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The Mental Accounting and its Impact in Reality

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Abstract:

Mental accounting theory is critically important because it provides a revolutionary lens through which to understand real-world financial behavior, moving beyond the traditional economic model of the perfectly rational actor. Its significance lies in explaining the systematic and predictable irrationalities that govern how people spend, save, and value money. By revealing that individuals compartmentalize wealth into non-fungible mental accounts—treating a tax refund differently from a salary bonus, for instance—the theory deciphers puzzles like why people simultaneously carry high-interest debt and maintain low-interest savings. This understanding is foundational for behavioral economics, informing everything from effective public policy design and retirement savings programs (like automatic enrollment) to personal financial advice and marketing strategies. It ultimately acknowledges that financial decisions are not purely mathematical but are deeply psychological, driven by subjective emotional framing rather than objective reality. In our real life, there's usually irrational behaviors when people are making decisions about consumption or investment, due to the effect of mental judgement.

Keywords: Mental accounting; sunk cost; mental budgeting; decision making.

1. Introduction

Totally speaking, the theory includes three main features and four main performances. The three features refer to sunk cost effect, endowment effect and non-fungibility. The performances refer to tagging of fund sources, classification of expenditure purposes, mental budgeting and difference in perception of amount. This thesis would focus on two main factors of this theory--sunk cost effect and mental budgeting. The sunk cost is defined as a cost that has already been incurred and 'cannot be recovered' or refunded. Because the money is already spent and gone, it should not influence your current or future decision-making. As for Mental Budgeting, it is the cognitive process individuals use to track, manage, and allocate their financial resources in their own minds, rather than using formal tools like spreadsheets or budgeting apps. It's the set of informal rules and categories people create to guide their spending and saving behavior. After reviewing the references which are used when writing this thesis, it could be seen that the influence

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of those two factors in reality is quite noticeable, and it could also show us the importance to further study the Mental Accounting theory and the content that is related to it. By doing so, more things could be improved using the theory and there would be a more promising future.

As for sunk cost effect, the document produced by Marius Guenzel in March 2025 mentioned that sunk costs are unrecoverable costs that should not affect decision making [1]. He provided evidence that firms systematically fail to ignore sunk costs and that this leads to significant investment distortions. In fixed-exchange-ratio stock mergers, aggregate market fluctuations after parties enter into a binding merger agreement induce plausibly exogenous variation in the final acquisition cost. These quasi-random cost shocks strongly predict commitment of the firms to an acquired business following deal completion, with an interquartile cost increase reducing subsequent divestiture rates by 8% to 9%. Consistent with an intrapersonal sunk cost channel, distortions are concentrated in firm-years in which the acquiring chief executive officer is still in office. This is a great example to show how the size of sunk could make a difference. A study made before was about a concert that met the storm, there were totally two assumed conditions. In the first one, the thing which varied was the price of the ticket—it cost you 1000 dollars or cost you nothing. In the second condition, the factor that varied was the time when you bought the ticket—you bought it a year ago or bought recently. The questionnaire was handed out. The collected result of the questionnaires showed that people were more likely to avoid loss if the cost was high, as more of them chose to overcome the storm when the ticket cost them 1000 dollars compared with when they were offered the free tickets, and the pain of loss would weaken as time got longer, as they did not show much interest given that the ticket was bought a year ago. However, if it was the ticket that they bought a few days ago, more of them would prefer to attend the concert even though there's a serious storm.

The mental budgeting, mentioned by Gerrit Antonides, February 2022, was reported on three studies, the first one including qualitative interviews, the second and third developing a mental budgeting scale and its relationship with tax compliance, respectively, in a large survey among self-employed people without personnel [2]. The qualitative study revealed four aspects of mental budgeting: budgeting, making reservations, nonfungibility, and compensation. After that, they got that tax compliance was positively related to mental budgeting. The age, the gender and the knowledge of economics would also make a difference. The factor was also researched using three different backgrounds in a study before——pay for the washing machine before or after using it, pay the money before or after going on a holiday, get paid before or after working. It seemed that people behaved rationally sometimes to maximize their profits, such as the first situation, but in the next two situations they would sacrifice benefit in order to gain positive emotional value, which is considered to be irrational using the rules in traditional economics.

