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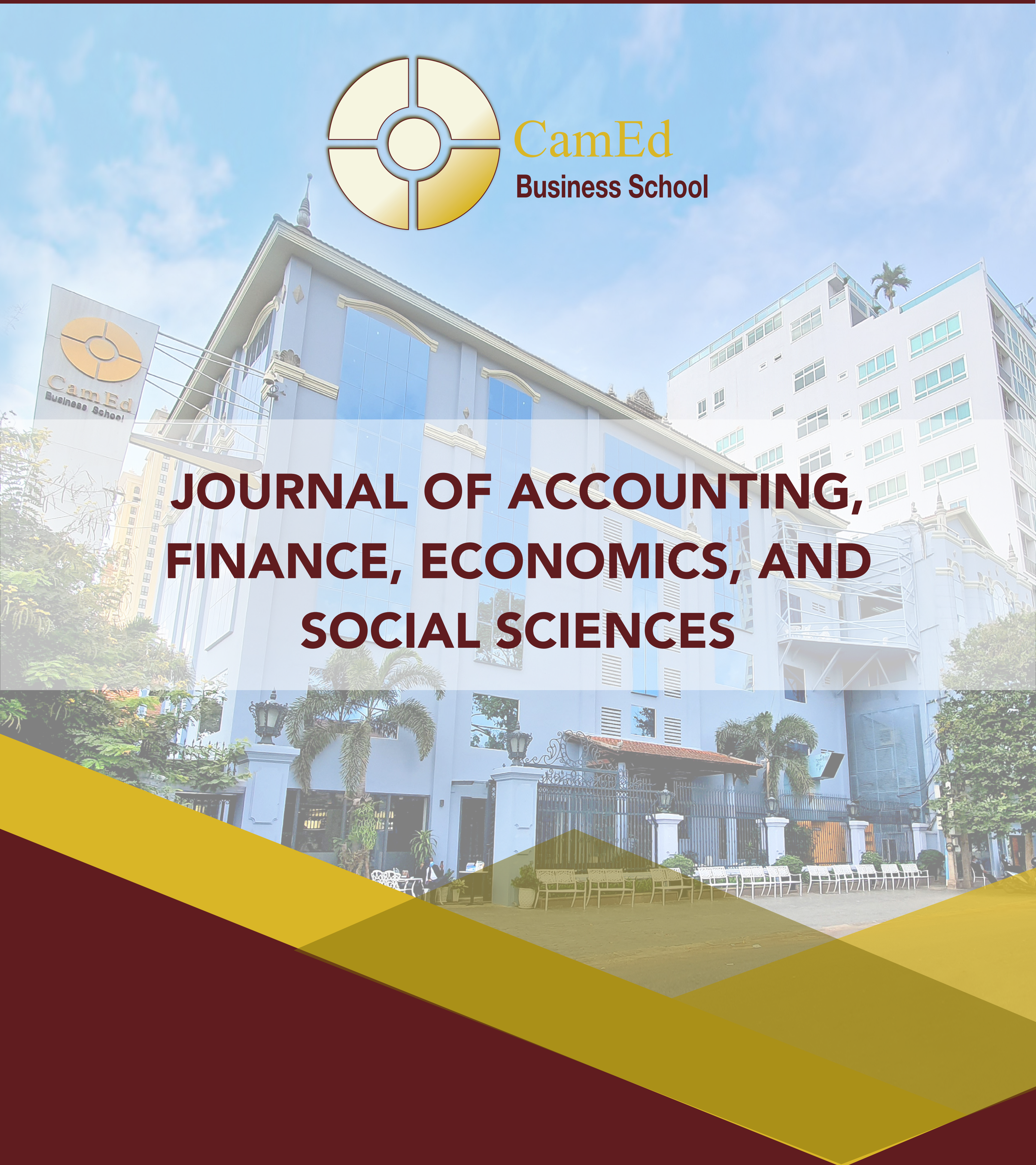

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Financial Literacy Awareness and Practices Among Village Savings Groups in Cambodia

Juliet Cadungog Uy* and Edman Padilla Flores ***

ABSTRACT

Purpose: *This study aims to assess the financial literacy awareness and practices of village savings group members in rural Cambodia, focusing on their earning, saving, spending, borrowing, insurance coverage, financial concepts awareness, and use of mobile applications.*

Methodology: *The study employed a quantitative research approach, surveying 109 savings group members from 24 villages in Cambodia's Kampot and Kampong Thom provinces using a structured questionnaire administered through face-to-face interviews. The collected data were then analyzed using descriptive statistics.*

Findings: *The study identified a relatively strong financial literacy among the respondents, indicating the potential for further capacity building. However, significant barriers to financial inclusion and access to formal financial services were revealed. The study also highlighted gaps in insurance coverage, particularly for agricultural and health risks, and limited use of mobile financial applications.*

Implications: *The findings highlight the urgent need for targeted interventions to improve access to formal financial services, strengthen insurance product uptake, and address challenges in using digital financial tools in rural Cambodia.*

Originality: *This study offers detailed micro-level insights into the financial literacy, practices, and challenges of village savings group members, which is essential for developing effective strategies to enhance financial inclusion.*

Limitations and future research: *The findings may not be generalizable to other contexts, as the study was conducted within a specific rural community. Future research could explore financial practices in different geographical and socioeconomic settings and delve into the root causes of barriers to inform targeted interventions and policy recommendations.*

Keywords: *Financial literacy; Savings groups; Financial inclusion; Rural Cambodia*

INTRODUCTION

Financial literacy, a critical life skill, encompasses the knowledge, attitudes, and behaviors necessary for informed financial decision-making and problem-solving. It is the bedrock of financial sustainability for individuals, families, enterprises, and national economies (Swiecka et al., 2020; Zaimovic et al., 2023). Understanding concepts like budgeting, saving, investing, and avoiding financial fraud is essential for effective personal and family financial management (Baranova et al., 2024; Gadzhiev et al., 2024), ultimately contributing to broader economic prosperity and stability. However, Cambodia faces a pressing challenge. Despite the Royal Government of Cambodia's National Financial Inclusion Strategy

* Juliet Cadungog Uy, Ph.D., CamEd Business School
Email: juliet@cam-ed.com
** Edman Padilla Flores, CamEd Business School
Email: edman@cam-ed.com

(NFIS) 2019-2025, financial literacy remains a significant barrier to inclusion. Cambodia's financial literacy score is a concerning 18%, ranking 135th out of 144 countries surveyed (Royal Government of Cambodia, 2019). This score is significantly lower than neighboring countries like Vietnam (24%) and Thailand (27%), placing Cambodia on par with Nepal and Haiti (Klapper et al., n.d.).

The implications of this lack of financial literacy are profound. Recent studies, including Samreth et al. (2024), highlight the crucial role of financial literacy in enhancing financial inclusion and reducing reliance on informal finance with its exorbitant interest rates. Their research identifies a strong correlation between financial literacy, general education levels, household income, and social capital, underscoring the need for targeted financial education programs, particularly for lower-income households. Further studies emphasize the importance of tailored financial education programs, community involvement, and the integration of financial literacy into broader educational curricula to improve financial outcomes and support economic development in Cambodia (Tes & Heng, 2024; Chet et al., 2023).

This study aims to support a Cambodian NGO working on community-savings group projects in rural areas of Cambodia's Kampot and Kampong Thom provinces. With a growing population of 858 savings group members, primarily women, these groups have raised an accumulated savings of more than $80,000, averaging $1,000 to $1,500 per group. The savings groups have kept their money in a metal box, with one officer keeping the box, one holding the key, and another member recording their group transactions.

The savings members have started income-generating activities such as small businesses, home gardening, livestock raising, organic farming, drinking water production, selling food or sugarcane juice, operating a fish pond, and other cultivations. In addition, the community-saving groups serve as platforms for disseminating health and nutrition messages and other information.

This study is significant as it assesses savings group members' financial literacy awareness and practices. It focuses on their earning and saving practices, spending and borrowing practices, protection and insurance coverage, financial concepts awareness use of mobile applications, barriers to accessing bank services, and knowledge and skills they want to learn. The findings from this study will provide valuable insights to policymakers, educators, and financial institutions, guiding them in formulating strategies and programs to enhance financial literacy, promote financial inclusion, and ultimately drive economic growth in Cambodia. This is not just about improving individual financial outcomes but also about building a more prosperous and stable Cambodia.

The next section reviews related literature, followed by an outline of the research methodology. The fourth section presents the study's findings and discusses previous studies' findings. The final section offers concluding remarks.

LITERATURE REVIEW

Financial literacy is a fundamental component in fostering economic development at both individual and national levels. It encompasses the knowledge and skills necessary to make informed and effective financial decisions crucial for personal financial well-being and broader economic stability. Financial literacy directly impacts people's ability to manage their finances at the individual level. It enables them to make informed decisions regarding budgeting, saving, investing, and managing debt, which are essential for financial stability and security. Increased financial literacy helps individuals avoid excessive debt and bankruptcy, thereby promoting economic stability (Dzodzikova et al., 2022; Akimov, 2023). Financial literacy is also linked to better financial behaviors, such as higher savings rates and more prudent investment choices, contributing to personal wealth accumulation and financial security (Bunyamin & Wahab, 2022).

Entrepreneurship is a key driver of economic growth and innovation. Financial literacy plays a critical role in entrepreneurial success by enhancing the ability of entrepreneurs to access and manage financial resources effectively. Studies have shown that higher levels of financial literacy among entrepreneurs lead to better business performance and sustainability (Burchi et al., 2021; Li & Qian, 2020). Financially literate entrepreneurs are more capable of navigating financial markets, securing funding, and making strategic business decisions, which are vital for the growth and sustainability of their enterprises (Anshika & Singla, 2022).

At the macroeconomic level, financial literacy contributes to economic stability and growth. A financially literate population is better equipped to participate in the economy, leading to increased economic activity and growth. Financial literacy improves financial inclusion, allowing more people to access financial services and products and stimulating economic development (Zaimovic et al., 2023). Additionally, financial literacy helps mitigate economic crises by reducing the likelihood of widespread financial mismanagement and promoting more stable financial systems (Kiszl & Winkler, 2022).

The importance of financial literacy has led to numerous educational initiatives and policy measures aimed at improving financial knowledge and skills. Integrating financial education into school curricula is one effective approach to building financial literacy from a young age, which has been shown to have long-term benefits for economic development (Sabirin et al., 2023). Furthermore, targeted financial education programs for different demographic groups, such as women and young people, can help address specific financial literacy gaps and promote inclusive economic growth (Swiecka et al., 2020; Akimov, 2023).

Financial literacy significantly contributes to poverty reduction by enhancing individuals' ability to make informed financial decisions and access financial services. Studies have shown that financial literacy alleviates relative household poverty through increased participation in entrepreneurial activities, commercial insurance, and better lending choices (Wang et al., 2022; Popli, 2023). Financial literacy also has immediate and long-term effects on poverty reduction in rural households by improving their economic status and financial education (Xu et al., 2023).

The relationship between financial literacy and income generation is well-documented. Financial literacy has been found to have a robust positive effect on household income, mediated by access to financial services (Twumasi et al., 2022). It also positively impacts the socioeconomic status of low-income households (Munisamy et al., 2022) and enhances the future income prospects of youth from low-income households through improved job-readiness and financial knowledge (Cedeño et al., 2021).

Financial literacy also plays a vital role in asset building by promoting financial inclusion and sustainable financial behaviors. Studies have found that financial literacy significantly improves access to various financial services, which is essential for asset building (Hasan et al., 2021; Rahayu et al., 2021). Furthermore, financial inclusion, driven by financial literacy, has been shown to reduce household budget deficits and poverty, particularly among women, thereby supporting asset building (Seng, 2021).

According to Faulkner (2021), the nations leading the world in financial literacy include Australia, Canada, Finland, Germany, Israel, the Netherlands, Sweden, and the United Kingdom. Rosenfeld (2022) also ranks Denmark, Norway, and Sweden at the top, each with a financial literacy rate of 71%. Canada and Israel are next at 68%, the United Kingdom at 67%, Germany and the Netherlands at 66%, Australia at 64%, and Finland at 63%.

