

Fragmentación de la evaluación y percepción de riesgo académico: revisión bibliométrica y diseño experimental en educación financiera

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ES Resumen. [Planteamiento del problema] Esta investigación aborda cómo los sesgos cognitivos, especialmente la aversión a la pérdida, afectan el bienestar y la motivación de los estudiantes universitarios en titulaciones económico-financieras, en función del diseño del sistema de evaluación.

[Novedad y originalidad de la investigación] La originalidad radica en aplicar la Teoría de la Perspectiva al contexto educativo, proponiendo que la fragmentación de la evaluación puede actuar como mecanismo de regulación emocional y cognitiva.

[Objetivo general] El objetivo principal es explorar, mediante revisión bibliométrica, la relación entre economía conductual, bienestar estudiantil y estrategias evaluativas en educación financiera, como base para una futura investigación empírica.

[Método] Se ha realizado una revisión estructurada de 167 artículos indexados en Scopus y Web of Science, siguiendo criterios PRISMA y empleando herramientas como VOSviewer para el análisis de coocurrencias.

[Diseño de la investigación] La investigación se estructura en tres fases: identificación de tendencias temáticas, análisis de sesgos cognitivos relevantes y propuesta de diseño experimental para una segunda fase empírica.

[Principales resultados] Los resultados sugieren que la evaluación fragmentada reduce el impacto emocional de la pérdida académica percibida, mejora el bienestar subjetivo y aumenta la satisfacción estudiantil. Se propone un estudio de campo con dos grupos de estudiantes, evaluados mediante escalas validadas de bienestar y satisfacción, para contrastar estas hipótesis.

Palabras clave: economía conductual; aversión a la pérdida; evaluación académica; bienestar estudiantil; educación financiera.

ENG Fragmentation of academic risk assessment and perception: bibliographic review and experimental design in financial education

Abstract. [Problem Statement] This research addresses how cognitive biases, especially loss aversion, affect the well-being and motivation of university students in economics and finance degree programmes, depending on the design of the assessment system.

[Novelty and originality of the research] The originality lies in applying Prospect Theory to the educational context, proposing that assessment fragmentation can act as a mechanism for emotional and cognitive regulation.

[General objective] The main objective is to explore, through a bibliometric review, the relationship between behavioural economics, student well-being and assessment strategies in financial education, as a basis for future empirical research.

[Method] A structured review of 167 articles indexed in Scopus and Web of Science was conducted, following PRISMA criteria and using tools such as VOSviewer for co-occurrence analysis.

[Research design] The research is structured in three phases: identification of thematic trends, analysis of relevant cognitive biases, and proposal of an experimental design for a second empirical phase.

[Main findings] The findings from the reviewed literature suggest that breaking the assessment down into smaller parts may help to reduce the emotional impact of perceived academic failure and may be associated with higher levels of subjective well-being and student satisfaction. A field study with two groups of students, assessed using validated scales of well-being and satisfaction, is proposed to test these hypotheses.

Keywords: behavioural economics; loss aversion; academic assessment; student wellbeing; financial education.

Sumario: 1. Introduction. 2. Methodology. 3. Results. 4 Discussion. 5 Conclusions and future research directions. 6. Bibliographical references.

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1. Introduction

In the early years of university education in Business Administration and Economics, the assessment system can significantly influence students' psychological well-being and academic engagement. Finance students themselves, trained in economic rationality, face their own set of cognitive biases during the learning process (Maheshwari et al., 2025). One of the most powerful is loss aversion, formulated by Kahneman and Tversky (Amos Tversky & Daniel Kahneman, 1979) in their Prospect Theory, according to which losses weigh psychologically twice as much as equivalent gains. Perspective Theory, formulated by Kahneman and Tversky, suggests that perceived losses have a greater emotional impact than equivalent gains. In educational contexts, this asymmetry can amplify stress in the face of single, decisive assessments. This asymmetry not only influences financial decision-making (Li et al., 2024), but also the way people or students perceive their progress, failures, and the risks associated with academic performance (Ahmad & Wu, 2024).

While classical economic theory assumes rational agents who maximise expected utility, behavioural evidence shows a much more human scenario: people fear losing more than they want to gain (Day, 1971). In pedagogical terms, this cognitive bias can translate into coping strategies, fluctuating levels of motivation, and emotional responses to assessment that differ substantially depending on the structure of the assessment system (Rana et al., 2025; Sayão & Baião, 2023; Yongchun et al., 2021). It is worth asking whether the assessment design—for example, dividing a final exam into several partial tests—modifies the psychological weight of perceived “losses” and contributes to greater student well-being and satisfaction.

