Q-Q plot shows a precise follow of a diagonal line, with only moderate deviations in the tails (at the extremes). As you can see, it shows that the assumption about normality is roughly satisfied, and you can further confirm it with a formal test like a Shapiro-Wilk test.

3) Homoscedasticity (Checked via scale-location plot)

The spread of points seems to be quite constant, and the red line is fairly flat. The funnels are not of the obvious type (ascending or descending variance). This implies that the homoscedasticity assumption is held.

4) Independence of Errors (Checked via residuals vs. leverage)

Some of those are labeled (because they have some influence), but none appear to be outside the dashed Cook's distance lines. Moreover, the model does not suffer from severe outliers or influential points or the violation of errors independence.

Based on these diagnostic plots, the regression model appears to satisfy all four key assumptions:

1) Linearity ✓

2) Minor deviations; probably OK at tails, normality ✓

3) Homoscedasticity ✓

4) Independence of errors ✓

For more rigorous validation of the regression model results, Shapiro-Wilk for normality and Durbin-Watson for independence have been conducted. The results are given below:

Table 3.The results of Shapiro-Wilk test for normality

Test	Statistic (W)	p-value	Interpretation
Shapiro-Wilk Normality Test	0.99368	0.137	Residuals are approximately normal.

Source: Research own analysis using Rstudio.

The p-value (0.137) is greater than the commonly used significance level (e.g., 0.05), indicating we fail to reject the null hypothesis. The null hypothesis of the Shapiro-Wilk test is that the data follows a normal distribution. Thus, the residuals of the model can be considered to be approximately normally distributed.

Figure 3 shows the Durbin-Watson test result for independence.

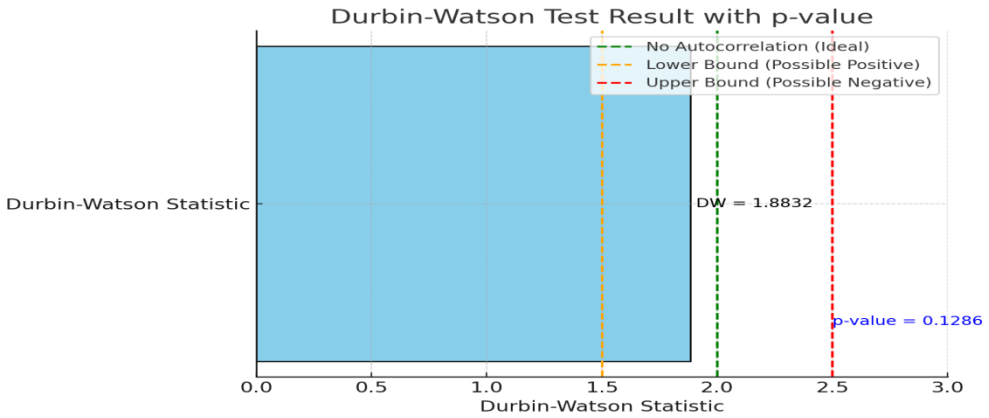

Figure 3. the Durbin-Watson test result for independence

Source: Research own analysis using Rstudio.

The Durbin-Watson test statistic is represented graphically in the figure above. The calculated Durbin-Watson statistic (1.8832) is the bar. Dashed lines indicate key thresholds: 2. The value, 0 (green), indicates that there was no autocorrelation (an ideal scenario); 1.5 (orange) was a lower bound of the potential positive autocorrelation, and 2.5 (red) is an upper bound of the potential negative autocorrelation. The residuals appear to have little to no autocorrelation since the DW statistic of 1.8832 was close to 2. Also, the p-value (0.1286) also agrees there was no significant autocorrelation.

Figure 4 shows the result of VIF values for each variable.

