Analysis of Differences in Mental Accounting Characteristics in Online Shopping Based on Demographic Perspectives among Students in Palu City

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Abstract

This research aimed to examine and analyze differences in mental accounting in online shopping. This type of research is research with quantitative research methods and uses primary data. The population in this study were students in Palu City. The sampling technique in this study used non-probability sampling techniques with sampling units, convenience sampling, namely sampling techniques based on chance, members of the population who were met and willing to become respondents to be sampled, with 154 respondents. The analysis technique used in this study is using prime data and tested through the chi-square test. The results of this study indicate that there are differences in mental accounting in students based on the place of residence and the number of semesters in online shopping, while in gender and university origin there are no differences in mental accounting in online shopping.

1. Introduction

Online shopping has become a lifestyle in today's fast-paced modern era. This is because online shopping makes it easy for consumers to make transactions indirectly without having to meet face-to-face. With the abundance of online shopping apps available today, such as Shopee, Lazada, Tokopedia, TikTok Shop, and many more, online shopping has become commonplace due to the numerous conveniences and benefits it offers, making it highly popular among the public. Online shopping, or shopping via the internet, is the process of purchasing goods or services from sellers who operate online, or through online buying and selling services without the need for direct face-to-face interaction between the seller and the buyer (Sari, 2015).

Online shops are one of the alternative methods businesses can use to offer products or services to consumers. Online businesses are growing rapidly without being limited by time or location. Transactions conducted through the internet make it easier for producers and consumers to conduct transactions without meeting in person.

Abdelina & Makhrani (2021) There are three key points in the major transformation of digital culture. First, the digital world is inseparable from human life. Almost all aspects of human life and business leverage digital advantages. Second, digital transformation is the gateway to change. Third, humans are agents of change in digital culture. Digital advantages have become a new force enabling collaboration, flexibility, and profit sharing or profit making in meeting consumption needs.

Every individual faces various economic decisions related to income, spending, and savings. Silaya et al. (2017) assume that an individual categorizes assets (wealth) into three accounts: current income, current assets, and future income. It is further assumed that individuals tend to use current income more than future income. This occurs because individual financial decision-making is greatly influenced by factors that are less recognized in corporate financial models, namely psychological and social factors, one of which is the aspect of mental accounting.

Mahastanti & Wiharjo (2012) found that women have higher anxiety levels regarding finances and are more risk-averse in managing their finances. Mental accounting is also related to demographic factors such as gender, age, and income. Individual perceptions and attitudes tend to differ based on gender, age, and income. Men and women have different perceptions of money, and age and income also influence financial decisions, such as online shopping. In addition to gender and age, income is another demographic factor that influences online shopping.

Demographic factors are one of many external factors in the marketing environment. Demographic trends are highly reliable as a basis for short- and medium-term decision-making. There is a problem for companies that are suddenly caught off guard by demographic developments. The primary demographic factor that marketers always monitor is population, as people form the market. Marketers are particularly interested in the size of the population and population growth rates in cities, the age distribution of the population, ethnicity and other markets, educational groups, household patterns, geographical shifts, and population trends.

The phenomenon of impulse buying has been extensively studied over the past 60 years. This phenomenon has been studied in various countries, particularly developed nations, with some research conducted in developing and underdeveloped countries.

Previous research indicates that women tend to engage in impulse buying to indulge themselves (Lucas et al., 2014). Women buy things without thinking first and act according to what they want and need to fulfill (Purnama, 2015).

Based on the above factors, the researcher is interested in including the variables of gender, number of semesters, place of residence, and university of origin in this study.

2. Literature Review

Previous Research

Sabarullah (2020) The Influence of Mental Accounting Practice on Micro Business Performance with Growth Mindset as an Intervening Variable. Mental accounting has not been shown to significantly influence micro business performance. Mental accounting significantly influences growth mindset. Growth mindset significantly influences micro business performance. And mental accounting can indirectly influence micro business performance with growth mindset as an intervening variable.

Silaya & Persulessy (2018) Mental Accounting and Demographic Factors: The Phenomenon of Credit Card Use Among Employees of Bank Danamon Ambon Branch. The results of the study indicate a relationship between the demographic factor of gender and mental accounting. Other demographic variables such as age and income are not related to mental accounting.

Haryana (2017) The Influence of Mental Accounting and Psychological Factors on Consumer Behavior in Credit Card Use. The research findings conclude that the three indicators of mental accounting—mental budget, self-control, and short-term orientation—have a significant influence on consumer behavior in credit card usage. Among psychological factors, only emotional instability, conscientiousness, materialism, and debt aversion have a significant influence, while introversion and need for arousal do not have a significant influence on consumer behavior in credit card usage.

Kusnandar et al., (2022) The Influence of Mental Accounting and Financial Literacy on Generation Z's Financial Behavior During the Covid-19 Pandemic, Mediated by Lifestyle. The study shows that financial literacy influences lifestyle, mental accounting influences lifestyle, and lifestyle mediates the influence of financial literacy and mental accounting on financial behavior.