From this behavioural perspective, it is hypothesised that dividing the assessment into smaller tests could mitigate the emotional impact of perceived academic setbacks, which could in turn promote students' well-being and motivation. The hypothesis that emerges from this behavioural framework is suggestive and perhaps promising: if losses generate more emotional impact than gains, reducing the potential magnitude of each perceived loss (an overall failure) could improve students' subjective well-being and, therefore, their commitment to the subject (Esson & Ertl, 2016; Rosales-Pérez et al., 2021). From this perspective, mid-term exams could serve as mechanisms for managing perceived risk (Glei et al., 2019). Within this framework, it is suggested that breaking assessment down into smaller parts could lessen the emotional impact of the perceived academic loss, which could in turn promote well-being and motivation. (Kawamura et al., 2021).

This approach opens up an emerging field of research between behavioural economics and teaching methodology in financial education. This study seeks to explore how the assessment structure affects students' well-being, motivation and perception of self-efficacy, considering loss aversion as an explanatory variable.

Prospect Theory provides a solid theoretical basis for reinterpreting the assessment experience as a series of decisions under risk (Balakina et al., 2026; Kaiser & Menkhoff, 2017): each exam, each assignment or feedback represents a gamble between the possibility of “winning” (academic success) and “losing” (failure or perceived setback). From this perspective, training programmes and teaching in accounting and finance not only teach students to make rational decisions in markets, but also to emotionally manage their own academic value curve (Baker et al., 2019; Jin & Liu, 2025).

Based on this reflection, the research poses a set of guiding questions that seek to connect the principles of behavioural economics with assessment practices in higher financial education.

First, does the fragmentation of assessment, for example, through partial examinations or continuous feedback, reduce the emotional intensity associated with perceived academic loss? Second, does this reduction in ‘assessment risk’ contribute to improving students' subjective well-being, motivation, and overall satisfaction? Finally, can methodologies inspired by Prospect Theory, such as frequent feedback, progressive rewards, or reframing mistakes as learning opportunities, promote sustained performance in financial subjects? These exploratory questions guide the bibliometric analysis that aims to identify the current state of knowledge on the intersection between behavioural economics, well-being and academic assessment in financial education.

Following the methodological guidelines of Hardies et al. (2024), systematic reviews of the accounting literature are characterised by the use of explicit and reproducible procedures that minimise bias and increase the reliability of results. This study adopts a complementary bibliometric approach, the purpose of which is to synthesise the accumulated evidence on behavioural economics, well-being and academic assessment in financial education through a structured, though not strictly systematic, review.

Following this theoretical introduction, the paper is structured into several sections that allow us to move from the conceptual to the empirical. First, the methodological framework of bibliometric research is presented, detailing the databases used (Scopus and Web of Science), the inclusion criteria and the descriptors employed. Next, the quantitative and qualitative results of the corpus of selected publications are analysed, identifying thematic trends, authors and journals with the greatest impact. Subsequently, the findings are discussed in light of the literature on well-being, motivation and assessment in financial education, drawing out possible lines of future research. Finally, the study concludes with a synthesis of theoretical and pedagogical implications, aimed at designing assessment strategies that are more emotionally balanced and consistent with the principles of behavioural economics. Thus, the research is part of an initial bibliometric phase, conceived as a starting point for future empirical studies on the psychological and motivational impact of assessment systems in university financial education.

2. Methodology

2.1. General research approach

This research adopts an exploratory and descriptive approach, aimed at synthesising and analysing the available evidence on the intersection between behavioural economics, well-being and academic assessment in finance education. This methodological approach is based on the premise that, in a field that is still emerging, it is a priority to map existing knowledge before developing explanatory or experimental models (Massaro et al., 2016).

Although the work is inspired by the methodological guidelines for systematic literature reviews proposed by Hardies et al. (2024a).

This study is designed as a structured narrative review with a bibliometric component, inspired by the methodological guidelines of systematic reviews, but it does not constitute a full systematic review in the strict sense. This type of review combines the procedural rigour of systematic reviews, in terms of transparency, process definition, and documentation of decisions made, with the interpretive flexibility of narrative reviews, which allow for the integration of different theoretical and empirical approaches from accounting, psychology, and financial education (Andiola et al., 2017).

This hybrid approach is particularly suitable in the early stages of research, where the main objective is to identify trends, gaps, and conceptual relationships rather than to produce an exhaustive synthesis or quantitative meta-analysis (Gurevitch et al., 2018a; Higgins JPT et al., 2024; Siddaway et al., 2019).