Informal savings groups, such as village savings and loan associations, are crucial in promoting financial inclusion, especially among marginalized populations like rural women and low-income households. These groups have been identified as a potential pathway to financial inclusion in various contexts, including Nigeria, Zambia, and Uganda (Oranu et al., 2020; Bwalya & Zulu, 2021; Okuna et al., 2023).

The impact of savings groups on poverty reduction is well-documented. In Uganda, savings groups have been shown to significantly reduce poverty by providing access to financial services, creating employment opportunities, and improving household resources like education and health (Okuna et al., 2023). Similarly, participation in savings groups in Kenya and Peru has enabled households to save, borrow, and invest in small businesses, contributing to poverty alleviation (Muthike, 2020; Frisancho & Valdivia, 2020).

However, the relationship between savings groups and formal financial service usage presents a complex picture. While these groups bolster financial inclusion, they may not always translate into increased engagement with formal financial institutions, as observed in Peru (Frisancho & Valdivia, 2020).

Savings groups face challenges such as inadequate capital, corruption, and limited government support. Policymakers in Uganda and Nigeria have been urged to increase support for these groups through financial assistance, capacity building, improved supervision, and addressing challenges like limited income base and vulnerability to theft (Okuna et al., 2023; Oranu et al., 2020).

Robust financial management practices within savings groups, including record keeping, security of savings, budgeting, segregation of duties, and the availability of a functional constitution, are essential for their effective operation and the confidence of group members (Lagu, 2023). However, factors such as member default and the mismatch between the demand and supply of funds can hinder the sustainability of these groups (Abaho et al., 2022; Burlando et al., 2021).

While savings groups primarily serve as short-term cash-management vehicles rather than profit-generating entities, research suggests optimizing the cycle setup and lending policies can enhance their financial efficiency (Bossuyt et al., 2023). Additional challenges include low financial literacy among members, problems with group leadership, and the impact of external shocks like the COVID-19 pandemic (Murugiah, 2021; Okuna et al., 2023; Adegbite et al., 2022).

The Cambodia National Financial Inclusion Strategy (NFIS) 2019-2025, adopted on July 12, 2019, aims to increase access to and use of formal financial services, specifically focusing on reducing the financial exclusion of women by half (Khmer Times, 2021). This strategy draws on the 2017 Making Access Possible (MAP) Cambodia Country Diagnostic Report, which utilized extensive data, including surveys and interviews, to understand the state of financial inclusion in the country.

Currently, 59% of Cambodian adults utilize formal financial services, 12% rely solely on informal services, and a concerning 29% remain entirely excluded (Royal Government of Cambodia, 2019). This uptake of financial services is deeply intertwined with income levels. Farmers, representing a significant portion of the population, earn the lowest average monthly income and consequently have limited engagement with formal financial services. Conversely, formally employed individuals with higher incomes demonstrate the highest usage of these services. While financial inclusion rates are similar across genders, a slight advantage exists for females (73%) compared to males (69%).

Several key barriers hinder financial inclusion in Cambodia. Low financial literacy and limited financial awareness prevent effective engagement with and utilization of financial services. Additionally, the majority of the population (75%) earns less than KHR 1 million (US$ 246) per month, leaving limited disposable income to cover the costs associated with formal financial services (Royal Government of Cambodia, 2019).

The NFIS 2019-2025 outlines priority activities to achieve its goals. These include encouraging savings in formal institutions, promoting innovative credit products for SMEs, expanding payment system capabilities, enhancing access to insurance, strengthening financial sector regulatory capacity, and increasing consumer empowerment, protection, and financial transparency. These activities, informed by MAP analysis and tailored to address customer needs and barriers, are structured into short, medium, and long-term action plans. Effective implementation of these plans is crucial for bolstering the financial sector and the overall economy (Royal Government of Cambodia, 2019).

Several studies shed light on the determinants of financial literacy, particularly among rural populations. Socioeconomic and demographic characteristics such as gender, income, age, and education significantly impact financial literacy levels (Twumasi et al., 2022; Zhang & Xiong, 2020). Financial intermediaries, particularly microfinance institutions, have shown promise in enhancing both financial literacy and inclusion among low-income individuals in rural areas (Bongomin et al., 2020).

A study conducted in Cambodia and Vietnam found a positive correlation between higher educational levels, income, and improved financial literacy. Older individuals and those in stable occupations also exhibited higher levels of financial literacy (Morgan & Trinh, 2019). This study also revealed a strong link between financial literacy and positive financial behaviors, with financially literate individuals more likely to engage in savings and formal financial systems (Morgan & Trinh, 2019).

Innovative approaches to financial education, such as the use of technology, have shown promise in improving financial literacy in rural Cambodia. A study exploring the application of Action Design Research in developing a tablet application for financial education demonstrated that combining financial literacy with technology literacy can significantly enhance understanding and management of financial matters among rural populations. The project highlighted the importance of integrating information systems with traditional teaching methods to achieve more effective learning outcomes (Zaitsev & Mankinen, 2022).

Recent studies highlight the crucial role of financial literacy in Cambodia. Samreth et al. (2024) emphasize the importance of financial literacy in fostering financial inclusion and reducing reliance on high-interest informal finance. They suggest that financial education programs should focus on lower-income households, underscoring the positive correlation between general education, social capital, and financial literacy. They advocate for community-based interventions and integrate financial education with general education as effective strategies to enhance financial literacy. Additionally, Tes and Heng (2024) argue for the necessity of financial literacy education among Cambodian students, viewing it as a critical step toward developing financial management skills and facilitating informed financial decisions. They champion the cause of mandatory financial literacy education at all levels, highlighting its numerous benefits for individuals and the nation as a whole. Furthermore, Chet et al. (2023) explore the growing emphasis on financial literacy within the Cambodian education system, a trend supported by the National Bank of Cambodia and the Ministry of Education, Youth, and Sport. They investigate various factors influencing financial literacy, including economic conditions, family background, social networks, and media access, thereby shedding light on the complex nature of this essential skill.

While existing literature offers insights into financial literacy at a national level in Cambodia, research focusing specifically on the financial literacy of village savings group members is limited. Evaluating the awareness and practices of financial literacy (e.g., earning, saving, spending, borrowing, protection, and insurance) among these group members could yield valuable insights.

The literature also underscores challenges encountered by savings groups in other countries, such as inadequate capital, corruption, and limited government support. An investigation into the specific obstacles and challenges village savings groups face in Cambodia could inform policy interventions and support mechanisms to address these issues effectively.

By addressing these research gaps, this study could enhance the broader understanding of financial literacy, financial inclusion, and the role of savings groups in fostering sustainable financial behaviors and economic development in Cambodia.

RESEARCH METHODOLOGY

This study employed a quantitative research approach to assess the financial literacy awareness and practices among village savings group members in Cambodia. The study was conducted in the rural areas of Kampot and Kampong Thom provinces, known for their active village savings group activities. These two provinces are the project coverage areas of the NGO, which formed village savings groups in 27 villages in Kampot and 26 villages in Kampong Thom. Each village has one savings group with 12-20 members. The study covers 45 percent of the total villages with savings groups in the two provinces (13 villages in Kampot and 11 in Kampong Thom). Four to five respondents were selected randomly from each group, provided they agreed to be interviewed, as participation was voluntary. A total of 109 participants, mostly subsistence farmers, agreed to be respondents, with 55 participants from Kampot province and 54 from Kampong Thom province.

A survey questionnaire was developed and translated into the Khmer language to ensure effective communication with the respondents. The study administered the survey face-to-face.

The data collected from the survey were analyzed using Microsoft Excel and SPSS software. The analysis involved calculating frequency counts, sums, rankings, and percentages to provide a comprehensive understanding of the study participants' financial literacy awareness and practices.

EMPIRICAL FINDINGS

Profile of Respondents

As shown in Table 1, the survey respondents were primarily members of the community's Saving for Change (SfC) groups, with 56 percent being ordinary members and 25 percent being committee members and part of the Village Health Support Group. The remaining respondents were community facilitators and mobile food vendors who were also regular members of the SfC groups.

Table 1 : Categories Respondents

Respondents	*f*	*%*
Community Facilitators	10	9
Mobile Food Vendor	8	7
Saving for Change Committee member (local authority)	14	13
Saving for change member	61	56
Village Health Support Group members (VHSG)	13	12
Commune Committee for Women and Children member (CWCC)	2	2
Chief of Saving for Change	1	1
Total	**109**	**100**

Table 2 shows that the majority of the respondents (65 percent) were between the ages of 30 and 50, and most (88 percent) were married. Farming was the primary occupation for 82 percent of the respondents, indicating that the SfC groups had a strong representation from the agricultural community.

The data also revealed interesting insights into the household decision-making dynamics within the respondents' families. A significant percentage (78 percent) reported that both the husband and wife made decisions for the family, while 18 percent said that the females were the primary decision-makers in the households. This suggests a relatively collaborative decision-making process within the households, with women playing a significant role in financial and household decisions.

Table 2: Profile of Respondents

Age of respondents	***f***	***%***
Below 30 years old	14	13
30-49	71	65
50-60	13	12
Over 60	11	10
Total	**109**	**100**
Marital status	**f**	**%**
Married	96	88
Single	3	3
Widowed	8	7
Divorced/separated	2	2
Total	**109**	**100**
Educational Level	**f**	**%**
No Education	4	4
Some Primary School (1-6)	52	48
Some Secondary School (7-9)	27	25
Some High School(10-12)	20	18
Some Tertiary School (college)	6	6
Total	**109**	**100**
Occupation	**f**	**%**
Farming/gardening	84	82
Farming and buying and selling	6	6
Buy and sell	3	3
Animal raising	2	2
Farming and livestock production	2	2
Government employee/selling	1	1
House helper with allowance	1	1
Blacksmith	1	1
Buy and sell/hairdresser	1	1
Fishing	1	1
Total	**102**	**100**
Decision maker in the family	**f**	**%**
Male	4	4
Female	20	18
Both	85	78
Total	**109**	**100**

Earnings and Saving Practices of Respondents

As Table 3 shows, the survey results revealed a diverse range of monthly incomes among the respondents. While 16 percent earned US$100 or less per month, a larger proportion (28 percent) earned between US$100 and US$250, and 36 percent earned up to US$500 monthly. This suggests that the SfC group members had varying levels of financial resources, with a significant number earning a modest monthly income.

However, despite these earnings, the majority of the respondents (86 percent) did not have any savings in the Bank. This indicates a potential lack of access or trust in formal financial institutions in this community. Instead, the majority (77 percent) of the respondents reported that they kept their savings within the SfC group, highlighting the importance of these informal savings mechanisms for the community.

The low proportion of respondents with formal bank savings (14 percent) suggests that financial inclusion and access to banking services may be challenging for this population. This finding underscores the need to understand the barriers and perceptions that prevent these individuals from utilizing formal financial services and to explore ways to enhance their financial resilience through alternative savings and investment opportunities.

Table 3: Earnings and Saving Practices

Earnings and saving		
Monthly Income ($)	f	%
50-100	17	16
101-250	31	28
251-500	39	36
501-650	19	17
No response	3	3
Total	**109**	**100**
Have savings in the Bank	f	%
Yes	15	14
No	94	86
Total	**109**	**100**
Where else do you keep your money	f	%
In the savings group	72	77
In the house	19	20
In Tong Tin	1	1
Villager Association/Paddy Project	2	2
	94	**100**

Spending and Borrowing Practices

As depicted in Table 4, the survey results also provided insights into the spending and borrowing practices of the SfC group members. A significant proportion (67 percent) of the respondents reported having borrowed money, with 32 percent borrowing from banks and 31% borrowing from the SfC savings group.

The primary reasons for borrowing included adding capital to their businesses (19 percent), starting a small business (11 percent), cultivating their farms (17 percent), and covering social expenses such as weddings (11 percent). These findings suggest that the respondents utilized borrowing to support their livelihoods, invest in entrepreneurial activities, and address economic and social obligations.

