Behind the Choices: Loss Aversion's Impact on Students' Course Selection

Zaiton Osman¹*, Izyanti Awang Razli²*, Phang Ing³*

¹Universiti Malaysia Sabah (UMS), Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia. Email: zaiosman@ums.edu.my
²Universiti Malaysia Sabah (UMS), Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia. Email: izyanti@ums.edu.my
³Universiti Malaysia Sabah (UMS), Jalan UMS, 88400 Kota Kinabalu, Sabah, Malaysia. Email: gracep@ums.edu.my

CORRESPONDING AUTHOR (*):
Zaiton Osman (zaiosman@ums.edu.my)

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Interest
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Students

ABSTRACT
This study investigates how the concept of loss aversion affects the decision-making process of students when they choose their courses at Universiti Malaysia Sabah. The primary focus of this research is to understand the impact of factors such as individual interests, career aspirations, and the reputation of lecturers on the degree of loss aversion experienced by students during their course selection. To gather data, the study employed purposive sampling, targeting third-year students from ten different academic programs. Questionnaires were administered, and data analysis was carried out using SPSS version 28 and SmartPLS 4.0. The findings of the study highlight a noteworthy negative correlation between students' career aspirations and the presence of loss aversion in their course selection decisions. Simultaneously, the research indicates that personal interests and the reputation of lecturers do not exert a significant influence on the manifestation of loss aversion in course selection among students at Universiti Malaysia Sabah.

Contribution/Originality: This paper contributes to the factors that impact course selection, particularly in relation to loss aversion, can assist educational institutions in developing effective interventions and strategies aimed at aligning courses more effectively with students' goals and enhancing the overall course selection experience.

1. Introduction

Loss aversion is a key concept within the framework of prospect theory, which was formulated by Tversky and Kahneman (1979). This theory presented a novel and distinct viewpoint on decision-making in situations involving risk. Originally, it emerged as a critique of the prevailing expected utility theory in the field. The expected utility theory was built on the assumption that individuals would make rational and logically consistent choices when faced with decisions that had uncertain outcomes. However, in their pioneering research on the prospect theory, Tversky and Kahneman (1979)
highlighted several phenomena that challenged the core principles of this normative model for rational decision-making. Instead, they put forth an alternative theory for decision-making in situations of risk.

The prospect theory proposes that individuals tend to evaluate results by comparing them to a point of reference they set for themselves. If an outcome falls short of this reference point, it is seen as a loss, but if it exceeds it, it’s considered a gain. Additionally, losses typically have a stronger emotional impact than equivalent gains. This theory also suggests that individuals often act cautiously when dealing with gains, emphasizing the significance of how a situation is framed and the reference point chosen.

Loss aversion plays a substantial role in shaping human decision-making. Moreover, individuals often face choices that involve risk, requiring them to assess possible results. A noteworthy observation in the realm of decision-making is the diversity in how individuals behave when presented with identical decision scenarios, like a gambling option, whether it’s presented as a one-time occurrence or as a sequence of repeated situations.

A classic example, as shared by Samuelson (1963), illustrates this phenomenon. Samuelson (1963) asked a colleague if they would be willing to take a single chance in a game where there was an equal chance of winning $200 or losing $100. Interestingly, the colleague declined the single gamble but showed a willingness to participate in multiple rounds of the same game. This behaviour can be attributed to loss aversion, where the colleague placed excessive emphasis on the potential loss, making them hesitant to accept the initial gamble.

Meanwhile, several studies, including those by Erev et al. (2008), Ert and Erev (2013), Gal and Rucker (2018), and Zeif and Yechiam (2022), have discussed the idea that the universality of loss aversion depends on factors like the size of the potential losses and the specific decision context. For example, Ert and Erev (2013) found that when participants were given the choice between receiving nothing or taking a 50-50 chance of gaining or losing 100 Sheqels ($30), 78% preferred to receive nothing. However, this preference shifted when the stakes were reduced to 10 Sheqels ($3), with only 52% making the same choice. These findings suggest that loss aversion might not be as pronounced in situations where the potential losses are smaller.