2.2. Justification of the methodological design

The choice of a structured narrative review. The review follows PRISMA 2020 as a guiding framework for transparency and traceability, although, given its exploratory nature, it is not a fully systematic review. (available at <http://www.prisma-statement.org/>) (Leclercq et al., 2019), is based on two main reasons. Firstly, the subject of study (Grp et al., 2016), the influence of behavioural biases, and particularly loss aversion, on the well-being and motivation of accounting and finance students, is still in its infancy in the literature (Etherton et al., 2022a). Previous research has addressed some aspects of the problem (academic motivation, assessment stress, and cognitive biases), but there are no studies that provide a comprehensive analysis of students' behavioural responses to assessment systems (Moreira Costa et al., 2021).

Secondly, this type of review allows for the combination of sources and perspectives from related disciplines (Liberati et al., 2009), such as behavioural economics, educational psychology, and accounting pedagogy, promoting a cross-disciplinary understanding of the phenomenon. In this way, the chosen methodology preserves the systematic spirit, by establishing explicit search and analysis criteria (Leclercq et al., 2019), but maintains the necessary openness to incorporate relevant conceptual contributions that, even without meeting all the formal requirements of a systematic review, add meaning to the theoretical framework of the study (Haddaway et al., 2022).

2.3. Literature search and selection strategy

The search and selection process was carried out following criteria of rigour, traceability, and partial replicability, as recommended by the guidelines for systematic reviews in accounting (Gurevitch et al., 2018b; Hardies et al., 2024b) and in broader scientific research (Gurevitch et al., 2018b).

The literature search was conducted in the Scopus and Web of Science (WoS) databases, selected for their coverage of indexed journals in accounting, finance, education, and organisational behaviour. The search strings combined the three conceptual blocks using Boolean operators. For example, in Scopus (and similar strings were adapted for WoS):

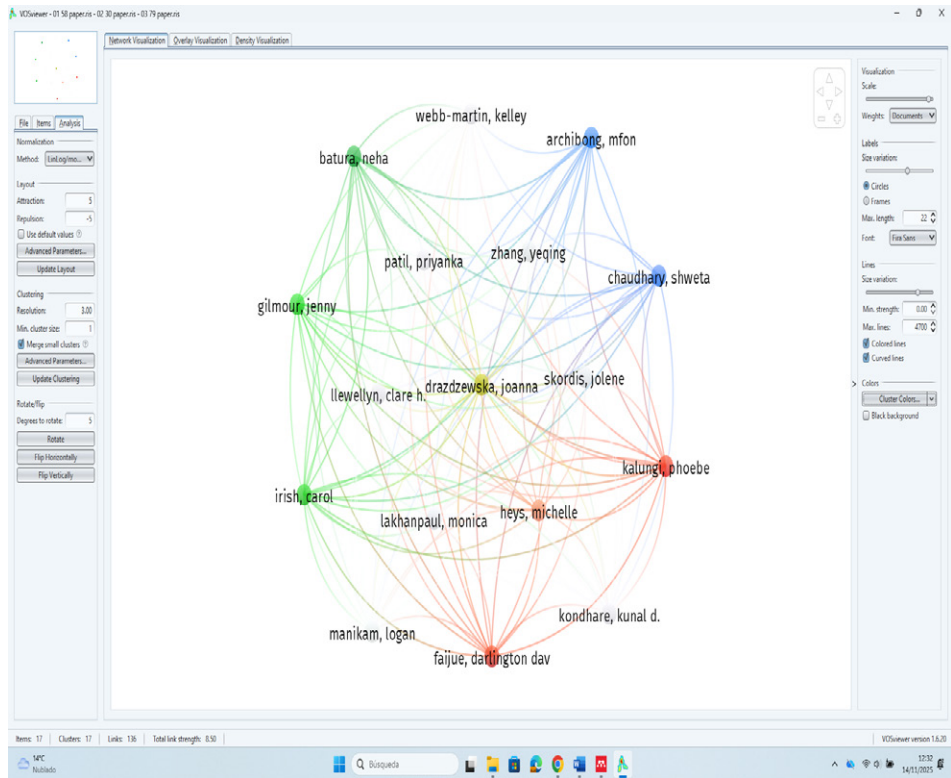
TITLE-ABS-KEY(“behavioural economics” OR “cognitive bias” OR “loss aversion”) AND TITLE-ABS-KEY(“financial education” OR “accounting education” OR “learning assessment”) AND TITLE-ABS-KEY(“well-being” OR “academic motivation” OR “student satisfaction”).