However, these documents and surveys were limited because the assumed situation was too simple and there were no detailed data, so that it could not get further judgments about mental effects. The main part of this thesis would analyze more documents and surveys with more descriptions or data about the factors by collecting and looking for more particles to get the conclusion it need and lead to a better understanding of the influence of those two factors in reality.

2. The Effect of Sunk Cost Theory

The first part of this text would be discussing the effect of sunk cost effect. The researches that were done in the past could prove that the effect of size would be more significant if the size was quite large [1]. In this survey, Marius Guenzel pointed out that sunk cost could not be recovered, so it should not affect decision making. However, the companies still could not ignore this factor and acted irrationally, and this is because the cost is too high and it led to investment distortions. And in the experiments that were made by Mario Bogdanov and Sean Devine in December 2024, they proved that the resources that were invested in the past could influence the willingness to invest further resources—for those people who had already invested in a lot of resources like time or money, they would be more likely to invest in more resources. which was also an ideal example to prove that the size of sunk cost could affect economic decisions [3]. In another survey, the authors, Jessica Priscila Rodrigues Meireles, Yuri Azevedo, Lucas Schwarz and Hellen Bomfim Gomes found out that the size of sunk cost was not the only factor. It also depends on the area that those investors were in [4].

When discussing relevant issues, time is undoubtedly a crucial consideration factor. In the introduction, this paper briefly mentioned some relevant research viewpoints, and a targeted study conducted by four other authors also provides strong evidence for this viewpoint [5].

The study found that timely reminders to workers or consumers, making them aware of the time, energy, and even money they have invested in a project, product, or service, can have wonderful and positive effects. From a long-term perspective, this reminder mechanism can significantly enhance their loyalty to the parties involved. As time slowly passes, this loyalty is not superficial or short-lived, but deeply rooted in their cognition and emotions, becoming a stable and lasting psychological tendency.

3. Mental Budgeting

Now it comes to the second part—Mental Budgeting. Except the results in those three situations, there were also other evidence. For example, the document produced by Gerrit Guenzel, pointed out that tax compliance was positively related to mental budgeting [6]. The age, the gender and the knowledge of economics would also make a difference. In another document that was produced by four authors, shown the effect of mental budgeting on families while making decisions. There was a graph related to this research, as shown in Figure 1 below.

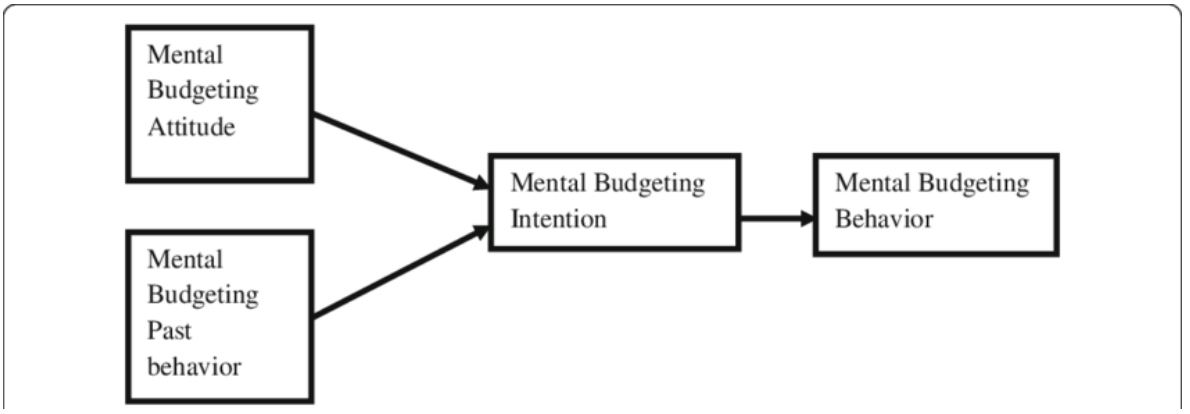

Figure. 1 Effect of mental budgeting on family decision making (Picture credit: Original).