A similar outcome was also observed in the research conducted by Karle, Engelmann, and Peitz (2022). They investigated the correlation between performance data from a multiple-choice exam and risk preference data collected during a classroom experiment. The exam scores were based on 30 multiple-choice questions, with both correctly answered and unanswered questions contributing positively to the score. Risk and loss preferences, which encompassed a cognitive reflection test (Frederick, 2005), were obtained from an incentivized classroom experiment focusing on lottery choices conducted at the beginning of the term. The findings indicated that the loss aversion parameter identified in the experiment displayed persistence. Furthermore, the presence of loss aversion in a low-stakes environment was shown to have implications for performance in a different, possibly high-stakes setting.

In a different context, loss aversion can also be relevant outside of financial settings, such as in the decision-making processes of students. A similar principle can be applied to students when they are deciding which courses to take during their academic journey.
The fear of failing a course could increase their aversion to potential losses, leading them to avoid certain courses. Hence, this research aims to investigate the potential impact of course selection choices made by university students who may be influenced by a tendency towards loss aversion. Factors such as career aspirations, personal interests, and the reputation of lecturers are believed to be significant determinants in shaping their course choices. Additionally, the study seeks to explore how the chosen academic program may affect course selection and whether there is any discernible gender-based differences in the course selection process among university students.

2. Literature Review

2.1. Career Aspirations

Career aspirations play a significant role in shaping an individual’s approach to studying. They enhance students’ academic motivation, ultimately leading to improved academic performance. Career aspirations can be viewed from both present and future perspectives. In this regard, they help students identify and set future goals while inspiring and actively engaging them in their current study habits aimed at achieving those goals. As a result, the concept of career aspirations is distinctive in its ability to blend present motivation (inspiration) with future ambitions, making it a compelling factor for academic pursuit (Mwaura, 2020). As per Kisilu, Kimani, and Kombo (2012), career aspirations refer to the hopes, aspirations, ambitions, and thoughts about one’s future career that young individuals have, which in turn, influence their choices regarding what they wish to study and pursue in the professional world. Research findings suggest that when students develop more robust career aspirations during their school years, it enhances their academic performance and increases the likelihood of realizing those aspirations (Nguyen & Blomberg, 2014; Nabil, 2015; Gorard, See & Davies, 2012; Pugh, 2017). Moreover, Mesa (2012) argues that individuals who harbour positive career ambitions tend to exhibit a strong inclination towards learning-oriented goals. This is because their inherent traits of actively seeking to master new skills, accomplish tasks, and overcome challenges align with their professional aspirations. Hence, this study proposed the following hypothesis:

H1: Career aspiration has a negative significant influence on loss aversion in course selection among students in Universiti Malaysia Sabah.

2.2. Interest

Selecting the appropriate course is a crucial step towards achieving academic success during one’s college journey. In college, there is a wide array of courses available, and it is the responsibility of students to chart their academic path. Successfully navigating this path is a fulfilling accomplishment. When deciding on a course of study, individuals must acquire the necessary knowledge that aligns with their aspirations. This knowledge equips them to make informed and prudent life decisions. However, making an incorrect choice can lead to adverse consequences. Preference plays a significant role in course selection, as it reflects what students are genuinely interested in. Students may perceive a course as challenging or straightforward based on their proficiency level. Nevertheless, irrespective of their level of expertise, students may opt for a specific course, even if it seems challenging, based on their personal preferences.
Interest serves as a potent motivational force that invigorates the learning process, steers academic and career paths, and plays an indispensable role in academic achievement. It encompasses both a psychological state characterized by focused attention and emotional connection to a specific subject or topic, as well as a long-lasting inclination to repeatedly engage with it over time. When students find themselves genuinely interested in an academic subject, they tend to attend classes more regularly, exhibit greater attentiveness, actively participate, enrol in additional courses, process information more effectively, and ultimately excel academically (Hidi & Harackiewicz, 2000).