To delimit the initial corpus, three groups of search terms were used in combination:

- Behavioural economics and cognitive biases: behavioural economics, cognitive bias, loss aversion: (58 articles).
- Financial education and assessment: financial education, accounting education, learning assessment, evaluation methods: (30 articles).

- Well-being and psychosocial variables: well-being, academic motivation, stress, student satisfaction: (79 articles).

Figure 1: Network of co-citations of documents in the field of behavioural economics, financial education and well-being. Created with VOSviewer.



Source: Own elaboration.

Figure 1 presents the PRISMA-inspired flow diagram of the selection process. In total, 208 records were identified in Scopus and Web of Science. After removing 41 duplicates. Following full-text assessment, 167 studies met the inclusion criteria and were incorporated into the bibliometric and narrative synthesis. The inclusion criteria were as follows:

- Peer-reviewed publications (articles or reviews) in English or Spanish.
- Preferably published between 2010 and 2025, in order to include the most recent contributions in the field of behavioural finance.
- Empirical, theoretical or review approach relating to at least two of the three conceptual areas above.
- Documents not directly related to financial education or training, informative texts and communications without academic review were excluded.

Exclusion criteria included:

- Non-peer-reviewed documents (conference proceedings without review, editorials, opinion pieces).
- Papers not addressing at least two of the three core areas (behavioural economics/biases, assessment, well-being/motivation).
- Studies focused exclusively on school or non-university populations;
- Documents without full text available.

2.4. Analysis procedure

The analysis of the selected literature was carried out in two complementary phases. In the first phase, a descriptive bibliometric analysis was performed to identify the evolution of publications over time, the main authors, journals and countries of affiliation, as well as the most frequent keywords and co-occurrences. This examination provided a structural overview of the field and identified the most active areas of research.

In the second phase, a qualitative thematic analysis was carried out to identify conceptual patterns, theoretical convergences and gaps in the literature. This stage focused on examining how different studies address the relationship between behavioural biases (especially loss aversion), the structure of academic assessments and perceptions of student well-being or motivation.

Table 1: Sample of the treatment applied to the revised documents:

	Doc. 1	Doc. 2	Doc. 3 [...]
Authors	Travis, Justin; Kaszycki, Alyssa; Geden, Michael; Bunde, James	Li, Ruihua; Hassan, Norlizah Che; Saharuddin, Norzihani	An, Min; Ma, Xuanxuan; Wu, Hongbin
Article Title	Some Stress Is Good Stress: The Challenge-Hindrance Framework, Academic Self-Efficacy, and Academic Outcomes	Psychological Capital Related to Academic Outcomes Among University Students: A Systematic Literature Review	Medical students' academic satisfaction: Social cognitive factors matter
Source Title	JOURNAL OF EDUCATIONAL PSYCHOLOGY	PSYCHOLOGY RESEARCH AND BEHAVIOR MANAGEMENT	MEDICAL EDUCATION
DOI	10.1037/edu0000478	10.2147/PRBM.S421549	10.1111/medu.15070
Publication Year	2020	2023	2023
Abstract	Historically, most investigations involving stress have assumed its undesirability, and...	In the past two decades, several scholars from different disciplines have conducted theoretical research and...	PurposeAcademic satisfaction (AS)-the extent to which people enjoy their role or experiences as...
Síntesis	Shows that challenge stress improves academic outcomes, while hindrance stress predicts withdrawal and lower performance.	This review shows that psychological capital significantly influences academic performance, motivation, stress, and student adjustment.	Satisfaction in medical students is strongly predicted by social cognitive factors, especially outcome expectations.
Assigned word: 1	Challenge-hindrance stress	Psychological capital	Academic satisfaction
2	Academic self-efficacy	Academic performance	Social cognitive theory
3	Student outcomes	Student adjustment	Outcome expectations
Commentary	Applies the challenge-hindrance theoretical framework to differentiate types of academic stress and their effects on performance...	Provides a systematic review of 43 empirical studies on the role of psychological capital (PsyCap), which includes hope...	Uses the social cognitive model of academic satisfaction (SCMAS) to explain how factors such as self-efficacy, ...

Source: Own elaboration.