Table 4: Spending and Borrowing Practices

Spending and borrowing		
Have borrowed money	f	%
Yes	73	67
No	36	33
Total	**109**	**100%**
Where do you borrow money? (multiple answers)	f	%
From Bank	33	32
From Saving Group	32	31
From Microfinance	25	25
From relatives	9	9
From Paddy Association	3	3
Reasons for borrowing money	f	%
To add capital to existing business	19	19
To cultivate farm	17	17
To start a small business	11	11
Socials (weddings, etc.)	11	11
To buy equipment	8	8
To buy moto	8	8
To buy medicines	5	5
To pay for clinic/hospital	5	5
To buy cows/chicken	3	3
To buy land	3	3
To pay other loans	3	3
To buy food	3	3
To pay school fees for children	2	2

Protection and Insurance Coverage

Table 5 reveals that 13 percent of the respondents have experienced farm losses due to calamities.

However, the survey showed that only 8 percent of the respondents have crop insurance coverage. Crop insurance is a critical risk management tool for farmers, providing financial protection against yield losses caused by various agricultural risks. The fact that most (92 percent) of respondents do not have crop insurance suggests a significant gap in access to and awareness of such insurance programs within this community.

Table 5 also shows that 17 percent of the respondents have some form of health or life insurance, while the remaining 83 percent do not. The relatively low rate of health and life insurance coverage among the respondents indicates room for improvement in increasing insurance penetration within this community.

Table 5: Access to Insurance Coverage for Protection

Protecting		
Have experienced farm losses due to calamities	f	%
Yes	14	13
No	95	87
Total	**109**	**100**
Do you have crop insurance?	f	%
Yes	9	8
No	100	92
Total	**109**	**100**
Do you have health/life insurance?	f	%
Yes	19	17
No	90	83
Total	**109**	**100**

Financial Concepts Awareness and Use of Mobile Applications

The survey also explored the respondents' familiarity with various financial concepts. As shown in Table 6, the majority of the respondents demonstrated a good understanding of concepts such as saving for change (86 percent), money remittance (80 percent), and interest on money (67 percent). This suggests that the SfC group members have a relatively strong grasp of fundamental financial principles.

Additionally, a notable proportion of respondents were familiar with more advanced concepts, such as bank deposits (52 percent) and microcredit (51 percent). This level of financial literacy indicates that the SfC group members have the potential to engage with a broader range of financial services and products, provided that the appropriate access and support mechanisms are available.

Table 6: Financial Concepts Awareness

Are you familiar with the following concepts? (Multiple answers)	*Yes answers*	*%*	*Rank*
Savings for Change	94	**86**	**1**
Money remittance	87	**80**	**2**
Interest on money	73	**67**	**3**
Bank deposit	57	**52**	**4**
Microcredit	56	**51**	**5**
Life/health insurance	38	**35**	**6**
Mobile phone banking	29	**27**	**7**
Investment scam	23	**21**	**8**
Pension	19	**17**	**9**
Financial app	17	**16**	**10**
Credit/debit card	15	**14**	**11**
Crop insurance	9	**8**	**12**
Inflation	7	**6**	**13**

Table 7 shows that the utilization of mobile financial applications among the SfC group members was relatively low, with only 28 members have the potential to engage with a broader range of financial services and products, provided of the 109 respondents reporting that they had downloaded and used such apps. The most common financial apps used were the Wing Bank app and ACLEDA mobile app, and 13 respondents had downloaded and used two or more applications (see Table 8).

This limited adoption of mobile financial technologies suggests that barriers or challenges may prevent the SfC group members from fully leveraging the potential of these digital tools. Factors such as access to smartphones, digital literacy, and the relevance of the available mobile apps to the community's specific needs could all influence the level of engagement with these financial technologies.

Table 7: Access to Financial Management Applications

Have you downloaded and used any financial management applications?	*f*	*%*
Yes	30	28
No	79	72
Total	**109**	**100**

Table 8: Financial App Used by the Respondents

Financial management applications downloaded and used	*f*	*%*
Wing Bank App	8	*27*
Wing Bank and ACLEDA mobile app	8	*27*
Wing bank, ACLEDA, Amret	1	*3*
Wing, ACLEDA, ABA Mobile	1	*3*
Wing, ACLEDA, Prasac Microfinance	1	*3*
ACLEDA Mobile	7	*23*
ABA Mobile	1	*3*
ABA and ACLEDA	2	*7*
Hattha Bank	1	*3*
Total	**30**	100

Barriers to Accessing Bank Services

The respondents cited several key barriers when asked about their reasons for not accessing bank services (see Table 9). The most common reasons included distance, as 31 percent of respondents stated that their house was too far from the Bank, highlighting the geographical accessibility challenges this rural community faces. Additionally, 28 percent of respondents reported that they could not borrow from the Bank without collateral property, indicating a significant obstacle to accessing formal credit. The lengthy loan processing time, with 24 percent of respondents mentioning that they had to wait a considerable period before the loan was released, also deterred them from using bank services. Travel time and cost, cited by 23 percent of respondents, and high bank fees, mentioned by the same percentage, were further reasons that discouraged the SfC group members from utilizing formal financial institutions.

Furthermore, 17 percent of respondents expressed a lack of trust in the Bank, while 12 percent believed banks often do not cater to low-income individuals. Table 10 shows the demographics of those respondents who said "they do not completely trust the bank." Most are females (94 percent), aged 30-49 (72 percent). Most of them have some primary school educational level (44 percent), and most are engaged in farming and gardening (83 percent).

Table 9: Barriers to Accessing Bank Services

Reasons for people not accessing bank services (Multiple answers)	*f*	*%*	*Rank*
Far from their house	34	**31**	**1**
Cannot borrow without collateral property	30	**28**	**2**
Long processing of documents/long waiting time for release of loan	26	**24**	**3**
Travel time and cost	25	**23**	**4.5**
Banks charge more fees	25	**23**	**4.5**
The Bank is more strict	23	**21**	**6**
More paperwork and bank requirements	22	**20**	**7**
Don't completely trust the Bank	18	**17**	**8**
Banks often do not cater to low-income individuals	13	**12**	**9**
No formal education/has limited knowledge	10	**9**	**10**
No money	8	**7**	**11**
Don't know how to use the technology	3	**3**	**12**

Table 10: Demographics of Respondents Who Say "They Do Not Completely Trust The Bank."

Gender	***f***	***%***
Male	1	6
Female	17	94
Total	**18**	**100**
Age of respondents	***f***	***%***
30-49	13	72
50-60	4	22
Over 60	1	6
Total	**18**	**100**
Educational Level	***f***	***%***
Some Primary School	8	44

Some Secondary School	5	28
Some High School	4	22
Some Tertiary School	1	6
Total	**18**	**100**
Occupation	***f***	***%***
Farming/gardening	15	83
Government employee	1	6
House helper	1	6
No response	1	6
Total	**18**	**100**

Knowledge and Skills Respondents Want to Learn

As shown in Table 11, most SfC group members were interested in acquiring knowledge and skills related to agriculture and food processing. This indicates a strong focus on enhancing their livelihood capabilities, particularly in areas closely connected to their primary occupations.

Table 11: Knowledge and Skills Respondents Want to Learn

Knowledge/skills	*f*	*%*
Agricultural skills	85	78
Food processing	63	58
Selling and marketing	50	46
Food handling/sanitation and hygiene	37	34
Calculation of Interest	32	29
Business Management	28	26
Bookkeeping/Income statement preparation	26	24
Basic computer skills/use of a laptop	25	23
Basic Excel	16	15
How to speak English	13	12
How to use a smartphone	1	1

DISCUSSION

The study highlights the crucial role of informal savings groups like SfC in advancing financial inclusion, especially for marginalized communities (Oranu et al., 2020; Bwalya & Zulu, 2021; Okuna et al., 2023). The reliance on SfC for savings and credit underscores their importance as alternative financial mechanisms. Barriers to accessing bank services—such as distance, collateral requirements, lengthy procedures, and lack of trust—reflect challenges noted in existing literature (Royal Government of Cambodia, 2019; Okuna et al., 2023; Oranu et al., 2020). This points to the urgent need for targeted interventions to improve the accessibility and affordability of formal financial services. Furthermore, the study shows that SfC members are keen to enhance their financial knowledge, particularly in agriculture and food processing. This result aligns with the literature's call for context-specific financial education programs tailored to community needs (Samreth et al., 2024; Tes & Heng, 2024), highlighting the potential impact of integrating financial education with livelihood development initiatives. Moreover, the study supports broader literature that emphasizes the positive link between financial literacy and economic development outcomes such as poverty reduction, income generation, and asset building (Bunyamin & Wahab, 2022; Wang et al., 2022; Hasan et al., 2021).

Although the literature underscores the role of savings groups in facilitating formal financial inclusion, the study shows that SfC members had a low uptake of formal savings and limited use of mobile financial applications. This indicates that participation in savings groups may not necessarily lead to greater engagement in Cambodia's formal financial institutions or digital financial tools. Additionally, the strong interest in agriculture and food processing knowledge among SfC members contrasts with the broader literature, which often focuses on general financial management skills. It underscores the importance of customizing financial education to meet the specific occupational needs of the target population.

The study offers valuable micro-level insights into the financial literacy, practices, and challenges of village savings group members in Cambodia, a demographic often overlooked in broader national surveys. By concentrating on this specific group, the research provides a detailed understanding of their financial behaviors and the obstacles they face. It highlights the specific barriers that hinder SfC members' engagement with formal financial institutions and digital financial services, such as lack of trust, collateral requirements, and geographical distance. These context-specific challenges are essential for developing effective strategies to enhance financial inclusion.

CONCLUSION

"Financial inclusion is a strong enabler of addressing the country's economic growth and reducing inequality," according to the Credit Bureau Cambodia chairwoman and NBC governor Dr. Chea Serey, as reported by Phnom Penh Post. This statement underscores the national goal of improving financial literacy and inclusion through a more determined, multisectoral, and inclusive approach, reaching out to the underserved corners of the country.

The study's findings provide valuable insights into the financial practices, literacy, and inclusion of the savings group members in the surveyed community. A key strength identified is the relatively strong financial literacy of the respondents, indicating the potential to further build upon this knowledge base and expand the financial capabilities of the savings group members.

However, the study also revealed significant barriers to financial inclusion and access to formal financial services. Factors such as geographical distance from banks, lack of collateral, lengthy loan processing, high costs, and perceived unfriendliness of banks were identified as major deterrents to the utilization of formal financial institutions. These findings align with existing literature on the challenges faced by marginalized communities in accessing formal financial services (Royal Government of Cambodia, 2019; Okuna et al., 2023; Oranu et al., 2020). This points to the urgent need for targeted interventions to improve the accessibility and affordability of formal financial services.

The study highlighted gaps in insurance coverage, particularly for agricultural and health risks, leaving the respondents vulnerable to financial shocks. Strengthening the availability and uptake of relevant insurance products could enhance the financial resilience of the savings group members. Furthermore, the limited use of mobile financial applications among the respondents also points to the need to address underlying challenges, such as digital literacy and the relevance of existing mobile solutions, to unlock the potential of digital financial services for this community.

The reliance on informal savings groups like SfC for savings and credit underscores their importance as alternative financial mechanisms, as noted in the existing literature (Oranu et al., 2020; Bwalya & Zulu, 2021; Okuna et al., 2023). However, the study shows that participation in savings groups may not necessarily lead to greater engagement with formal financial institutions or digital financial tools in Cambodia, which is an important nuance compared to the broader literature.

It is important to note that this study was conducted within a specific rural community, and the findings may not be fully generalizable to other contexts. Future research could explore the financial practices and inclusion of savings group members in different geographical regions or socioeconomic settings to gain a more comprehensive understanding of the financial landscape.

Moreover, further research could delve deeper into the root causes of the identified barriers, such as the underlying reasons for the lack of trust in formal financial institutions. This could inform the development of more targeted interventions and policy recommendations to address this population's unique needs and challenges.