High school and university students who uncover their academic interests are better equipped for fulfilling careers. Interest functions as a robust motivator, propelling learning forward and shaping academic and career trajectories (Hidi & Renninger, 2016). Personal interest underscores individuals’ enduring preferences for specific content. The immediate experience of interest signifies a well-established inclination to derive enjoyment and value from a particular subject or activity across various situations. Consequently, students are more likely to revisit and delve deeper into the subject matter over time (Harackiewicz, Durik, Barron, Linnenbrink-Garcia, & Tauer, 2008). In essence, interest serves as a predictor for conventional indicators of educational success, including future course selection and academic performance. Hence, this study proposed the following hypothesis:

H2: Interest has a negative significant influence on loss aversion in course selection among students in Universiti Malaysia Sabah.

2.3. Lecturer’s Reputation

The existing academic literature offers limited insights into the influence of publicly accessible instructor ratings on course enrolment. Although student assessments of teaching have been widely adopted by most higher education institutions as a means of evaluating professor effectiveness, there is no standardized approach for disseminating these ratings to students (D’Apollonia & Abrami, 1997). Some institutions provide summaries of official ratings, while others do not. A portion of the research has focused on understanding how students utilize instructor reputation to inform their course selection process. In a study conducted by Davison and Price (2009), 216 students enrolled in sociology, economics, statistics, and women’s studies courses were surveyed, revealing that 92% were aware of Rate My Professor, 80% visited the website multiple times, 84% found the website beneficial, 95% considered the information credible, and 75% used the website to make decisions regarding course enrolment (Davison & Price, 2009). Evidently, many students are well-acquainted with the website and acknowledge its role in shaping their course choices. However, there is a contradictory finding in the research conducted by Tipoe (2013), where no correlation was established between Rate My Professor ratings and students’ decisions regarding course enrolment. This finding is surprising, given the high utilization of Rate My Professor as reported by Davison and Price (2009). Nevertheless, it’s important to note that these results may be influenced by the limited sample of courses and the specific student population in highly selective universities. It’s possible that students within certain majors have limited options and are compelled to enrol in courses without significant alternatives. Additionally, students might not heavily rely on Rate My Professor ratings when official course evaluations are accessible to them.
In Malaysia, the majority of universities have established their own mechanisms to assess the performance of lecturers and instructors. At the end of each semester, students are mandated to participate in a "Student Course Delivery Feedback" survey. This survey encompasses their views on various aspects such as the quality of lectures, campus facilities, evaluation procedures, and additional considerations. Given the relatively sparse research in this area, it becomes imperative to explore the importance of lecturers’ and instructors’ reputations as influential factors in shaping students’ choices of courses. Hence, this study proposed the following hypothesis:

H3: Lecturers’ reputation has a negative significant influence on loss aversion in course selection among students in Universiti Malaysia Sabah.

3. Methodology

This research attempts seeks to explore the intricate dynamics surrounding students’ course selection processes within the Faculty of Business, Economics, and Accountancy. Specifically, our aim is to investigate whether career aspirations, individual interests, and the perceived reputation of lecturers’ influence students’ decision-making regarding course selection, with a particular focus on understanding the phenomenon of loss aversion. In order to comprehend these intricate relationships, we have adopted a quantitative research method, aiming to carefully investigate the insights and viewpoints of third-year students in the second semester of the 2022/2023 academic year. Third-year students in the Faculty of Business, Economics, and Accountancy face the pivotal task of choosing two elective courses from a comprehensive array of nearly 30 available options. This selection process carries significant implications for their academic journey and future career prospects. Consequently, the factors guiding their choices deserve thorough examination. To delve into this multifaceted issue, we employed a purposive sampling method. The study targeted 120 third-year students across ten distinct programs within the faculty, ensuring diversity in backgrounds and academic trajectories. This approach allowed the study to capture a comprehensive range of perspectives and experiences related to course selection. The data collection instrument utilized in this study was a questionnaire. The questionnaire, adopted and adapted from previous research studies by Ren and Xiong (2016), Robbins et al. (2004), Feldman (1989), Astin and Astin (1992), was carefully tailored to our research objectives and contextualized to the specific domain of course selection within our institution.