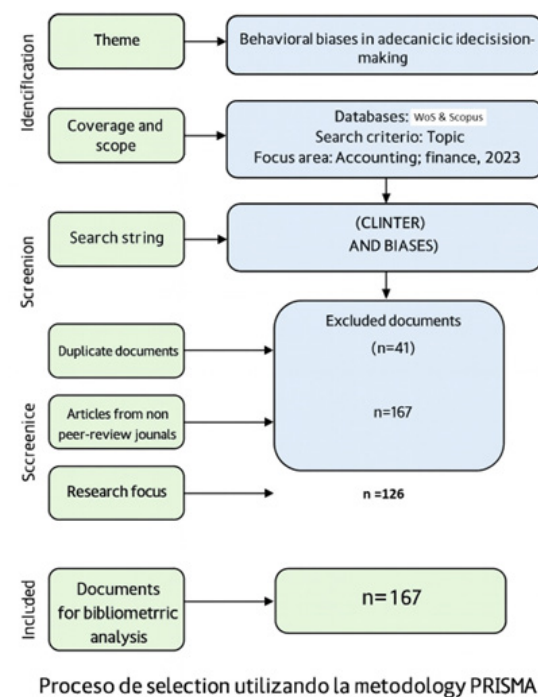
Data processing and organisation were supported by bibliographic management programmes (Zotero, Mendeley) and the use of co-occurrence analysis tools (VOSviewer), which allowed us to visualise networks of authors and concepts relevant to the field of study.

2.5. Scope and limitations

This study does not aim to provide an exhaustive systematic review, but rather an interpretative and structured synthesis of the available knowledge. Consequently, certain selection or interpretation biases may persist, derived from the narrative nature of the approach adopted. However, the use of transparent procedures and explicit search and analysis criteria helps to minimise bias and ensure the internal consistency of the process.

The review therefore constitutes an initial or diagnostic phase in the development of a broader line of research on the behavioural and emotional response of accounting and finance students to different assessment systems. The results obtained will serve as a basis for designing future empirical studies that delve deeper into the causal relationships between assessment design, perception of academic risk and students' subjective well-being.

Image 1: Selection process.



Source: Own elaboration.

3. Results

3.1. General trends in the analysed corpus

The literature review included 168 articles published between 2004 and 2025, selected for their relevance to three thematic areas: behavioural economics and cognitive biases, academic assessment in financial education, and student well-being/motivation. The bibliometric analysis shows sustained growth in scientific output on these topics, especially since 2018, with peaks in 2021 and 2023. The journals with the highest concentration of relevant articles include *Frontiers in Psychology*, *Journal of Educational Psychology*, *Current Psychology*, and *Psychology Research and Behaviour Management*.

The literature review reveals an expanding field of study that connects behavioural economics, educational psychology, and academic assessment in the university context. Of the articles analysed, 24 highlight how variables such as loss aversion, assessment stress, self-efficacy, and psychological capital affect the well-being and performance of students in economic and financial disciplines in their early years of training.

A first notable trend is the recognition of academic stress as a multidimensional phenomenon. Travis et al. (2020) propose the challenge-hindrance framework, which distinguishes between stimulating and limiting stress, and links it to self-efficacy and academic outcomes. This distinction is complemented by studies on coping strategies (Barbé et al., 2025; Merhi et al., 2018) and on the role of resilience in psychological adjustment (de la Fuente et al., 2023; Etherton et al., 2022b), suggesting that student well-being depends on both internal factors and the evaluative environment.

Secondly, there is a consolidation of the psychosocial approach to academic satisfaction. An et al. (2023) analyse the cognitive and social factors that explain medical students' satisfaction, while Arroyo et al. (2022) and Wa Thai Nhu Phuong & Dang (2024) highlight the importance of a sense of belonging and social support in the transition to university. These findings are in line with studies on basic psychological needs (Carmignola et al., 2021a) and on the impact of the pandemic on student vitality.

A third line of research focuses on cognitive biases and their influence on academic decision-making. Moreira Costa et al. (2021) show how financial literacy can amplify the framing effect, while Ebrahimigharehbaghi et al. (2022) apply Prospect Theory to explain energy efficiency investment decisions, offering a model that can be extrapolated to the evaluation context. Rau & Bromiley (2025) systematise strategic biases in decision-making, including loss aversion and evaluative myopia, while Gu (2023) analyses how financial experience modulates myopic aversion bias in management settings.

In addition, studies such as those by Hartley & Phelps (2012) and Liu & Han (2020) explore how anxiety and reference point dependence affect risk perception and satisfaction in search and decision contexts, reinforcing the hypothesis that students do not evaluate their results neutrally, but rather based on prior expectations and anticipated emotions.

In terms of methodology, there has been a growing incorporation of integrative explanatory models. Lo (2004) proposes the adaptive markets hypothesis, which combines economic rationality with behavioural evolution, while McCabe (2018) and Pascual Ezama et al. (2011) advocate redesigning assessment practices based on behavioural economics. Dale-Jones et al. (2013) and Irfan et al. (2025) contribute innovative pedagogical experiences that mitigate stress and improve learning, such as the use of reflective writing or sensory materials.