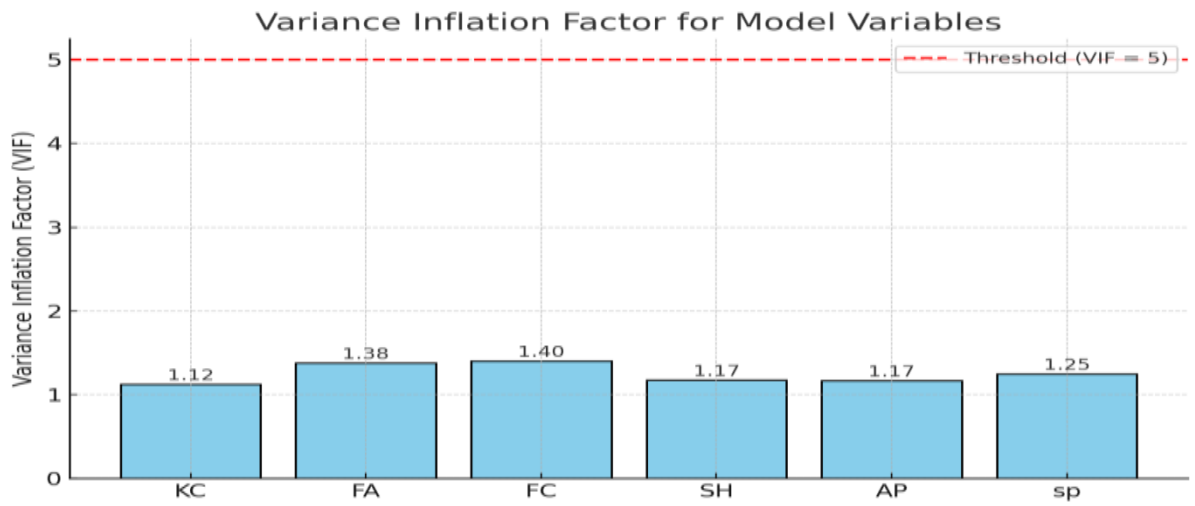

Figure 4. the VIF values for each variable

Source: Research own analysis using Rstudio.

The VIF values for each variable are visualized via the bar plot. At VIF = 5, a dashed red line represents the commonly used threshold which indicates multicollinearity issues. VIF values for all variables in the model are less than 5; thus, no significant problem of multicollinearity exists.

6. Major Findings

The majority of the respondents are male (62.5%), and the majority of them (69.8%) are undergraduates. Approximately 72% of consumers earn less than Tk 50,000, and 59.5% of them live in rural areas. 72% of the respondents come from single-family households and have a background in commerce.

The F statistic is very small (i.e., very small p-value, <2.2e−16), and that indicates that the regression model is statistically significant. The independent variables KC (Knowledge of Cognitive Biases), FA (Feedback and Adaptation), FC (Confidence in Future Career Prospects), SH (Study Habits and Effort), and SP (Self-perceived Knowledge) have a very substantial effect on the dependent variable (DR), which seems to represent some kind of risk- or decision-related measure, while AP (Academic Performance Expectations) has a less significant effect. The explanatory power of the model is moderate: it explains 35.34% of the variation in DR.

All key assumptions for linear regression are satisfied: Residuals: No significant pattern. Normality: Overall, residuals tend to be roughly normal. Homoscedasticity: Residual variance is constant across all levels of fitted values. The independence of errors shows an autocorrelation of order 1, indicating the absence of outliers. Shapiro-Wilk The p-value of 0.137 indicates an approximate normal distribution of the residuals. Durbin-Watson Test: The residuals seem not to be auto correlated with this Durbin-Watson statistic of 1.8832. VIF

(Variance Inflation Factor): Because all variables have values of VIF below 5, there is no serious problem of multicollinearity in the variables.

7. Implications

As the significant impacts of Knowledge of Cognitive Biases (KC), Feedback and Adaptation (FA), Confidence in Future Career Prospects (FC), Study Habits and Effort (SH) and Self Perceived Knowledge (SP) indicate, improving these variables holds huge potential in altering decision-making or choice on a risk basis (DR). For instance, improving feedback systems, improving the self-perception of knowledge and strengthening study habits could result in benefits for individuals, especially in rural areas or from a single-family household.

Given that Academic Performance Expectations (AP) has a lesser effect; it may be more beneficial to focus on factors that are related to personal development and career confidence. This can include offering skill-building workshops, mentoring programs, and support for adapting to cognitive biases.

Policymakers and educational institutions can use this insight to design interventions that foster positive study habits, adaptive feedback mechanisms, and greater career confidence, particularly in rural areas, where 59.5% of respondents reside.

As 59.5% of respondents live in rural areas, programs aimed at improving access to education and enhancing career prospects in these regions would likely benefit individuals the most. Special focus on Study Habits and Effort and Self-perceived Knowledge can help address gaps in these areas.

The finding that a large portion of the respondents come from single-family households and earn less than Tk 50,000 highlights the importance of social and economic support. Family structures could be improved by policies that focus on improving their structures, offering them financial literacy programs, and providing high-quality career guidance to lessen constrain financially and improve long-term career future prospects.