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The Determinants of Tax Revenue in Southeast Asia: The Role of Government Effectiveness and Human Development

Rido Thath*

ABSTRACT

Purpose: *This study examines the determinants of tax revenue in Southeast Asia, focusing on the impact of human development and government effectiveness on tax revenue.*

Methodology: *The panel data method, specifically the fixed effects and random effects models, was employed to examine the determinants of tax revenue. The study used data (1992 to 2022) from eight Southeast Asian countries retrieved from the World Bank's World Development Indicators and the International Monetary Fund online database.*

Findings: *This study reveals a positive relationship between human development and tax revenue and government effectiveness and tax revenue.*

Implications: *The results of this study carry important implications for policymakers. They suggest that enhancing government effectiveness and human development, which encompasses income, health, and education, can lead to an increase in tax revenue. Policymakers are therefore encouraged to prioritize the implementation of policies that bolster government effectiveness, such as the use of modern technology in tax administration, and economic policies that not only boost income but also improve health and education outcomes.*

Originality: *This study contributes to the existing literature by providing evidence on the relationship between tax revenue and key policy variables. Moreover, it has tested data sets and variables that differ from those used in previous panel data analyses.*

Limitations and directions for future research: *This study provides valuable evidence on various factors that affect tax revenue. However, based on data availability, other policy variables, such as the quality of tax administration, tax exemption, and incentives, should be included to explore their impact on tax revenue.*

Keywords: Tax revenue; Human Development; Government effectiveness; Southeast Asia

INTRODUCTION

Tax revenue is one of the major sources of government budgets in most countries, except for several resource-rich economies that can generate revenue from natural resources for financing public expenditure (Devarajan & Do, 2023). The government needs budgets to supply various services, including financing essential investments in education, health, and physical infrastructure to promote economic growth and sustainable development to improve the welfare of citizens. The size of the budget needed differs from government to government grounded on their policy priorities, ideologies, and social structure, such as the change in the demographic composition, and based on external factors such as the international

* Rido Thath, Ph.D, CamEd Business School
Email: trido@cam-ed.com

trade regimes and geopolitics, and the incidence of the outbreak of pandemics such as the COVID-19, which generally pressure the government to increase public expenditure (Crowe et al., 2022; Dougherty et al., 2022; Fu & Chang, 2021). In a more social-oriented leftist government, more considerable tax revenue is needed as the government desires to provide most of the public services to the people, while in a more liberal government, a lower budget is required to provide public services as the government tends to be smaller and most services are provided by the market or private sectors and the responsibility of the individual (Högström & Lidén, 2023). Regarding the demographic composition, the more aging the society is, the higher the budget the government needs, while the revenue from taxation is lower due to the decreasing working-age population (Crowe et al., 2022; Dougherty et al., 2022).

The issue of taxation is complex and multifaceted, and it depends on the development stage of the economy. Developing economies tend to mobilize lower tax revenue as they depend more on small-scale and subsistence farming, making it difficult for the government to impose a tax, and the informal sector, most of which are not taxable, accounts for a sizeable share of the economic pie. These factors render lower tax revenue in many developing economies. According to Besley & Persson (2014), in low-income economies, tax revenue generally comes from 10 to 20 percent of the GDP, while high-income countries can collect as much as 40 percent of the GDP. The causes of the relatively low tax revenue in developing countries vis a vis their developed counterparts go beyond economic reasons; political, sociological, and cultural factors also influence the effort of tax collection; developing countries, for instance, have weaker institutions and their policies are less transparent, and corruption is rampant, rendering the leakage of the already small tax revenue (Ajaz & Ahmad, 2010; Besley & Persson, 2014). However, developing countries need larger budgets for financing necessary investments, such as the infrastructure investment that is one of the main drivers of economic growth and development (Wang, 2002); since the infrastructure is generally not well-developed in many developing countries, its investment was found to have a relatively more significant impact than the same magnitude of investment in developed countries (Han et al., 2021).

As adequate tax revenue cannot be mobilized to deliver public services, finance the infrastructure, and other investments for development purposes, developing countries are pressured to explore ways to increase tax revenue as well as other alternative sources of revenue, probably the non-tax revenue, which is defined as all forms of government revenue except for taxation. It includes user charges, fees, fines, and revenue from government capital and funds. In broader terms, non-tax revenue includes sovereign debt (Deng & Smyth, 2000). Non-tax revenue is one of the most important sources of revenue in developing countries. However, the non-tax revenue generated from resource extraction was found to be anti-democratic (Prichard et al., 2018), which is also anti-growth, as democracy was found to have a positive relationship with economic growth (Acemoglu et al., 2019; Barro, 1996). Otherwise, the only available option is to reduce public expenditure and scale down public services, which will negatively affect the welfare of the people and cause negative repercussions on the popularity and stability of the government. Thus, taxation must be examined thoroughly, given its critical role in maintaining economic stability and sustainability. Understanding the factors influencing tax revenue is essential for governments seeking to improve revenue without stirring public discontent or adverse repercussions.

The economy of Southeast Asia has grown rapidly, and after the COVID-19 pandemic, the International Monetary Fund (IMF) expects the region to be the fastest-growing in the world (Menon, 2023). The majority of the countries in the region, once among the poorest of the poor, have experienced rapid economic growth and social and structural transformation. Poverty has significantly reduced, and the most underdeveloped countries in the region have successfully graduated from a low-income to at least a lower-middle income status. As development proceeds, the pressure on each country to increase tax revenue is mounting. Along with growing income, people tend to demand more and better-quality public services, and problems regarding the demographic transformation, such as aging and decreasing working-age population, emerge, which further depress the government revenue. This development indicates that knowledge of taxation and its determinants is important; however, previous studies exploring the determinants of tax revenue in

Southeast Asia are limited. Only a few studies, such as studies by Anh and Thinh (2018), Minh Ha et al. (2022), and Saptono and Mahmud (2021), were relevant to the context of Southeast Asia. Thus, the current study seeks to enhance the understanding of taxation by investigating the factors influencing tax revenue in Southeast Asia. Specifically, we examine the relationship between tax revenue, the Human Development Index (HDI), and government effectiveness. Unlike previous studies, this study uses a more extended period and more recent data to estimate the determinants of tax revenues, and the results shed more light and contribute to the body of the literature on determinants of tax revenue.

Following the introduction, the next section reviews the determinants of tax revenue in general and specifically in Southeast Asia. Subsequently, the methodology, data sources, data analysis, and discussion are presented, and finally, the study concludes with policy implications.

LITERATURE REVIEW

The Determinants of Tax Revenue

The literature on the determinants of tax revenue is rich. It shows that tax revenue issues are complex and multi-faceted. Various factors, including economic, political, institutional, socio-cultural, external, legal, and business cycles, were found to affect the level of tax revenue.

The economy's structure determines the tax revenue level that the government collects. Economies with a larger share of value-added to the manufacturing sector can collect higher tax revenue as it is less complicated to collect tax from manufacturing firms than from small-scale farming households. Thus, if the value-added of the agriculture, fishing, and forestry sector accounts for a larger share of the national income, which is a typical characteristic of many developing countries, tax revenue is likely to be smaller. In addition, economies with a high ratio of the informal sector, which is also a typical characteristic of many developing countries, can collect lower tax revenue as it is difficult to tax the informal sector. This is one of the factors contributing to lower tax revenue in developing countries (Tanzi & Zee, 2001).

The main objective of taxation is to mobilize revenue to finance public services (Burgess & Stern, 1993). However, the government may use its authority to collect tax for political purposes rather than raising revenue for public expenditure, such as financing income redistribution programs or providing incentives to specific industries or firms that are considered strategically important for the economy (Avi-Yonah, 2006; Gwartney & Lawson, 2006; Hemels, 2017). For political reasons, the government may even forgo tax revenue to promote a strategic industry. Related to political factors, the quality of public institutions also plays a vital role in tax administration. In the study in Sub-Saharan Africa, Tagem and Morrissey (2023) found that institution variables, including the level of corruption, equitable distribution of resources, accountability, and democracy, were among the most critical determinants of variation of tax capacity in different countries. In addition to institutional factors, culture is found to influence taxation. Culture is context-based; thus, it works differently in different economies. Social stigmatization, an example of a specific case of culture, is perceived differently in the US and Germany. In the case of tax evasion, social stigmatization, i.e., announcing a taxpayer's activities in the media, for instance, works better in the US than in Germany (Ermasova et al., 2021). It was found that culture can influence the morality of taxpayers, and tax morale affects the compliance and evasion of taxes (Alasfour et al., 2016; Torgler, 2002).

Besides economic, political, and institutional factors, tax laws and regulations determine what and who to be taxed, thus also affecting tax revenue. An economy with a broad tax base can raise more taxes at lower administrative costs than those with a narrow tax base. In the case of sales and individual income tax in the US, the variation of tax revenue is associated with how the tax base is composed (Kwak, 2013).

In addition, tax revenue is generally associated with the business cycle, in the Spanish case, during the economic boom, the government can collect higher revenue, while a recession would see government revenue declining (Durán-Cabré et al., 2020). These periods of boom and bust are linked to external or global factors. For example, during a global pandemic such as COVID-19, most economic activities have slowed down or stopped, many firms could not generate profit, cross-border trades were restricted, and government tax revenues declined (Stone & Saxena, 2020). Foreign aid or Official Development Assistance (ODA) is another external factor. The amount of aid varies depending on the economic condition of donor countries and their relationship with recipient countries. ODA is disbursed through grants, concessional loans, and technical assistance. Grants, for example, were found to have a negative relationship with tax revenue (Benedek et al., 2014; Thornton, 2014) because the government that relies on grants tends to make less effort to collect tax. Tax is not popular among the citizens; the government that increases tax rates and tax bases tends to be less popular with their voters and has to be more transparent and accountable to taxpayers; thus, if grants are available, the government will try not to increase tax revenue. Unlike grants, concessional loans, regardless of the concession level, were found to have a positive relationship with tax revenue (Thornton, 2014). As the government must pay back the loan, they will likely make more effort to collect tax to repay the loan, such as trying to improve the business environment so that firms will be more profitable and able to pay more taxes or to improve the capacity of tax administrators, and thus enhance the efficiency of tax collection and increase the volume of tax revenue collected. Similarly, external debt stock was found to have a positive relationship with tax revenue. As debts increase, the government is pressured to reduce them; thus, the government may become more prudent in taking more loans by considering only loan that has larger benefits or positive internal rate of returns or may find ways to improve tax revenue collection as well as reduce leakage from tax administration. The latter is linked to government effectiveness, one of the variables used to measure the quality of governance. Although a study in the context of Southeast Asia by Syadullah (2015) found an inconclusive effect of government effectiveness, it was expected to have a positive correlation with tax revenue; improved effectiveness will increase government revenue in various ways such as efficient collection of revenue or reducing leakage.

Other critical external factors besides ODA are Foreign Direct Investment (FDI) and Trade. FDI was found to have increased tax revenue (Camara, 2023); the channels through which FDI increases tax revenue are job creation, the increased productivity of workforces, and corporate and indirect taxes. Trade is the sum of imports and exports and has a significant relationship with tax revenue. However, the direction of the impact differs. If trade is associated with liberalization, reducing tariffs, and other trade barriers, the government may lose the sources of revenue that they once had collected from imposing tariffs (Asghar & Mehmood, 2017; Gropp et al., 1999; Karimi et al., 2016). Thus, the relationship is negative. Nonetheless, if trade enables the country to benefit from economies of scale and comparative advantage, the standard gain from trade argument, the tax revenue will likely increase. That means if trade improves economic activities, the government can increase tax revenue from various taxes such as income, salary, and profit taxes.

Inflation, although unfavorable, was found to have a positive relationship with tax revenue because when the general price level is rising, the tax bracket will be widened, which means that more people will be included in the tax bracket; for instance, their income would reach a certain level that requires them to pay taxes. Thus, the government will be able to mobilize increasing tax revenue. However, depending on the magnitude of inflation, too high inflation may cause severe economic consequences, particularly when investors are uncertain about their future investment and people's livelihoods are eroded due to the rising cost of living (Prezas, 1991). Consequently, investors may choose to decrease their investments, while consumers may decide to reduce their consumption. This reduction in investment and consumption could lead to a decline in government tax revenue, and in the most severe situation, it could trigger an economic crisis.