Finally, studies such as those by Salanova et al. (2010) and Tuominen-Soini & Salmela-Aro (2014) show that academic burnout and engagement are mediated by structural barriers and emotional facilitators, reinforcing the need to design assessment systems that reduce the psychological cost of error and foster the perception of progress.

Overall, the analysed corpus confirms that university students do not respond solely to rational incentives, but that their academic experience is deeply influenced by cognitive biases, anticipated emotions, and assessment structures. This finding justifies the development of empirical studies that analyse how the fragmentation of assessment, for example, through partial tests, can modulate loss aversion and improve subjective well-being in economics and finance degree programmes.

3.2. Main cognitive biases identified

The literature review confirms that university students, even those studying subjects geared towards economic rationality, do not make academic decisions in a strictly logical manner. On the contrary, their behaviour is conditioned by a series of cognitive biases that distort their perception of risk, the value of effort and the interpretation of the results obtained. Among these biases, loss aversion emerges as the most cited in studies on academic decision-making (Derous & Ryan, 2008; J. Liu et al., 2015), in line with the Prospect Theory formulated by Tversky and Kahneman (Amos Tversky & Daniel Kahneman, 1979), according to which perceived losses generate a greater emotional impact than equivalent gains. This cognitive asymmetry is amplified by the temporal structure of assessment, as suggested by Swar & Hameed (2017) and Liu et al. (2015), who highlight that the fragmentation of tests and continuous feedback can modulate the perception of academic risk, directly affecting subjective well-being and student motivation.

Along with loss aversion, the analysed corpus repeatedly identifies three other relevant biases: the status quo bias, which manifests itself in the tendency to maintain routines or previous decisions out of inertia or fear of change (Sverdlík & Hall, 2020); the framing effect, which shows how the way academic information is presented influences the student's emotional response (Delgado & Shealy, 2018; Pachur & Scheibehenne, 2017); and overconfidence, linked to overestimating one's own abilities, which can lead to frustration in the face of unexpected results (Rosacker & Rosacker, 2016; Yoo & Marshall, 2022). These biases do not operate in isolation, but interact with contextual factors such as assessment design, the digital environment and individual student characteristics, forming a complex behavioural map that must be considered in the design of more effective and emotionally sustainable teaching strategies.

Loss aversion emerges as the most cited bias in studies on academic decision-making. Within the framework of Prospect Theory (Amos Tversky & Daniel Kahneman, 1979), this bias implies that perceived losses generate a greater emotional impact than equivalent gains. In educational contexts, this asymmetry translates into greater sensitivity to academic failure, especially when assessment focuses on single, decisive events. Liu et al. (2015) apply this principle to financial decision models, but its implications can be extrapolated to the field of assessment, where failing a single test can be perceived as an irreversible loss.

Reach's (2013) research on medical adherence reinforces this idea by showing how the perception of loss conditions compliance with routines, a phenomenon that can be transferred to academic follow-up. Similarly, Swar & Hameed (2017b) link loss aversion to digital distraction and fear of missing out (FOMO), which interferes with concentration and rational decision-making in study environments.

The status quo bias manifests itself in the tendency to maintain previous decisions or established routines, even when more effective alternatives exist. Sverdlík & Hall (2020) analyse how the stage of the academic programme influences well-being and motivation, observing that students in intermediate stages tend to retain poorly adaptive study strategies out of inertia or fear of change. This bias may explain the resistance to changing preparation habits in the face of new assessment structures, such as mid-term exams or continuous feedback.

In the teaching field, Sabagh et al. (2018) identify this bias as one of the factors contributing to teacher burnout, as it perpetuates unsustainable teaching practices due to institutional pressure or a perceived lack of alternatives.

The framing effect describes how the presentation of information influences the decision made, even when the objective content is equivalent. Delgado & Shealy (2018) show that the way in which the return on energy investment is communicated affects institutional decision-making, which can be extrapolated to the academic context: presenting an assessment as an 'opportunity for improvement' rather than a 'risk of failure' can modify the student's emotional response.

Pachur & Scheibehenne (2017) explore this phenomenon from a cognitive modelling perspective, showing that differences in valuation between buyers and sellers can be explained by the framing of previous experience, suggesting that students also interpret their results based on subjective expectations and comparisons.