As it could be seen in Figure 1, the results indicate that mental budgeting attitude and mental budgeting past behavior strongly predict mental budgeting intention, and mental budgeting intention predicts mental budgeting behavior. Further, mental budgeting intention partially mediates the relationship between mental budgeting attitude and mental budgeting behavior, and mental budgeting past behavior and mental budgeting behavior. And this has greatly contributed to further studies in family behaviors. There was another article showing the effects of mental budgeting, using vegetable farmers in China as an example [7]. This survey contained 393 farmers, and it studied the effects of mental budgeting on their passion to use low-toxicity pesticides. When they were offered subsidies, they would be more willing to use them. However, if the extra income came from higher consumer price, their incentive would be low. So mental budgeting also exists on farmers, and it should better understand it to make wiser policies. In order to achieve the government's objectives. In the case above, it seems to be wiser if the subsidy is directly given to the farmers, rather than increasing the income from higher price. The last example was about the role of this theory in Philanthropic Decision-Making [8]. The article pointed out that the mental budgeting literature has not yet researched on the use of mental budgets on Philanthropic, which means this theory is not taken seriously or even considered in this area. However, the interviews in America and Canada shown that the mental budget and other budgets were delivered with gifts. At the same time, it is clear that the donor's mental budget is malleable [9]. From these discoveries, it is clear that the theory of Mental Budgeting could be used in this area [10-11]. So it should better understand the mental budgeting in this field to strengthen the long-term donor relationships.

4. Conclusion

Mental Accounting theory, a cornerstone of behavioral economics, examines how individuals categorize and evaluate financial and non-financial resources, with two critical factors—the Sunk Cost Effect and Mental Budgeting—playing pivotal roles in shaping decision-making processes. The Sunk Cost Effect reveals that individuals often irrationally persist with failing endeavors due to prior investments, with the pain of loss intensifying as sunk costs grow larger, compounded by individual differences in knowledge and cognitive biases that lead to flawed decisions, while the passage of time further amplifies emotional responses, making it harder to abandon unproductive investments. Meanwhile, Mental Budgeting, the cognitive process of allocating resources into distinct mental accounts, has far-reaching implications across various domains, from household financial behaviors—where intentions shaped by attitudes and past actions predict budgeting patterns—to agricultural policy, where understanding farmers' mental categorization of expenses can lead to more effective subsidy designs, and philanthropy, where aligning donation campaigns with donors' mental accounting tendencies can foster long-term giving relationships. Looking ahead, the potential applications of Mental Accounting theory are vast and largely untapped, particularly in integrating behavioral nudges into policy design, such as framing retirement savings as "future security accounts" to boost participation or structuring debt

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repayment plans to match borrowers' mental prioritization of obligations. Cross-cultural research could uncover how mental accounting varies across societies, while advancements in digital finance and AI present opportunities to develop personalized financial tools that adapt to users' mental budgeting styles, such as smart apps that categorize spending based on cognitive patterns or banking products tailored to how customers mentally segregate funds. Beyond finance, Mental Accounting could revolutionize time management, health behaviors, and sustainability efforts by reframing activities like exercise as „long-term wellness investments" or energy conservation as contributions to a „planet protection budget." Despite its promise, many fields—from education to healthcare—have yet to fully leverage this theory, underscoring the need for interdisciplinary research to refine models, test new applications, and design interventions that align with how people naturally process resources. By deepening our understanding of mental accounting, it can craft policies, products, and behavioral strategies that enhance economic stability, promote smarter decision-making, and address societal challenges, making it imperative for researchers and practitioners to explore this theory's full potential and drive its adoption across diverse sectors for broader, real-world impact.

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