Finally, the stage of economic development also influences tax revenue. Generally, the more developed the economy, the higher tax revenue the government can mobilize. One of the widely used indicators of development, the Human Development Index (HDI) was found to have a positive relationship with tax revenues (Ibadin & Oluwatuyi, 2021). There are different channels through which HDI can positively affect tax revenue. As HDI is a composite index of education, health, and income, its effect on tax revenue will be through these three development outcomes. Separately, when people are educated, they are more likely to comply with tax payments, which can reduce the occurrence of avoidance and evasion. In addition, educated and healthy labor forces are more productive, which translates into higher income and output, contributing to increased tax revenue. In general, if a tax system is progressive, higher-income individuals pay a higher proportion of their income in taxes than lower-income individuals. As a result, the government can mobilize more revenue from those with higher incomes. In addition, with high income, people will contribute to increased government tax revenue through various ways such as increased consumption and investment. In short, there is a positive relationship between HDI and tax revenue across various channels.

In conclusion, various factors affect tax revenue, categorized into economic, political, institutional, socio-cultural, external, legal, and business cycles. Based on the available data, this study selects variables relevant to the region to analyze after reviewing the studies on the determinants of tax revenue in Southeast Asia.

The Determinants of Tax Revenue in Southeast Asia

Studies on the determinants of tax revenue in Southeast Asia are relatively scarce. In general, factors that were found to positively affect tax revenues include trade openness, FDI, the ratio of foreign debt to GDP, and the share of value-added in industry to GDP; while ODA and the share of agriculture value-added have a negative relationship with tax revenue (Minh Ha et al., 2022; Saptono & Mahmud, 2021). In addition, the study by Syadulla (2015), focusing on the relationship between governance and tax revenue, found various variables such as corruption, voice and accountability, and political stability to have significant negative effects on the tax ratio, while the variables that have a positive impact on the tax ratio include the rule of law and quality of regulation. However, Maryantika and Wijaya (2023) found no impact of corruption on tax revenue in the case of Indonesia, suggesting an inconclusive relationship between corruption and tax revenue. In addition, HDI was used as one of the explanatory variables and found to be positively correlated with tax revenue in the study on the case of Indonesia by Lestari and Yolanda (2023).

In conclusion, in Southeast Asia, factors influencing tax revenues include trade openness, FDI, the ratio of debt to GDP, agriculture, and industry value added, ODA, governance, and HDI. Since HDI was found to have a positive relationship with tax revenue, the current study is expected to contribute to the literature on the determinants of tax revenue in Southeast Asia by incorporating HDI and government effectiveness as the main policy variables to extend the econometric analysis of Minh Ha et al. (2022). In addition, the current study analyzed the more extended period and recent data sets.

Current Tax Revenue in Southeast Asia

The effort to raise tax revenue differs from region to region and among different groups of economies. According to the revenue statistics published by OECD (2023), the tax revenue as the ratio to GDP in 2021 was the highest in OECD countries (34.1 percent), followed by countries in Latin America and the Caribbean (21.7 percent), Asia-Pacific (19.8 percent), and Africa (16.0 percent). However, some Sub-Saharan African economies performed better than Latin American countries in tax revenue collection (Sen Gupta, 2007), indicating that the regional average may overlook a specific country's tax effort. Nonetheless, there is no comparison between Southeast Asian tax revenue and other regions.

Southeast Asia is one of the fastest-growing regions. This region is home to a heterogeneous group of countries in terms of languages, cultures, government systems, colonial legacies, and other aspects. In terms of income, the region comprises lower-middle-income, upper-middle-income, and high-income countries.

The rapid development and transformation in living standards and demographics across Southeast Asia exert considerable strain on public revenue and expenditure. On the spending side, governments face pressure to enhance services, requiring budget increases. However, revenue growth has not kept pace with the rising expenditure.

The Figure 1 shows the tax revenue trend as a percentage of GDP in eight Southeast Asian countries. Except for Myanmar, which has the lowest rate of tax revenue, the rate in the other countries fluctuates from around 10 percent to around 20 percent of GDP. The tax revenue in Cambodia has increased gradually from around 8 percent in 2002, when the data was first available, to about 18 percent in 2020, the highest among countries in the region. However, when the average rate is computed, it reveals that Thailand, Vietnam, and Malaysia have the highest average rate of tax revenue during the study period, followed by the Philippines, Cambodia, Indonesia, and Lao PDR. The rate is somewhat consistent with the general tendency that the more developed economies collect considerable tax revenue.

In sum, there is still room for increasing tax revenue in Southeast Asia since the ratio of tax revenue to GPD is still below the average of high-income countries. For this reason, it is crucial to understand the determinants of tax revenue.

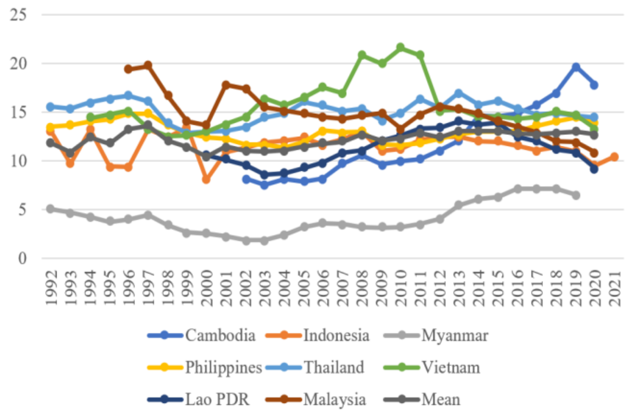

Figure 1: Tax revenue (percentage of GDP) in Southeast Asia

Source: World Bank's World Development Indicators and IMF

METHODOLOGY

Data Collected

The data used in this study is the panel data publicly available in the World Bank's World Development Indicators online database, spanning from 1992 to 2022 for eight Southeast Asian countries: Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Thailand, and Vietnam. Only the data on tax revenue, such as the percentage of GNI of Malaysia and Lao PDR, were retrieved from the IMF database since it is not available in the World Development Indicators online database. The panel is an unbalanced one as the availability of the data is different among the eight countries in terms of the year.

Statistical Method Used

Based on Min Ha et al. (2022), this study used panel data analysis to estimate the following regression equation.

Where:

$$TAX_{it} = \beta_0 + \beta_1 ODA_{it} + \beta_2 FDI_{it} + \beta_3 TRA_{it} + \beta_4 INF_{it} + \beta_5 MAN_{it}$$
$$+ \beta_6 AGR_{it} + \beta_7 DEB_{it} + \beta_8 HDI_{it} + \beta_9 GEP_{it} + \varepsilon_{it}$$

i is the country (i = 1, 2, ...,8 for eight countries in Southeast Asia)

t is the year (t = 1, 2, ...,31 is the for the years from 1992 to 2022)

TAX is the tax revenue (percentage of GDP), a dependent variable

ODA is the net official development assistance received (percentage of GNI) and is expected to have a negative relationship with tax revenue

FDI is the net inflow of foreign direct investment (percentage of GDP) and is expected to be positively related to tax revenue

TRA is the sum of exports and imports of goods and services (as a percentage of GDP) and is expected to have a positive relationship with tax revenue

INF is the inflation measured by the consumer price index (annual percentage) and is expected to have a positive relationship with tax revenue

MAN is the manufacturing value-added (percentage of GDP) and is expected to be positively related to tax revenue

AGR is the agriculture, forestry, and fishing value-added (percentage of GDP) and is expected to have a negative relationship with tax revenue

DEB is the external debt stock (percentage of GNI). It is expected to be positively related to tax revenue. Due to data availability, the central government's total debt (percentage of GDP) rather than the external debt stock was used for Malaysia

HDI is the UNDP's Human Development Index (from 0 to 1, with 1 being the highest HDI) and is expected to be positively related to tax revenue

GEP is the government's effectiveness (percentile rank) and is expected to have a positive relationship with tax revenue. According to the World Bank, government effectiveness reflects people's perceptions of public service quality, civil service quality, independence from political influence, policy formulation and implementation quality, and the government's commitment to credibility (World Bank, n.d.)

ε_it is the disturbance terms

RESULTS AND DISCUSSION

Results

Table 1 shows the descriptive statistics of the variables. As shown, the average tax revenue in the region is about 12 percent of GDP, with a minimum of about two percent and a maximum of about 22 percent. In addition, data on several variables are worth noting. ODA accounts for about 2.7 percent of GNI on average, with a minimum value of -0.6 percent, indicating that the country is a donor, not an aid recipient, as the country sent ODA to other countries. FDI also shows that Southeast Asian countries not only receive FDI but also invest in other countries. The variable trade (TRA) indicates that Southeast Asian countries are very open to trade, with an average trade volume of about 100 percent of their GDP, and the maximum is as large as about 220 percent of the GDP. The external debt stock variable DEB shows a heterogeneous picture of the region. DEB averages around 63.8 percent of the GNI. However, the interval is very large, with a minimum value of about 43 percent and a maximum value of about 267 percent. This large interval reflects different features of each country's budget and public financial policies, as well as the ability of the country to access finance and service the debt. The HDI index shows an average of 0.576, with a minimum value of 0.356, indicating that the country is in the group of Low Human Development. This low HDI is because the data ranges from 1995 to 2021; the least developed countries in the region have improved their development indicators, and in 2021, all countries were at least in the group of Medium Human Development. Southeast Asian countries have not performed well, as indicated by the percentile rank of government effectiveness. On average, the percentile rank is about 43.4, which means that the regions perform better than 43.4 percent but worse than 56.6 percent of the countries in the ranking; however, the data for each country shows that many countries are in the percentile rank of lower than 30 percent.

Table 1. Descriptive statistics

Variable	Obs.	Mean	Standard Deviation	Min	Max
TAX	208	12.201	4.044	1.868	21.592
ODA	237	2.717	3.771	-0.643	17.520
FDI	239	3.951	3.051	-2.757	14.146
TRA	216	99.768	44.668	11.855	220.407
INF	231	7.639	12.840	-1.710	125.272
MAN	207	20.196	6.920	5.455	31.953
AGR	230	20.032	11.456	7.241	57.140
DEB	231	62.790	43.110	16.469	267.137
HDI	240	0.576	0.109	0.356	0.804
GEP	184	43.353	23.230	1.914	85.292

Source: World Bank's World Development Indicators and IMF

Note: Tax revenue as a percentage of the GNI of Malaysia and Lao PDR was retrieved from the IMF database since it was not available in the World Bank's World Development Indicators online database.

To explore the relationship between tax revenue and the explanatory variables, we used panel data regression to estimate the fixed effects and random effects models. The Hausman test was then used to compare the appropriateness of the fixed effects and the random effects models, and the pooled OLS was estimated to compare the coefficients of the three models.

Table 2 shows the results of the Hausman test. According to the result, the random effects model is preferable for the analysis. Table 3 shows the estimated coefficients of the three models: the random effects, the fixed effects, and the pooled OLS.

Table 2: The results of the Hausman test

Variable	Fixed Effects Model (1)	Random Effects Model (2)	Difference (1)-(2)	SE
ln_ODA	0.030	0.005	0.025	0.012
ln_FDI	0.035	0.043	-0.008	0.008
ln_TRA	0.102	0.225	-0.122	0.083
ln_INF	0.042	0.037	0.006	0.009
ln_MAN	-0.107	-0.194	0.087	0.177
ln_AGR	-0.111	-0.081	-0.029	0.092
ln_DEB	0.018	0.045	-0.027	0.043
ln_HDI	1.072	0.543	0.529	0.311
ln_GEP	0.212	0.272	-0.060	0.046
Note: chi-squared = 10.820; probability > chi-squared = 0.288				

Source: Author's calculation

As the random effects model is preferable, its coefficients will be analyzed, while the fixed effects model and the pooled OLS will only be used for comparison and reference. Table 3 shows insufficient evidence of the significant relationship between ODA, the value added of agriculture, forestry, and fishing, and debt stock on tax revenue. A positive and significant relationship exists between FDI, trade, and inflation on tax revenue. That is, the larger the inflow of FDI, the larger the tax revenue the government can collect. Also, the increase in trade volume, the sum of imports and exports, will allow the government to collect various taxes, thus increasing tax revenue. Inflation also had a positive and significant relationship with tax revenue. As prices rise, the tax base will be enlarged so the government can collect more tax revenue.