Overconfidence refers to the tendency to overestimate one's own abilities or knowledge, which can lead to suboptimal decisions. In the academic context, this bias is related to poor planning, procrastination, and

underestimating the effort required. Yoo & Marshall (2022) analyse how motivation and stress interact with academic satisfaction, observing that students with high perceived self-efficacy tend to experience greater frustration when their results do not align with their expectations.

Rosacker & Rosacker (2016) caution that financial literacy does not guarantee rational decisions if it is not accompanied by a realistic assessment of one's own abilities, reinforcing the need to integrate metacognition strategies into finance education.

Taken together, these cognitive biases do not operate in isolation, but interact with contextual variables such as assessment design, institutional support, and individual student characteristics. The literature reviewed suggests that assessment fragmentation, frequent feedback, and positive framing of errors can mitigate the impact of these biases, promoting a more emotionally balanced and pedagogically effective learning environment.

3.3. Proposed experimental design

The second, empirical phase of this research is conceived as a field quasi-experimental study with two groups of undergraduate students enrolled in introductory finance or accounting courses.

The independent variable will be the assessment structure (fragmented assessment with several mid-term tests vs. single final exam), while the dependent variables will include subjective well-being, perceived academic risk, and course satisfaction, measured through validated scales.

A sample size of approximately $N \approx 360$ students (two cohorts) is envisaged, with groups balanced by gender, prior academic performance and degree programme. Where possible, students will be randomly assigned to assessment conditions at the group level (class sections).

Data will be analysed using comparative statistics (t-tests/ANOVA) and multivariate models (e.g., regression or ANCOVA) to control for potential confounders (prior GPA, age, employment status).

4. Discussion. Theoretical convergences and gaps detected

Although there are studies that link well-being and academic assessment, few explicitly integrate behavioural economics as an explanatory framework. Most research focuses on psychological variables (self-efficacy, anxiety, resilience), without considering how cognitive biases can distort the perception of performance or assessment risk. This gap justifies the relevance of the approach proposed in this research.

The literature review carried out identifies a set of theoretical convergences between behavioural economics, educational psychology and research on academic assessment in university contexts. These convergences form an emerging conceptual framework that recognises the influence of cognitive biases on the academic experience, especially in economics and finance degrees. However, there are also significant gaps that justify the need to move towards integrated explanatory models.

A first convergence can be observed in the gradual incorporation of Prospect Theory (Amos Tversky & Daniel Kahneman, 1979) as an interpretative framework for academic decisions under risk. Studies such as those by Liu et al. (2021) and Ebrahimigharehbaghi et al. (2022) apply this theory to the analysis of financial and energy decisions, but its implications in the field of education are still in their infancy. The extrapolation of these models to assessment design, for example through test fragmentation or the use of progressive rewards, appears to be a promising, albeit underdeveloped, line of research.

Secondly, there is growing attention to the role of anticipated emotions and assessment anxiety in academic decision-making. Hartley & Phelps (2012) and Liu & Han (2020) show how reference point dependence and anxiety affect risk perception, reinforcing the hypothesis that students do not evaluate their results neutrally, but rather based on prior expectations and emotional contexts. This perspective is complemented by the challenge-hindrance framework proposed by Travis et al. (Travis et al., 2020), which distinguishes between stimulating and limiting stress and links it to self-efficacy and academic performance.

A third convergence revolves around the concept of academic resilience and its relationship with subjective well-being. Studies such as those by Etherton et al. (2022), Caleon & King (Caleon & King, 2021) and Carmignola et al. (2021) highlight that the satisfaction of basic psychological needs, autonomy, competence and relatedness modulates the emotional response to assessment, suggesting that pedagogical design can act as a protective factor against cognitive biases. This line of thinking is reinforced by research on the impact of the pandemic on student vitality (Gadosey et al., 2022; Mireles Vázquez & García García, 2022), which highlights the importance of the institutional environment in managing perceived academic risk.

Methodologically, there is a convergence towards interdisciplinary approaches that combine behavioural economics, cognitive psychology and higher education. Lo (2004) proposes the hypothesis of adaptive markets as an alternative to classical rationality, while McCabe (2018) and Moreira Costa et al. (2021) advocate redesigning assessment practices from the perspective of behavioural economics, incorporating elements such as the framing effect and myopic loss aversion. These proposals, although conceptually sound, have not yet been empirically validated in academic contexts.

However, significant gaps remain. Most of the studies reviewed address the components of the problem, motivation, stress, satisfaction, biases, in a fragmented manner, without integrating an explanatory model that articulates the interaction between assessment design and cognitive biases. For example, research on teacher burnout (Sabagh et al., 2018) or academic satisfaction (Brosnan & Jones, 2023; Wang et al., 2024) recognises the influence of the environment but does not explore how the structure of assessment can amplify or mitigate biases such as overconfidence or the status quo.