4. Data Analysis & Results

This demographic summary on the above Table 1 provides a comprehensive overview of the participant composition in terms of gender and program of study. The study gathered demographic data from a cohort of 109 participants, encompassing both male and female respondents with diverse program study backgrounds. Among the participants, 26 individuals (constituting 23.9% of the sample) identified as male, while the majority, comprising 83 participants (equivalent to 76.1% of the sample), identified as female. Notably, the gender distribution exhibits a predominant representation of female participants within the sample. Furthermore, the data underscore the diversity in program study backgrounds among the participants. Specifically, the participants’ academic pursuits encompassed a range of fields, including Accounting, Entrepreneurship, Planning and Development, Financial Management and Banking, Financial Economics, Hotel Management, International Business, Marketing, Human
Resource Economics, and Tourism Management. Within this diverse landscape, the program specializations with the highest number of participants were Financial Economics and Hotel Management.

Table 1: Demographic Analysis

<table>
<thead>
<tr>
<th>Demographic Items</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>26</td>
<td>23.9</td>
</tr>
<tr>
<td>Female</td>
<td>83</td>
<td>76.1</td>
</tr>
<tr>
<td>Accounting</td>
<td>10</td>
<td>9.2</td>
</tr>
<tr>
<td>Entrepreneurship</td>
<td>10</td>
<td>9.2</td>
</tr>
<tr>
<td>Planning and Development</td>
<td>11</td>
<td>10.1</td>
</tr>
<tr>
<td>Financial Management and Banking</td>
<td>11</td>
<td>10.1</td>
</tr>
<tr>
<td>Financial Economics</td>
<td>13</td>
<td>11.9</td>
</tr>
<tr>
<td>Hotel Management</td>
<td>13</td>
<td>11.9</td>
</tr>
<tr>
<td>International Business</td>
<td>10</td>
<td>9.2</td>
</tr>
<tr>
<td>Marketing</td>
<td>10</td>
<td>9.2</td>
</tr>
<tr>
<td>Human Resource Economics</td>
<td>11</td>
<td>10.1</td>
</tr>
<tr>
<td>Tourism Management</td>
<td>10</td>
<td>9.2</td>
</tr>
</tbody>
</table>

Table 2 presents the results of a measurement model analysis for four distinct constructs: Loss Aversion, Career Aspirations, Interest, and Lecturer's Reputation. For each construct, multiple items were assessed. Loadings, which indicate the strength and direction of the relationship between each item and its corresponding construct, were calculated and shown that all value exceed the threshold of 0.50. Additionally, the table provides two important validity and reliability metrics. The Average Variance Extracted (AVE) values, which assess convergent validity, exceeded 0.50 for all constructs, suggesting that the items within each construct are measuring the same underlying concept effectively. The Composite Reliability (CR) values, indicative of internal consistency and reliability, exceeded 0.70 for all constructs, demonstrating good internal consistency among the items within each construct. These results collectively demonstrate the robustness of the measurement instruments employed in this study to assess the targeted constructs accurately.