Manufacturing value added was found to have a significant and negative relationship with tax revenue; that is, when the share of manufacturing value added increases, tax revenue will decline. HDI, which characterizes the development stage of countries, was found to have a significant and positive relationship with tax revenue. That means the higher the HDI, the larger the tax revenue the government can collect. HDI is a composite index of income, health, and education. A higher HDI indicates that the country is more developed with higher income and more productive workforces; therefore, the government can collect more tax revenue. It also means that when workforces are more productive, healthier, and better educated, they can contribute to a larger GDP and better understand the importance of tax revenue, thus complying well with the tax obligation. Therefore, higher HDI is correlated positively with larger tax revenue.

Table 3: The determinants of tax revenue

Variable	Random Effect	Fixed Effect	Pooled OLS
ln_ODA	0.0054 (0.0124)	0.0305^{*} (0.0173)	0.0054 (0.0124)
ln_FDI	0.0430^{**} (0.0168)	0.0346^{*} (0.0186)	0.0430^{**} (0.0168)
ln_TRA	0.2248^{***} (0.0422)	0.1025 (0.0935)	0.2248^{***} (0.0422)
ln_INF	0.0369^{***} (0.0142)	0.0425^{**} (0.0169)	0.0369^{***} (0.0142)
ln_MAN	-0.1937^{***} (0.0586)	-0.1070 (0.1864)	-0.1937^{***} (0.0586)
ln_AGR	-0.0815 (0.0733)	-0.1108 (0.1174)	-0.0815 (0.0733)
ln_DEB	0.0446 (0.0341)	0.0179 (0.0550)	0.0446 (0.0341)
ln_HDI	0.5432^{***} (0.1205)	1.0724^{***} (0.3334)	0.5432^{***} (0.1205)
ln_GEP	0.2722^{***} (0.0434)	0.2120^{***} (0.0635)	0.2722^{***} (0.0434)
Constant	1.3285^{***} (0.3923)	0.2979^{***} (0.6007)	1.3285^{***} (0.3923)
Number of obs.	114	114	114
R-sq	Within = 0.5406 Between = 0.9966 Overall = 0.8621	Within = 0.5666 Between = 0.8093 Overall = 0.7238	R-sq = 0.8621 Adj R-sq = 0.8502

Note: *, **, *** significant at 10%, 5% and 1% levels, respectively

Source: Author's calculation

Discussion

This study found that FDI has a positive relationship with tax revenue. This finding is consistent with previous studies in developing countries (Camara,

2023) and Southeast Asia (Minh Ha et al., 2022). The same positive impact was also found in the case of eight West African countries (Okey, 2013). The inflow of FDI will boost economic activities and bring various benefits to the economy through job creation, technology transfers, and exports; thus, larger tax revenue will possibly be mobilized.

In addition to FDI, trade was also found to have a positive relationship with tax revenue. The literature on the impact of trade openness or liberalization has shown mixed results. For instance, Khattry and Rao (2002) found that low-income and upper-middle-income countries experienced declining tax revenue after liberalizing, which is contrary to the findings of this study. However, the result of the current study is consistent with those of Gnangnon and Brun (2019) and Gaalya et al. (2017), which found that countries that are open to trade, theoretically, will benefit from the gain from trade in terms of improved welfare of the people, the benefit of their comparative advantage, and economies of scale.

Inflation was found to be positively correlated with tax revenue. It has a distortion effect by shifting taxpayers to a higher tax bracket, which they usually have to pay higher taxes; thus, inflation will increase both the real tax paid and the marginal tax rate (Beer et al., 2023). In addition to rising tax revenue, the government benefits from inflation by reducing real public debt. However, this benefit is found to be temporary. If inflation is persistent, it will cause negative consequences to the economy. As taxation is already considered a burden to the taxpayers, inflation will be another burden; the two burdens will double the pain (Robson & Laurin, 2023).

The share of manufacturing in the GDP is expected to have a positive relationship with tax revenue. As manufacturing is associated with more modern and larger-scale industries, it is easier for the government to tax manufacturing than imposing tax on small-scale agriculture. Therefore, the coefficient of the manufacturing is expected to be positive. In Southeast Asia, studies such as those of Min Ha et al. (2022) and Saptono and Mahmud (2021) found that the manufacturing value added contributes to increasing tax revenue. However, this study found the opposite result. The reason may be that as many governments liberalize trade and provide incentives to manufacturing firms through tax holidays or reducing profit tax to encourage them to increase output and export, they see decreasing tax revenue from manufacturing sectors.

This study is different from Min Ha et al. (2022) and Saptono and Mahmud (2021) since HDI was used as one of the regressors rather than the per capita income, education, and life expectancy separately. HDI is a composite index that captures income, education, and health outcomes. It was found to have a positive and significant relationship with tax revenue. Studies that analyze the relationship between HDI and tax revenue are scarce. In the case of Turkey, Bayar and Sasmaz (2022) found an interplay between tax revenue and HDI; that is, higher HDI will increase tax revenue, while higher tax revenue will increase human development.

Finally, it was found that government effectiveness has a positive relationship with tax revenue. If the government effectiveness, which is the percentile rank of each country vis a vis the group, increases, tax revenue will also increase. In the study of governance and tax revenue in ASEAN countries, Syadulla (2015) used different governance indicators as explanatory variables for tax revenue; government effectiveness was one of the variables, but it was found to have no significant relationship with tax revenue. The study by Yaru and Raji (2022) in Sub-Saharan Africa confirms that no significant relationship exists between government effectiveness and tax revenue. The authors examined various governance indicators and found that only corruption significantly negatively impacts tax revenue. In contrast, other factors, such as political stability and absence of violence, rule of law, regulatory quality, voice, and accountability, had no significant relationship with tax revenue. Therefore, the current study provides evidence of the significant and positive relationship between government effectiveness and tax revenue.

CONCLUSION AND POLICY IMPLICATIONS

Tax is one of the most important sources of government revenues. As the pressure to mobilize tax revenue is mounting and many governments face mounting budget deficits, there is an increasing need to understand the factors influencing the revenue. Government effectiveness, one of the significant determinants of tax revenues, plays a vital role in revenue mobilization. Improving effectiveness is one of the policy options that the government can use to prove its accountability to taxpayers, maximize tax revenue, and reduce revenue leakage. When the government can mobilize revenue to finance public services expenditure as well as public investment that will improve the well-being of the people, that is, improving HDI, the government will be able to mobilize increasing revenue to further finance their capital and current expenditure needs. Thus, efficient tax revenue mobilization will produce an inducement effect that will keep the economy in a virtuous cycle of development.

Like this study, cross-country analyses overlook variables that influence tax revenue in individual countries. For instance, countries may implement different policies and utilize different technologies for tax collection. Therefore, future studies may consider conducting in-depth analyses within a single country, incorporating variables that are difficult to analyze in a cross-country context, such as specific tax policies and structures.

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The Effect of Corporate Social Responsibility Performance on Tax Avoidance in Cambodia: The Moderating Role of Board Independence

Zubir Azhar * and Monileak Siem**

ABSTRACT

Purpose: *This study seeks to explore the connection between corporate social responsibility (CSR) performance and tax avoidance (TA) among a sample of Cambodian companies listed on the Cambodian Securities Exchange (CSX). It also investigates whether board independence moderates the relationship between these two variables.*

Methodology: *Several statistical analyses have been conducted using the effective tax rate (ETR) and extracting accounting data from these companies' annual reports.*

Findings: *The study reveals that Cambodian companies investing significant resources in charitable initiatives are less likely to participate in TA practices. It has also been realized that the influence of CSR in mitigating the likelihood of engaging in TA practices is boosted in firms with a higher proportion of independent directors.*

Implications: *The study's findings have significant policy implications as they contribute to a better understanding of TA practices and CSR. This understanding can benefit numerous investors, regulators, and academics interested in firms' tax behavior. Furthermore, the findings can aid tax administrations in identifying conditions that heighten the risk of TA practices, thereby assisting in formulating effective tax systems that enhance firms' tax compliance.*

Originality: *This study represents one of the initial inquiries into the relationship between CSR and TA practices in Cambodia. It provides a unique perspective by furnishing empirical evidence on this relationship within the Cambodian context, which differs from other cultural and institutional environments where previous studies have been conducted. It also offers new insights into how the independence of board directors moderates the relationship between CSR and TA.*

Limitations and directions for future research: *This study primarily relies on firms' disclosed donation figures in financial statements. As such, the study may only partially represent the extent of CSR involvement and potentially impact the accuracy of CSR assessment.*

Keywords: *Corporate social responsibility; Tax avoidance; Effective tax rate; Cambodia*

INTRODUCTION

Taxation is intricately linked to the welfare of society as it serves as a vital source of revenue for national fiscal purposes, facilitating investments in domestic infrastructure, education, healthcare, national defense, public transportation, and law enforcement. Consequently, adhering to the fundamental principles of tax law is crucial for a firm to establish legitimacy within society and maintain a positive relationship

* Zubir Azhar, PhD, Universiti Sains Malaysia, Malaysia
Email: zubir@cam-ed.com
** Monileak Siem, National University of Management

with tax authorities (Ostas, 2004; Rose, 2007; Wierzbicki & Werner, 2023). It can be argued that a firm's compliance with tax laws and the contribution of its fair share of taxes lawfully collected by governments in any country of operation is a fundamental obligation toward society (Christensen & Murphy, 2004; Rabbi & Almutairi, 2021).

Despite taxes' crucial role in fostering a favorable corporate environment, some firms perceive them merely as costs to be minimized. They engage in legal but strategic tax practices aimed at reducing corporate taxes by avoiding tax payments due through formal compliance with the law without trying to breach it, which is known as tax avoidance (TA) practices (Avi-Yonah, 2008; Lenz, 2020).

Management may become incentivized to engage in TA practices to benefit shareholders in the short term due to the cash savings such practices provide. Managers can then utilize these savings to generate future shareholder wealth. However, engaging in such practices could jeopardize the firm's sustainability and diminish its market value. The media frequently scrutinizes these practices, and consumers tend to be more aware of socially irresponsible activities than socially responsible ones. Consequently, the negative publicity surrounding TA practices can inflict reputational damage on firms, potentially leading to financial harm for their shareholders (Lanis & Richardson, 2012; Dhaliwal et al., 2022).

On the other side, there is a great awareness of the role of business toward society as a whole, leading to the emergence of corporate social responsibility. While the definition of this term is contested, the explanation given by Carroll (1979, p.500) is the most commonly recognized. He proposed this description of CSR: "… the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time."

It can be argued that TA practices deviate from the principles of CSR, as TA practices harm companies and their shareholders and impact the citizens and governments of nations serving as tax havens for these practices. As earnings are stripped and shifted to jurisdictions with lower tax rates, governments struggle to maintain essential services. Consequently, TA behaviors are widely viewed as irresponsible by government institutions and the public (Knuutinen, 2013).

In line with legitimacy theory (Dowling & Pfeffer, 1975), a company's legitimacy is essential for its survival, and society holds certain expectations regarding the proper conduct of businesses. Therefore, it can be claimed that TA practices are incongruent with CSR since they impose costs on society and may be perceived as unethical and irresponsible by the public and the press. Several empirical studies (Hoi et al., 2013; Landry et al., 2013; Lanis & Ricardson, 2012; 2015) have indicated that CSR-oriented companies tend to have higher effective tax rates.

In contrast, according to risk management theory (Fombrun et al., 2000; Moser & Martin, 2012), CSR can be viewed as a risk management strategy to prevent potential damage to a company's reputation that might arise from involvement in harmful practices. Since TA practices can expose firms to significant risks, including loss of reputation, heightened political and media scrutiny, potential fines and penalties from tax authorities, and consumer boycotts of companies' products, firms may seek to safeguard their reputation by actively managing CSR activities. Empirical support for this argument is provided by studies conducted by Borza and Stoian (2011), Davis et al. (2013), and Huseynov and Klamm (2012).