8. Conclusion

It is found that personal and socioeconomic factors such as Knowledge of Cognitive Biases, Feedback and Adaptation, Confidence in Future Career Prospects, Study Habits and Self-perceived Knowledge are important determinants of decision-making or risk behavior (DR). The regression model is statistically significant and moderately explains (35.34 percent) of the variance of DR, or negatively, with F-stat, the model is overall adequate. The model follows many key assumptions, i.e., linearity, normality, homoscedasticity, and independent error. Also, multicollinearity and autocorrelation are not significant.

However, the study shows that Academic Performance Expectations (AP) have less of an effect, but that focusing on individual personal and professional development might herald better decision-making and risk tolerance. Additionally, these factors need to be tackled head-on in rural areas because of the rural-to-urban divide.

9. Suggestions for Further Study

1) Future studies may further explore additional variables, such as emotional intelligence, social networks, or financial literacy, to better understand what effects decision-making or decision-related behavior (DR).

2) Conducting longitudinal studies could help assess how these factors influence DR over time, providing a clearer picture of the long-term effects of the interventions.

3) Future research could investigate the psychological dimensions of decision-making, such as stress levels or self-regulation, which might play a role in shaping individuals' behavior, particularly in high-risk environments like financial markets.

4) Expanding the study to include a larger and more diverse sample from both urban and rural areas would help generalize the findings. Something could then be compared across regions or cultures to see if these factors are applicable or region-specific.

5) Future research could investigate the psychological dimensions of decision-making, such as stress levels or self-regulation, which might play a role in shaping individuals' behavior, particularly in high-risk environments like financial markets.

6) Testing specific interventions (such as cognitive bias training, career counseling, or financial literacy programs) in a controlled environment could validate the practical effectiveness of these factors in improving decision-making and risk tolerance among individuals.

Acknowledgments

We thank all respondents for their excellent contributions, as well as everyone else who has helped us conduct this study, directly or indirectly.

References

Abdwllah, T. W., & Hussein, S. J. (2023). The Relationship Between Risk-taking behavior and self-confidence of students of Salah al-Din University. *Journal of University of Raparin*, *10*(2), 116–141. https://doi.org/10.26750/Vol(10).No(2).Paper5

Acciarini, C., Brunetta, F., & Boccardelli, P. (2021). Cognitive biases and decision-making strategies in times of change: a systematic literature review. *Management Decision*, *59*(3), 638–652. https://doi.org/10.1108/MD-07-2019-1006

Al-Dhahri, D. H., Al-Ghamdi, A. A., & El-Keshky, M. E. S. (2021). Cognitive Bias and its Relationship to Decision Making: the Case of Talented Secondary Students in Jeddah. *Journal of Educational and Psychological Sciences*, *4*(45), 78–98

Al-Ubaidi, S. M., &Tukan, A. H. (2020). The Seven Habits of Stephen R. Covey and its relationship with decision-making among secondary school students. *Journal of Tikrit University for Humanities*, *27*(3), 359–382. https://doi.org/10.25130/jtuh.27.3.2020.18

Andersson, T. (2016). *Rationality in educational choice : A study on decision-making and*

risk-taking in academic settings. Master Dissertation, Uppsala University. Uppsala University Research Repository. Retrieved from https://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-298200.

Babakr, Z. H., & Fatahi, N. (2023). Big Five personality traits and risky decision-making: A study of behavioural tasks among college students. *Passer Journal of Basic and Applied Sciences*, *5*(2), 298–303. https://doi.org/10.24271/psr.2023.387309.1263

Bayat, B., Akbarisomar, N., Tori, N. A., & Salehiniya, H. (2019). The relation between self-confidence and risk-taking among the students. *Journal of Education and Health Promotion*, *8*(1), 27. https://doi.org/10.4103/jehp.jehp_174_18

Boxer, P., Goldstein, S. E., DeLorenzo, T., Savoy, S., & Mercado, I. (2011). Educational aspiration–expectation discrepancies: Relation to socioeconomic and academic risk-related factors. *Journal of Adolescence*, *34*(4), 609–617. https://doi.org/10.1016/j.adolescence.2010.10.002

Burns, G. N., Jasinski, D., Dunn, S., & Fletcher, D. (2013). Academic support services and career decision-making self-efficacy in student athletes. *The Career Development Quarterly*, *61*, 161–167. https://doi.org/10.1002/j.2161-0045.2013.00044.x