Table 2: Measurement Model

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Loadings</th>
<th>AVE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss Aversion</td>
<td>LA1</td>
<td>0.820</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LA2</td>
<td>0.798</td>
<td>0.661</td>
<td>0.854</td>
</tr>
<tr>
<td></td>
<td>LA4</td>
<td>0.821</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CA1</td>
<td>0.907</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career Aspirations</td>
<td>CA2</td>
<td>0.882</td>
<td>0.738</td>
<td>0.894</td>
</tr>
<tr>
<td></td>
<td>CA3</td>
<td>0.784</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>INT1</td>
<td>0.835</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>INT3</td>
<td>0.865</td>
<td>0.702</td>
<td>0.876</td>
</tr>
<tr>
<td></td>
<td>INT4</td>
<td>0.811</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LR1</td>
<td>0.874</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecturer's Reputation</td>
<td>LR2</td>
<td>0.911</td>
<td>0.763</td>
<td>0.906</td>
</tr>
<tr>
<td></td>
<td>LR3</td>
<td>0.835</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discriminant validity assessment was conducted following the HTMT criterion, initially proposed by Henseler et al. (2015) and subsequently updated by Franke and Sarstedt (2019). The computed HTMT values, as presented in Table 3, were consistently found to
be $\leq 0.85$, which adheres to the more lenient criterion of $\leq 0.90$. Thus, it can be confidently inferred that the respondents recognized the distinctiveness of the utilized constructs. In summary, the results from the above validity assessments collectively affirm the validity and reliability of the measurement items.

Table 3: Discriminant Validity - Heterotrait-Monotrait Ratio (HTMT)

<table>
<thead>
<tr>
<th>Items</th>
<th>Career Aspiration</th>
<th>Interest</th>
<th>Lecturer Reputation</th>
<th>Loss Aversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Aspiration</td>
<td>0.663</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>0.587</td>
<td>0.673</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecturer Reputation</td>
<td>0.426</td>
<td>0.458</td>
<td>0.526</td>
<td></td>
</tr>
<tr>
<td>Loss Aversion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Values on the diagonal represents the square root of AVE while the off diagonal are correlations*

The structural model analysis as in Table 4, conducted in this study evaluated three hypotheses pertaining to the relationships between career aspiration, interest, lecturers’ reputation, and loss aversion in course selection. Each hypothesis explored a specific association between independent and dependent variables. The standardized beta coefficients were employed to gauge the strength and direction of these relationships. Standard errors were used to assess the precision of the estimates, while T-values and associated P-values determined the statistical significance of the relationships. Effect sizes, denoted by $f^2$, were calculated to provide insight into the strength of the relationships between the factors (career aspiration, interest, and lecturer’s reputation) and loss aversion. Lecturer’s reputation ($f^2 = 0.065$) appears to have the most substantial influence, followed by career aspiration and interest, with the latter two having relatively smaller effects. In this case, lecturer’s reputation has a more substantial influence on the outcome compared to career aspirations and interest. It implies that students’ choices or performance may be more strongly influenced by the reputation of their lecturers.

Table 4: Hypothesis Testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>Std Beta</th>
<th>Std Error</th>
<th>T-Value</th>
<th>P-Values</th>
<th>$f^2$</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁</td>
<td>Career Aspiration -&gt; Loss Aversion</td>
<td>-0.279</td>
<td>0.134</td>
<td>2.073</td>
<td>0.038</td>
<td>0.020</td>
<td>Supported</td>
</tr>
<tr>
<td>H₂</td>
<td>Interest -&gt; Loss Aversion</td>
<td>-0.041</td>
<td>0.171</td>
<td>0.241</td>
<td>0.810</td>
<td>0.009</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H₃</td>
<td>Lecturer Reputation -&gt; Loss Aversion</td>
<td>0.212</td>
<td>0.143</td>
<td>1.484</td>
<td>0.138</td>
<td>0.065</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>

The p-value of 0.038 indicates a noteworthy relationship between career aspiration and loss aversion. This suggests that career aspiration is likely to be linked with or exert an influence on loss aversion. In contrast, the p-values of 0.810 (for interest) and 0.138 (for lecturer’s reputation) imply that no statistically significant relationship exists between interest, lecturer’s reputation, and loss aversion within the scope of this study.
5. Conclusion and Recommendations