Mental Accounting

Mental accounting is a description of how an individual performs accounting processes, which can only be studied by observing an individual's behavior or inferring the rules that apply in society. Mahastanti & Wiharjo (2012) Mental accounting is a series of cognitive operations used by individuals and households to code, categorize, and evaluate their financial activities. Mental accounting focuses on how an individual should approach and evaluate a situation when there are two or more possible outcomes, particularly how to combine the possibilities of those outcomes. In mental accounting, individuals assign different levels of utility to each wealth account, thereby influencing their consumption decisions. Tversky and Kahneman (1981) state that mental accounting focuses on the form of individual financial decisions, while Shefrin and Thaler (1988) discuss that mental accounting is also influenced by knowledge and understanding of finance.

Thaler (1999) said that mental accounting refers to the behavior or way of thinking of a person who has a tendency to group and treat money differently depending on where it comes from. According to this theory, individuals assign different functions to each asset.

Sabarullah (2020) states that the construct of mental accounting is a metaphor used in shopping decision-making because of its usefulness in an empirical phenomenon concept. Mental accounting is a cognitive form of bookkeeping that individuals use to check their spending and control their consumption. To limit their spending, people often use mental accounting by allocating budgets to specific categories, demonstrating another role of mental accounting, namely special transactions, where a person sets up an account for transactions, expenses, and consumption credits. Mental accounting can also act as a self-regulation mechanism. As Thaler (1999) wrote: "mental accounting procedures have developed to save time and costs, and also to address self-control issues." This statement about mental accounting indicates that the accounting process contains elements of inaccuracy or ambiguity.

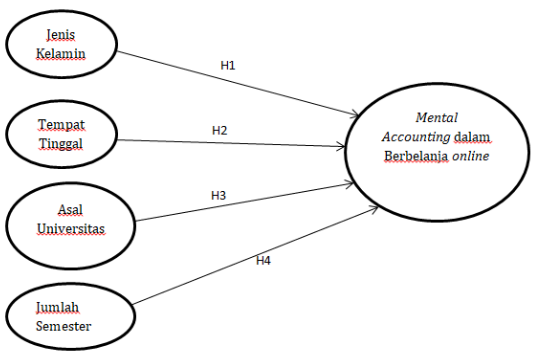
Demographic Factors

Demographics is a population science that covers the size, structure, and distribution of the population, as well as how the population changes over time due to births, deaths, migration, and aging. Akhmad et al., (2021) Demographic factors are a field of study that examines the characteristics and behavior of individuals influenced by factors such as gender, education level, and income.

Gender is the social difference between men and women. Women tend to be more influenced by service quality than men, while men are more influenced by the perceived economic value of fashion products. On the other side, some findings show that men are more impulsive in their purchasing than women because women are more careful in their purchasing plans. Similarly, there are differences between students who live with their parents or in boarding houses, the number of semesters, and the origin of the university.

The relationships between the variables used in this study can be seen in the theoretical framework diagram presented below:

Figure 1
Theoretical Framework



3. Research Method

This study was conducted among students in the city of Palu. The research took place in June 2025.

Population, Sample, and Sampling Method

According to Sugiyono (2016: 149), a sample is a portion of the population that shares the same characteristics as the population. The exact number of the population cannot be determined. The sampling technique used in this study is non-probability sampling with convenience sampling, which is a technique for determining the sample based on chance, where members of the population who are encountered and willing to participate as respondents are selected as the sample. (Siregar, 2013). Respondents were selected as samples because they happened to be at the research location, met the criteria, and were willing to assist the researcher in completing the questionnaire provided.

To classify the respondents' answers, this study used the Likert scale, as described by Sugiyono (2016:168), which ranges from strongly agree to strongly disagree.

Table 1. Questionnaire Answer Scores According to the Likert Scale

No	Options	Bobot (Skor)
1.	Strongly Agree	4
2.	Agree	3
3.	Disagree	2
4.	Strongly Disagree	1

Data Collection Methods

Data collection in this study is a survey form of research using quantitative methods. Survey research is a research method that can examine large populations using a sample method that has the aim of knowing the behavior, characteristics, and making descriptions and generalizations that exist in the population and also through the use of hypotheses to convey problems.

In this study, the population used was students in Palu City and the type of data used was primary data, where the information needed was obtained by distributing questionnaires to students in Palu City.

Analysis and Testing Methods

The data analysis used is descriptive quantitative analysis and chi Square test. Descriptive analysis is used to present a description of a phenomenon observed in a real context. The phenomenon in this study is to explain mental accounting in online shopping for students in Palu city. As for the hypothesis test in this study, the chi-Square test was used. The chi Square test analysis was used to determine whether there were differences in mental accounting on the variables in this study.

4. Results and Discussion

Description of Respondents

Respondents in this study were obtained from identity data from the questionnaire sheet. Data grouping consists of gender, place of residence, university origin and number of semesters. The data can be seen from the following table.