Likewise, there is little application of behavioural analysis tools in empirical studies on financial education. Although some studies use prospect theory models (Delgado & Shealy, 2018; Gu, 2023), their use in the design of assessment strategies remains marginal. Nor has the potential of interventions based on choice architecture or nudges to modify academic decision-making patterns been sufficiently explored (Monroy Cely, 2017; Shealy & Klotz, 2017).

5. Conclusions and future research directions

This bibliometric review has enabled us to map an emerging field of study at the intersection of behavioural economics, student well-being and evaluative design in financial education. Based on the analysis of 167 articles indexed in Scopus and Web of Science, conceptual patterns, recurring cognitive biases and theoretical gaps have been identified that justify the need to move towards empirical studies that validate the hypotheses formulated from Prospect Theory (Tversky & Kahneman, 1979).

Among the most relevant findings is the centrality of loss aversion as a dominant cognitive bias in academic decision-making (Liu et al., 2015; Reach, 2013). This bias, widely documented in financial contexts, manifests itself in the educational sphere as an exacerbated sensitivity to academic failure, especially when assessment focuses on a single decisive event. The reviewed literature suggests that the fragmentation of assessment, through partial tests or continuous feedback, can act as a mechanism for mitigating perceived risk, promoting subjective well-being and student motivation (Kawamura et al., 2021; Esson & Ertl, 2016).

Other relevant biases have also been identified, such as the status quo bias (Sverdlík & Hall, 2020), the framing effect (Delgado & Shealy, 2018; Pachur & Scheibehenne, 2017) and overconfidence (Yoo & Marshall, 2022; Rosacker & Rosacker, 2016), all of which are modulated by contextual factors such as evaluative design, the digital environment, and individual student characteristics. These biases do not operate in isolation but rather form a complex behavioural map that must be considered in the design of more effective and emotionally sustainable pedagogical strategies.

The review has also highlighted the importance of psychosocial variables such as resilience (Etherton et al., 2022), psychological capital (Li et al., 2023), and self-efficacy (Travis et al., 2020), which act as mediators between the assessment environment and student well-being. In this regard, studies such as those by An et al. (2023) and Arroyo et al. (2022) show that a sense of belonging and social support are key factors in academic satisfaction, especially in contexts of transition or uncertainty.

The literature reviewed suggests that a fragmented assessment may be associated with higher levels of well-being and satisfaction, although this hypothesis will need to be tested in the empirical phase of the project. Most of the research reviewed addresses the components of the problem, motivation, stress, satisfaction, biases, in a fragmented manner. It fails to articulate an explanatory model that links assessment design to the student's subjective experience. This shortcoming limits the ability to generate pedagogical recommendations based on scientific evidence.

In this context, the present research proposes to move towards a second empirical phase, aimed at validating the hypotheses formulated in the review. The field study will be conducted with university students studying economics and finance, divided into two groups: an experimental group that will be assessed through two mid-term exams (one in the middle of the semester and one at the end), and a control group that will be assessed only through a final exam. This structure will allow for the analysis of the impact of assessment fragmentation on well-being and academic satisfaction, controlling for contextual and personal variables.

To this end, two instruments validated in international literature will be used:

- Test 1: Academic Well-being Scale, based on the work of Warfvinge et al. (2022) and previous studies on subjective well-being in university contexts (<https://doi.org/10.1080/03075070903216643>; <https://doi.org/10.1080/01443410.2023.2223787>). This scale will measure dimensions such as vitality, perception of progress, and emotional management in the face of evaluation.
- Test 2: Academic Satisfaction Scale, developed by Warfvinge et al. (2022) (<https://doi.org/10.1080/03043797.2021.1942794>), which assesses the perception of learning quality, clarity of objectives, and adequacy of the assessment system.

Data analysis will be performed using multivariate statistical techniques, with the aim of identifying significant differences between groups and establishing causal relationships between the type of assessment and the psychological variables measured. The results are expected to confirm the hypothesis that assessment fragmentation reduces loss aversion, improves subjective well-being and increases academic satisfaction, especially in students with lower psychological capital or greater sensitivity to stress.

Ultimately, this research aims to contribute to the design of more equitable, emotionally sustainable, and pedagogically effective assessment systems, aligned with the principles of behavioural economics and the real needs of university students. The integration of theoretical models, bibliometric evidence, and empirical data will enable progress towards a more humane financial pedagogy, focused not only on performance but also on the student's overall experience.

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