Selecting the appropriate courses plays a pivotal role in helping students reinforce their knowledge in their chosen field of study. It serves as preparation before entering their selected careers and enhances their skills through the course’s learning outcomes. Previous research on loss aversion has typically employed experimental methods (Davison & Price, 2009; Samuelson, 1963; Ert & Erev, 2013), often comparing results with academic performance (Davison & Price, 2009). This study, however, takes a different approach by examining the factors that influence students' loss aversion in course selection using a survey methodology. The findings of the study validate that there is a statistically significant negative impact of career aspirations on students' loss aversion when it comes to choosing courses. In simpler terms, students believe that if the courses they select align with their career aspirations after graduation, their level of loss aversion decreases.

When students possess well-defined and ambitious career goals, they frequently have faith in their capacity to attain these aspirations. Those with robust career ambitions often anticipate an abundance of opportunities and job openings within their chosen career trajectory. This positive outlook can heighten their optimism regarding the potential outcomes of their course selections, thereby diminishing their apprehension of making an erroneous choice (Bandura, 1997). These individuals may hold a heightened perception of their employability, convinced that their skills and knowledge will be in demand within the job market. Consequently, they may perceive themselves as less susceptible to adverse consequences resulting from suboptimal course selections (Lent, Brown, & Hackett, 2000). Reduced apprehension of failure frequently corresponds with heightened self-assurance. Students driven by strong career aspirations might exhibit greater willingness to take well-considered risks when selecting their courses because they harbor the belief in their capacity to adapt and surmount any challenges they encounter (Dweck, 2006). The enhanced confidence in future career prospects among students with ambitious career goals can culminate in a decreased sense of aversion to loss in the context of course selection. Their optimism, conviction in their employability, resilience, and readiness to embrace calculated risks collectively contribute to this phenomenon.

Interest in a course and the reputation of lecturers may not always directly correspond to a student’s long-term career objectives. Students might give precedence to courses that they perceive as being more closely tied to their career aspirations, irrespective of their personal interest in the subject or the lecturer’s reputation (Brown, 2002). Some students may view their interests and a lecturer’s reputation as subjective factors that do not guarantee success in a rapidly evolving job market. Consequently, they may prioritize courses that offer tangible and applicable skills for future employment (Fugate et al., 2004). In certain instances, students may attach greater importance to a course’s content and curriculum, focusing on specific knowledge and skills that are directly relevant to their chosen field (Hossler, Braxton & Coopersmith, 1989; Watt & Richardson, 2008).

Although interest in a course and the reputation of a lecturer are indeed essential factors in course selection, they may not consistently alleviate the sense of loss aversion among students, especially when considering other factors such as career objectives and practicality. Future research should explore additional variables that could influence students' loss aversion in course selection. External factors like parental expectations,
peer pressure, and societal norms may have a significant impact on students’ choices, potentially overshadowing the significance of personal interest or lecturer reputation (Hooft, Born, Taris, & Flier, 2003). Moreover, academic advisors can exert a considerable influence on course decisions, with advisors often emphasizing course alignment with career goals rather than personal preferences or lecturer reputation (Habley & McClanahan, 2004). Finally, individual disparities in learning preferences and motivations also play a pivotal role in course selection, with some students focusing on pragmatic outcomes while others prioritize their personal interests (Richardson et al., 2012).

**Ethics Approval and Consent to Participate**

UMS has established ethical policies solely for research in the fields of medicine and sciences, lacking specific guidelines for social sciences research. Nevertheless, this study-maintained adherence to universally recognized ethical standards and consent was obtained from all participants.

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**Conflict of Interest**

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

**References**


Mesa, V. (2012). Achievement goal orientations of community college mathematics students and the misalignment of instructor perceptions. *Community College Review, 40*(1), 46-74