Given the conflicting findings from previous research, it is crucial to investigate this issue within the Cambodian context, particularly considering the need for more studies examining this topic among Cambodian-listed companies. Therefore, this study examines whether Cambodian non-financial firms with a tendency to engage in CSR endeavors exhibit a lower propensity to avoid their taxes. It also aims to investigate whether the proportion of independent directors can have a moderating influence on the relationship between CSR and TA, especially with their positive influence on motivating managers to participate in charitable activities and diminishing the firm's likelihood of engaging in TA practices.

Independent board members are obligated to stockholders, other key stakeholders, and, most importantly, the general public (Ibrahim et al., 2003). Furthermore, Armstrong et al. (2015), Lanis and

Richardson (2011), Minnick and Noga (2010), Richardson et al. (2013), and Salhi et al. (2020) demonstrated the effectiveness of independent directors as an internal control device about a company's tax policy. Furthermore, previous research (e.g., Wang & Dewhirst, 1992; Ibrahim & Angelidis, 1995; Coffey & Wang, 1998; Johnson & Greening, 1999; Ibrahim et al., 2003; Webb, 2004; Dunn & Sainty, 2009; Jo & Harjoto, 2011; Post et al., 2011; Sahin et al., 2011; Shaukat et al., 2016) has established that such board members have a positive impact on motivating firms to engage in CSR practices.

Based on this argument, independent boards should know that fulfilling tax rules aligns with CSR and should also inform managers that enhancing CSR participation necessitates a commitment to pay a fair share of tax. As a result, independent board members can moderate the association between CSR and TA.

The remaining sections of this paper are structured as follows: Section 2 provides an overview of the literature and presents hypotheses based on theoretical background. Section 3 outlines the research methodology employed. Research findings are discussed in Section 4. Finally, Section 5 offers conclusions, discusses the implications of the results, acknowledges study limitations, and proposes avenues for future research.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The Concept of Corporate Social Responsibility

The idea of CSR suggests that companies are real-world entities that must address the interests of the wider society and fulfill the expectations of various stakeholders such as personnel, stockholders, customers, societies, and governmental organizations (Jones, 1995).

A shift in perspective regarding a firm's societal role has increased the focus on CSR. Traditionally, a firm was seen as accountable solely to its shareholders, with a relationship mainly between executives and shareholders (Friedman, 1962). The stakeholder-agency perspective has altered this view by recognizing managers as representatives of all stakeholders, not just shareholders (Hill & Jones, 1992; Jones, 1995), and perceiving the organization as a network of relationships with stakeholders with an implied social contract with the firm. Consequently, companies adopting CSR aim to fulfill stakeholder expectations and honor the social contract.

Although previous research has presented various definitions of this concept, Carroll's (1979, P. 500) is the most commonly accepted. He defines the concept as "the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time."

Based on this definition, CSR encompasses four obligations for companies: the economic duty focused on generating profit, the legal duty tied to adhering to regulations, the ethical duty involving just and fair actions, and the discretionary duty to be a responsible corporate citizen by contributing resources to benefit society as a whole.

The Concept of Tax Avoidance

Taxes are essential tools to provide governments with the necessary funds to manage and offer the necessary public goods and services and make them available to all members of society. However, the interest of companies in maximizing profitability in the short term resulted in considering the tax as a burden, and commitment to companies must be reduced or eliminated. Hence, management might contract with advisers and experts in the field of tax to formulate tax strategies aimed at avoiding payment of the tax due through exploiting the legal loopholes permitted by the law to exempt or circumvent the text in explanation or application or create facts that are compatible with the legal texts and contradict the content of the texts. Therefore, companies seek to avoid the tax aggressively through formal compliance with the law without trying to breach it, known as TA (Avi-Yonah, 2008; Lenz, 2020).

There is no globally acknowledged definition of TA. Hanlon and Heitzman (2010) define it as a sequence of tax strategic initiatives to lower the amount of stated tax, while Jones (2012) outlines it as a viable way to reduce taxes. Meanwhile, TA is expressed as the descending management of income tax through legal, questionable, or illegal tax planning methods (Lanis & Richardson, 2012). It is also described by Lee et al. (2015) as a company's intentional endeavor to decrease its tax liability using legal or unlawful methods or plans.

The Relationship between CSR and TA

Companies' decisions and practices directly impact society as a whole because business is an integral part of society that affects and is affected by it. Therefore, one of the key social responsibilities of companies is adhering to tax regulations, as taxation serves as a crucial mechanism for governments to acquire the essential funds required for delivering public services to all citizens.

The participation of firms in TA practices has depleted corporate tax funds, leading to a reduction in state tax revenue and, consequently, the incapability of the state to deliver public services. Firms' involvement in such behaviors directly affects society. Hence, TA practices are inconsistent with the principles of CSR (Knuutinen, 2013).

Many scholars are driven to explore the connection between CSR involvement and TA practices, often employing legitimacy and risk management theories to interpret this relationship. These two theories propose two different viewpoints regarding the association between these two variables. Legitimacy theory (Dowling & Pfeffer, 1975) posits that a firm's legitimacy is crucial for its survival, as society holds expectations regarding businesses' proper conduct, while risk management theory views CSR as a risk management mechanism, aiming to protect the firm's reputation from potential harm resulting from participating in adverse activities (Fombrun et al., 2000; Moser & Martin, 2012; Rehman et al., 2020).

From a legitimacy standpoint, tax payment serves as a CSR instrument for establishing corporate legitimacy within society and is deemed a significant community contribution (Preuss, 2010). Conversely, according to risk management theory, companies might strategically handle CSR endeavors to shield themselves from the repercussions of engaging in aggressive TA practices, which could result in substantial adverse outcomes for the firm (Hoi et al., 2013).

As theories vary in their interpretation of the relationship between CSR endeavor and TA practices, empirical studies offer differing evidence on the nature of this association. Some research suggests that CSR has a negative effect on TA. For instance, Hoi et al. (2013) examine the impact of irresponsible CSR activities on TA across a sample of 3,000 US firms from 2003 to 2009. Their study reveals that companies exhibiting extremely irresponsible CSR activities, which refer to corporate actions generally perceived as detrimental to corporate governance, employee relations, societies, public health, human rights, diversity, the environment, and other related aspects, are more aggressive in TA. They are more likely to participate in tax-shielding behaviors and display greater variations in discretionary and permanent book-tax items. Landry et al. (2013) also investigated the link between CSR activities and fair tax contributions through a sample of 168 Canadian corporations between 2004 and 2008. Their study revealed that socially responsible companies are less inclined to engage in aggressive TA practices.

Based on data from the Vigeo database, Laguir et al. (2015) examine if the link between aggressive TA practices and CSR varies based on the type of CSR activities. They analyzed a sample of 24 French-listed firms and found that firms with higher levels of social CSR engagement tend to engage less aggressively in TA practices, while those with higher levels of environmental CSR engagement tend to be more aggressive in such adverse practices. Moreover, Lanis and Ricardson (2015) utilized a KLD database to assess CSR performance across a sample of firms in the USA spanning from 2003 to 2009. Their findings indicate that higher commitment to CSR correlates with a reduced likelihood of involving in TA practices.

Muller and Kolk (2015) contributed to the research on this topic by examining local companies compared to multinational corporations. They analyzed data from 82 Indian firms between 2000 and 2001. Their findings revealed that Indian multinational corporations pay a larger amount of taxes compared to national companies. Additionally, they observed that multinational corporations and their affiliates engaged in more CSR activities tend to pay higher taxes than those not prioritizing CSR activities. Besides, Amidu et al. (2016) explored the link between CSR and TA among a sample of non-financial companies listed on the Ghana Stock Exchange (GSE) and non-listed entities sourced from the Ghana Revenue Authority (GRA) database over four years from 2010 to 2013. Their findings suggest that Ghanaian firms exhibiting high levels of CSR involvement tend to participate less in tax avoidance practices.

Zeng (2016) provides further evidence indicating that Canadian CSR firms are less involved in TA practices. Analyzing a sample of Canadian corporations included on S&P/TSX60 over five years between 2005 and 2009; the findings suggest that companies with higher rankings in CSR are less likely to engage in aggressive TA practices. In addition, Park (2017) investigated the correlation between CSR endeavors and TA by analyzing residual and total book-tax differences (BTD) of a sample of 1,148 Korean-listed firms from 2004 to 2009. The findings revealed that firms with heightened CSR engagement demonstrated a reduced propensity for TA.

Utilizing an international sample spanning from 2006 to 2014, López-González et al. (2019) examined the impact of CSR performance on TA and reported a negative association between these two variables. This indicates that companies with higher levels of CSR performance exhibit reduced tax-saving behaviors.

On the contrary, some researchers argue that tax payments of companies involved in CSR are insufficient. For instance, Huseynov and Klamm (2012) investigated the influence of various CSR measures (i.e., Corporate Governance, Society, and Diversity) on TA practices using a sample of 500 US firms from 2000 to 2008. They categorized each CSR measure into strengths and weaknesses, with TA assessed through the long-term effective tax rate (ETR). Their findings suggest that weaknesses in the societal aspect of CSR were positively associated with the ETR. In contrast, strengths in the corporate governance aspect and weaknesses in the diversity aspect had a negative impact on the ETR.

Employing data from KLD and Compustat databases, Davis et al. (2013) investigated the relationship between CSR involvement and the level of corporate tax payments and the extent of investment in tax reduction strategies across all publicly traded American companies from 2002 to 2010. Their findings revealed a negative correlation between CSR involvement and ETR and a positive association with expenditures on tax lobbying. This suggests that firms committed to CSR tend to pay lower taxes and be more active in tax lobbying efforts. Moreover, Watson (2015) explored the correlation between CSR and both acceptable and unacceptable TA practices by analyzing ETR and unrecognized tax benefits among a sample of US firms during the period between 2000 and 2011 and suggested that CSR-affiliated firms tended to exhibit lower ETR and higher levels of unrecognized tax benefits, signaling a notable presence of both acceptable and unacceptable TA practices within CSR-oriented companies.

Gulzar et al. (2018) investigated the impact of CSR on TA among Chinese-listed corporations. The study utilized CSR ratings obtained from Rankins, an agency that rates the CSR practices of Chinese companies, from 2009 to 2015. The authors discovered that more responsible companies were more likely to engage in tax avoidance practices than those considered less responsible. Within an international context, Zeng (2018) explored the link between CSR and TA within listed companies from the top 40 countries by GDP, spanning from 2011 to 2015, and utilized multiple proxies for TA practices. The study uncovered robust international evidence indicating a positive correlation between CSR and TA.

Alsaadi (2020) investigated the influence of financial-tax reporting conformity jurisdictions on the relationship between CSR and aggressive TA using a sample of European firms from 2008 to 2016. The findings indicate a positive correlation between CSR and TA. Additionally, firms in jurisdictions with low financial-tax reporting conformity are inclined to adopt CSR practices to mitigate the adverse effects of aggressive TA, contrasting with those in countries characterized by high financial-tax reporting conformity. Likewise, Abid and Dammak (2022) examined the impact of TA on CSR performance using a dataset of French non-financial firms from 2005 to 2016. Their findings suggest that companies with higher CSR scores are inclined to participate in aggressive TA practices.

More recently, Pandapotan (2023) explored the impact of CSR on TA within a sample of consumer goods manufacturing firms listed on the Indonesia Stock Exchange from 2019 to 2020. The study revealed a positive and significant relationship between these two variables. Drawing from an extensive review and analysis of prior research, it is evident that investigations into the correlation between CSR and TA practices have been approached from various theoretical perspectives and implemented across diverse economic landscapes, encompassing developed nations and emerging markets.

Given the conflicting findings regarding the association between CSR and TA practices and the dearth of studies focusing on Cambodian enterprises, this study aims to fill this gap by examining the Cambodian context. It is also noticed that all of the previously mentioned studies depend on using ETR as a measurement of TA and employing quantitative research design through statistically analyzing measurable data; therefore, this study follows the same research methodology.