Cekuls, A., & Cekule, L. (2022). *RISK-TAKING AND DECISION-MAKING RELATIONSHIP OF THE IMPLEMENTATION OF INTENTIONS* (pp. 727–734). Proceedings of 9th SWS International Scientific. SWS International Scientific Conferences on SOCIAL SCIENCES – ISCSS. SGEM WORLD SCIENCE (SWS) Scholarly Society. https://doi.org/10.35603/sws.iscss.2022/s08.085

Chakrabarty, A., & Singh, A. K. (2023). Strategic Reforms in the Higher Education Research Ecosystem in India. *Higher Education for the Future*, *10*(1), 86–109. https://doi.org/10.1177/23476311231152292

Dao, B., Hasanzadeh, S., & Esmaeili, B. (2018). *The association between risk perception and the risk-taking behaviors of construction workers* (pp. 433–442). Construction Research Congress 2018. https://doi.org/10.1061/9780784481288.042

Dornbusch, S. M., Ritter, P. L., Mont-Reynaud, R., & Chen, Z. Y. (1990). Family decision making and academic performance in a diverse high school population. *Journal of Adolescent Research*, *5*(2), 143–160. https://doi.org/10.1177/074355489052003

Karahan, M., Patır, S., & Gedik, Y. (2021). Üniversite Öğrencilerinin Kendine Güvenve Risk Alma Davranışlarıile Yenilikçilik Düzeyleri Arasındaki İlişkilerin İncelenmesi. *Yaşar Üniversitesi E-Dergisi*, *16*(63), 1496–1513. https://doi.org/10.19168/jyasar.892087

Laguna Sánchez, P., & Segovia Pérez, M. (2023). Higher education: a Fundamental intangible capital towards a sustainable future. *Intangible Capital*, *19*(1), 1–3. https://doi.org/10.3926/ic.2230

Liang, Z., Liao, X., & Cai, H. (2022). The Impact of Specific Psychological Characteristics on Decision-Making Under the Different Conditions of Risk Self-Assessment. *Frontiers in*

Psychology, *13*, 779246. https://doi.org/10.3389/fpsyg.2022.779246

Maldonato, M., & Dell'Orco, S. (2011). How to make decisions in an uncertain world: Heuristics, biases, and risk perception. *World Futures*, *67*(8), 569–577. https://doi.org/10.1080/02604027.2011.615591

Oleksandra, B., & Valentyna, K. (2023). The effectiveness of systematic physical activity in the applicants of the institutions of the higher education. *Scientific Journal National Pedagogical Dragomanov University*, *5*(164), 23–29. https://doi.org/10.31392/NPU-nc.series15.2023.5(164).05

Rojewski, J. W., & Hill, R. B. (1998). Influence of gender and academic risk behavior on career decision making and occupational choice in early adolescence. *Journal of Education for Students Placed at Risk*, *3*(3), 265–287. https://doi.org/10.1207/s15327671espr0303_4

Teixeira, M. A. P., & Gomes, W. B. (2005). Decisão de carreira entre estudantesemfim de cursouniversitário. *Psicologia: Teoria e Pesquisa*, ***21***(3), **327**–**334**. https://doi.org/10.1590/S0102-37722005000300009

Villanueva, E., & Martins, I. (2022). Overconfidence, fear of failure, risk-taking and entrepreneurial intention: The behavior of undergraduate students. *Tec Empresarial*, *16*(3), 16–33. https://doi.org/10.18845/te.v16i3.6355

Wrońska-Bukalska, E. (2016, September). *Overconfidence of students and managers–comparative analysis* (pp. 349–361). Proceedings of the 6th Economics & Finance Conferences, OECD Headquarters, Paris. https://doi.org/10.20472/EFC.2016.006.020

Wyatt, G. (1990). Risk-taking and risk-avoiding behavior: The impact of some dispositional and situational variables. *The Journal of Psychology*, *124*(4), 437–447. https://doi.org/10.1080/00223980.1990.10543239

Yaowen, X., Suqing, S., Zhang, P., & Tian, M. E. N. G. (2015). Impact of cognitive bias on improvised decision-makers' risk behavior: an analysis based on the mediating effect of expected revenue and risk perception. *Management Science and Engineering*, *9*(2), 31–42.

Ye, Y. (2014). Role of career decision-making self-efficacy and risk of career options on career decision-making of Chinese graduates. *Psychological Reports*, *114*(2), 625–634. https://doi.org/10.2466/01.17.PR0.114k20w9

Zichella, G., & Reichstein, T. (2023). Students of entrepreneurship: Sorting, risk behaviour and implications for entrepreneurship programmes. *Management Learning*, *54*(5), 727–752. https://doi.org/10.1177/13505076221101516

Copyrights