Tabel 2. Characteristic of Respondents

No	Description	Frequence	Persentage
1.	**Gender:**		
	Male	60	39%
	Female	94	61%
	Total	**154**	**100%**
2.	**Residence:**		
	Living With Parents	84	
	Boarding House	70	
	Total	**154**	
3.	**University**		
	State of University	124	
	Private University	30	
	Total	154	
4.	**Total Semester**		
	Semester 1-3	46	
	Semester 4-6	75	
	Semester 7-14	33	
	Total	**154**	

Table 3. Characteristic of Respondent (Gender)

Gender	Male	STS	TS	S	SS	Total
		0	5	39	16	60

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	Persentage %	0%	8,3 %	65 %	26,7 %	100%
	Fenale	1	2	55	36	94
	Persentage %	1%	2,1 %	58,5 %	38,3 %	100%
Total		1	7	94	52	154
		0,6%	4.5 %	61.0 %	33.8 %	100.0 %

From the characteristics of respondents based on gender, the percentage of men and women shows a tendency for mental accounting.

Table 4. Characteristic of Respondent (Residence)

Residence	Living with Parents	STS	TS	S	SS	Total
		0	32	45	7	84
	Persentage %	0	38.1%	53.6%	8,3 %	100%
	Boarding House	0	11	55	4	70
	Persentage %	0	15.7%	78.6%	5,7 %	100%
Total		0	94	43	11	154
		0 %	61.0 %	27.9 %	7,1 %	100 %

From the characteristics of respondents based on place of residence, it shows a difference in percentage. Students who live in a boarding house tend to have a higher percentage in agreeing, this indicates the existence of mental accounting compared to students who live with their parents.

Tabel 5. Characteristic of Respondent (University)

University		STS	TS	S	SS	Total
	State of University	1	6	72	45	124
	Persentase %	0.8 %	4.8 %	58.1 %	36.3 %	100.0%
	Private University	0	1	22	7	30
	Persentage %	0.0 %	3.3 %	73.3 %	23.3 %	100.0%
Total		1	7	94	52	154
		0.6 %	4.5 %	61.0 %	33.8 %	100.0%

The characteristics of respondents based on university origin show a positive trend in mental accounting towards online shopping. Students from private universities agree more with a percentage of 73.3% compared to students from public universities with a percentage of 58.1%.

Tabel 6. Characteristic of Respondent (Semester)

Semester		STS	TS	S	SS	Total
	Semester 1-3	2	13	31	0	46
	Persentage %	4.3 %	28.3 %	67.4 %	0.0 %	100.0%
	Semester 4-6	0	24	47	4	75
	Persentage %	0.0 %	32.0 %	62.7 %	5.3 %	100.0%
	Semester 7-14	0	13	15	5	33
		0.0 %	39.4 %	45.5 %	15.2 %	100.0%
Total		2	50	93	9	154
		1.3 %	32.5 %	60.4 %	5.8 %	100.0%

From the characteristics of respondents based on the number of semesters in the table above, semesters 1-3 show the existence of mental accounting with a percentage of 67.4% but not yet at a high level of confidence. In the 4-6 semester, it is also dominated by an agreeing response with a percentage of 62.7%. Likewise, the 7-14 semester has a percentage of 45.5% which shows the existence of mental accounting towards online shopping.

Chi-Square Results

Table 7. Chi-Square Results

Chi-Square		
Variable	Pearson Chi Square	Asymptotic Significance (2-sided)
Gender	Pearson Chi Square	0,141
Residence	Pearson Chi Square	0,004
University	Pearson Chi Square	0,478
Semester	Pearson Chi Square	0,023

Based on the results of the chi-square test above, it was found that gender had a significant value of 0.0141 > 0.05, so it can be concluded that there is no difference in mental accounting in online shopping between male and female students because the decision to shop online today does not consider gender, whether male or female.

Based on the results of the chi-square test on place of residence, it was found that there is a difference in mental accounting between students who live with their parents and those who live in dormitories. This can be seen from the significant value of 0.0004 < 0.05. Students who live in dormitories show a higher tendency toward mental accounting characteristics compared to those who live with their parents. This can be attributed to the level of financial independence and personal financial management.

Based on the results of the chi-square test in the table above, it was found that the origin of the university, whether public or private, did not have a difference in mental accounting. The significant value shows 0.478 > 0.05, which means that the type of university does not significantly affect students' thinking patterns regarding mental accounting when shopping online.

Based on the results of the chi-square test on the number of semesters, the significant value is 0.023 < 0.05, meaning there is a difference in mental accounting between the number of semesters completed. Students with higher semesters tend to have a more mature level of mental accounting. This is undoubtedly related to increased experience and maturity in managing finances over time.

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5. Conclusion

Based on the analysis of the results and discussion conducted in this study, it was found that gender and university origin did not prove to have any differences in mental accounting characteristics when shopping online. Meanwhile, students based on their place of residence and number of semesters completed had differences in mental accounting because these students had different social circles, and students who lived in boarding houses had independence and managed their personal finances.

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