In Cambodia, businesses that adhere to environmental and social responsibility standards are eligible for a tax holiday, a temporary duration during which the government decreases or eradicates specific taxes. These tax holidays in Cambodia can extend up to nine years, comprising a three-year exemption period followed by a regular increment in the tax rate over the subsequent six years. In light of the foregoing discussion, this paper proposes the following two opposing hypotheses:

H1a: There is a negative correlation between Cambodian listed companies' level of Corporate Social Responsibility (CSR) performance and their extent of engaging in tax avoidance (TA) practices.

H1b: There is a positive correlation between Cambodian listed companies' level of Corporate Social Responsibility (CSR) performance and their extent of engaging in tax avoidance (TA) practices.

The Moderating Role of Board Independence on the Relationship between CSR And TA

One integral aspect of corporate governance responsible for supervising top management and protecting the interests of stockholders is the board of directors (Fama & Jensen, 1983). There are two types of board members: executive and independent directors. Executive directors have management duties, while independent directors have no responsibilities for daily business management or operations. As a result, independent directors are considered to be more compelled to monitor management actions (Jensen & Meckling, 1976).

The existence of independent directors strengthens the board's function as an agent for the shareholders. Because they come from outside the firm, do not have direct financial interests in the company, have closer relationships with stakeholders, know their expectations better, and are more willing to satisfy their demands, it is argued that the presence of independent directors with a larger number can effectively monitor top management and protect stakeholders. Moreover, such directors are proposed to supply their firms with more information, resources, and legitimacy, which could result in the best managerial decisions and consequently improve company performance (Hillman et al., 2000; Boivie et al., 2021).

Independent directors enhance the quality of business decisions by providing independent and objective expert advice and guidance to the management to preserve the interests of the stockholders, other stakeholders, and the overall community (Anderson & Reeb, 2004; Dahya & McConnell, 2005; Boivie et al., 2021). Independent directors also supply the company with the resources required for its sustainability and long-term effectiveness (Pfeffer & Salancik, 1978; Hillman & Dalziel, 2003; Kavadis & Thomsen, 2023).

With independent directors in a higher proportion, top management is more motivated to be concerned with society when putting the company's strategy into action. Therefore, it is assumed that the presence of independent directors with a higher percentage may lead to the development of the company's CSR performance. Previous research (for example, Wang & Dewhirst, 1992; Ibrahim & Angelidis, 1995; Coffey & Wang, 1998; Johnson & Greening, 1999; Ibrahim et al., 2003; Webb, 2004; Dunn & Sainty, 2009; Jo & Harjoto, 2011; Post et al., 2011; Sahin et al., 2011; Shaukat et al., 2016; Zaid et al., 2020) indicated that CSR engagement is improved in companies with a higher percentage of independent directors.

Besides the impact of independent directors in enhancing CSR performance, the presence of such directors could also influence the firm's engagement in TA practices. Independent directors are more aware of the possible risks of severe tax positions and, as a result, should make every effort to mitigate TA (Armstrong et al., 2015). Several previous studies (e.g., Minnick & Noga, 2010; Lanis & Richardson, 2011; Richardson et al., 2013; Armstrong et al., 2015; Salhi et al., 2020) showed that the higher the proportion of independent directors, the lower the level of TA.

Based on the foregoing explanation, independent directors shall actively advocate increased business response to society's viewpoints, which have been progressively concentrated on concerns about TA due to its negative social implications. They would also advise management that compliance with tax laws is consistent with increasing engagement in CSR activities; as such, two practices are effective for ensuring a good relationship with stakeholders. As a result, the existence of independent directors should moderate the link between CSR and TA. Accordingly, the following hypothesis is tested:

H2: The presence of independent directors will reinforce the negative association between CSR engagement and TA.

RESEARCH METHODOLOGY

Like most of the previous research on this topic, this study follows a quantitative research design that depends upon gathering and statistically analyzing measurable data. Ethical considerations of research are discussed before the method of extracting data and determining the research sample, the way of measuring the research variables, and the regression equations are presented.

Ethical Considerations of Research

Some ethical considerations have been taken into account when conducting the current research. These considerations include data privacy, confidentiality, transparency, and integrity. Although the data is sourced from publicly available annual reports, care has been taken to ensure that no confidential or sensitive information about companies or individuals is inadvertently disclosed or misinterpreted. The findings are also presented objectively, without bias or manipulation, ensuring that the data accurately reflects the companies' activities. Misrepresentation of results could raise ethical concerns.

Data and Sample

Financial data for the study variables are extracted from corporate financial statements. The research sample comprises all non-financial Cambodian firms listed on the Cambodian Securities Exchange (CSX) from 2014 to 2022. Given financial companies' adoption of various accounting policies, they would be subject to different factors influencing TA. Therefore, these firms are excluded from the research sample. This study focuses on the eight non-financial companies listed on CSX during the study period. Despite the governmental nature of some of the sample companies, they are included among the research sample as it is argued that such entities might have incentives to engage in TA practices, as fraud has become a frequent issue in government agencies due to key factors such as perceived pressure, available opportunities, and rationalizations for engaging in fraudulent activities (Riskiyadi & Tarjo, 2021). Table 1 outlines the names of these companies, the year they were listed on CSX, and the number of available reports for each company since listing.

Table 1: Details of companies listed on the Cambodia Securities Exchange

Company name	Year of listing	Number of available reports
JS LAND PLC	2022	1
DBD Engineering Plc.	2021	2
Pestech (Cambodia) Plc.	2020	3
Sihanoukville Autonomous Port	2017	6
Phnom Penh SEZ Plc.	2016	7
Phnom Penh Autonomous Port	2015	8
Grand Twins International (Cambodia) Plc.	2014	9
Phnom Penh Water Supply Authority	2012	9
Total		**45**

As illustrated in Table 1, the final sample comprised 45 firm-year observations. All observations classified by year are outlined in Table 2. According to Roscoe (1975, referenced in Sekaran & Bougie, 2016: 264), a sample size between 30 and 500 is sufficient for the vast majority of studies; therefore, it can be argued that the sample size of this study does not affect the estimated parameters of the regression.

Table 2: Sample distribution by industry and year

Sample distribution by year		
Year	**Complete sample**	
	N	%
2014	2	4.44
2015	3	6.67
2016	4	8.89
2017	5	11.11
2018	5	11.11
2019	5	11.11
2020	6	13.33
2021	7	15.56
2022	8	17.78
Total	**45**	**100**

Variables Measurement

The Effective Tax Rate (ETR), commonly utilized as a gauge of TA, serves as the proxy for TA in this study. Two measurements were used in this study to calculate this rate. While the first measurement is the ratio of tax expense to pretax net earnings, the second is the fraction of taxes paid in cash to pretax net earnings. It is acknowledged that a distinction exists between tax expense and taxes paid. Tax expense encompasses deferred or accrued taxes, established based on accounting regulations yet susceptible to earnings management (Hanlon & Heitzman, 2010; Mamatzakis et al., 2023), while cash payments denote actual cash outflows. Due to lack of data about CSR engagement of Cambodian companies through databases, CSR engagement is evaluated by calculating the ratio of charitable contributions to pretax net profit as employed by previous research (e.g., Lev et al., 2010; Ramzan et al., 2021; and Vo et al., 2023).

The ratio of independent directors to the total number of board members is employed as a measurement of the power of board independence. Concerning control variables, prior research suggests some firm-specific variables that play a role in determining the level of TA. As a result, the base regression model incorporates various control variables related to the quality of earnings, financial performance, and other company characteristics.

The study incorporates firm size (SIZE) as a control variable to mitigate size-related influences. Drawing from Zimmerman (1983), smaller companies are anticipated to exhibit lower levels of tax avoidance than their larger counterparts. This expectation stems from smaller firms' limited economic and political influence, which restricts their ability to minimize tax liabilities. In addition to firm size, the base regression model integrates variables such as total assets growth (GROWTH) and return on assets (ROA). This inclusion aligns with previous research by Gupta and Newberry (1997) and Adhikari et al. (2006).

According to Gupta and Newberry (1997), a company's capital structure correlates empirically with its ETR, given that the tax deductibility of debt is inherent to the capital structure. Consequently, a company with substantial debt tends to exhibit a lower ETR; conversely, those with lesser debt tend to have a higher ETR. As such, financial leverage (LEV) is incorporated into this research as a control variable. Based on Desai and Dharmapala's (2009) study, total accruals (TAC) are included as a control variable to ensure that the quality of earnings does not influence the correlation between CSR and tax avoidance.

Capital intensity (CINT) and inventory intensity (INVINT) are incorporated as control variables to manage the influence of fixed assets on the degree of tax avoidance. Stickney and McGee (1983) posit that capital-intensive firms may exhibit higher tax avoidance levels than inventory-intensive ones. The details regarding the study's independent, dependent, and control variables are presented in the forthcoming table.

Table 3: Measurement of the study variables

Variable	Abbreviation	Measurement
Independent variable		
CSR engagement	CSR	The ratio of charitable contributions to pretax net profit.
Dependent variable		
Tax avoidance	ETR	The rate of total corporate tax expense to net profit before tax.
	CETR	The rate of tax paid in cash to net profit before tax.
Moderating variable		
Board independence	BIND	The ratio of independent board directors to the total number of board members.
Control variables		
Firm size	SIZE	Natural log of total assets
Firm growth	GROWTH	Total assets growth rate
Firm performance	ROA	The ratio of net profit before tax to the total assets.
Financial leverage	LEV	The ratio of total debt to the total assets.
Total accruals	TAC	It is gauged via this equation: TAC = (change in current assets – change in current liabilities – change in cash and short-term investments + change in short-term debt – depreciation and amortization expense) / lagged value of total assets
Capital intensity	CINT	The ratio of property, plant, and equipment to the total assets.
Inventory intensity	INVINT	The ratio of inventory to the total assets.

Empirical Model

Upon data collection, the subsequent regression equations are assessed to check the first research hypothesis:

$$ETR_{i,t} = \alpha_0 + \alpha_1\ CSR_{i,t} + \alpha_2\ BIND_{i,t} + \alpha_3\ SIZE_{i,t} + \alpha_4\ ROA_{i,t} + \alpha_5\ LEV_{i,t} + \alpha_6\ GROWTH_{i,t} + \alpha_7\ CINT_{i,t} + \alpha_8\ INVINT_{i,t} + \alpha_9\ TAC_{i,t} + \varepsilon_i \quad (1)$$

$$CETR_{i,t} = \alpha_0 + \alpha_1\ CSR_{i,t} + \alpha_2\ BIND_{i,t} + \alpha_3\ SIZE_{i,t} + \alpha_4\ ROA_{i,t} + \alpha_5\ LEV_{i,t} + \alpha_6\ GROWTH_{i,t} + \alpha_7\ CINT_{i,t} + \alpha_8\ INVINT_{i,t} + \alpha_9\ TAC_{i,t} + \varepsilon_i \quad (2)$$

Where:

$ETR_{i,t}$= The rate of total corporate tax expense to net profit before tax.

$CETR_{i,t}$ = The rate of tax paid in cash to net profit before tax.

$CSR_{i,t}$= The ratio of charitable contributions to pretax net profit.

$BIND_{i,t}$ = The ratio of independent directors to the total number of board members.

$SIZE_{i,t}$ = The natural logarithm of total assets.

ROAi,t= The ratio of net profit before tax to the total assets.

LEVi,t = The ratio of total debt to the total assets.

GROWTHi,t= Total assets growth rate.

CINTi,t = The ratio of property, plant, and equipment to the total assets.

INVINTi,t= The ratio of inventory to the total assets.

TACi,t = Total accruals.

In order to test the moderating impact of board independence on the association between the level of CSR engagement and tax avoidance, an interacting variable between CSR and BIND (CSR*BIND) has been introduced in the following regression equations:

$$ETR_{i,t} = \alpha_0 + \alpha_1\ CSR_{i,t} + \alpha_2\ BIND + \alpha_3\ CSR{*}BIND + \alpha_4\ SIZE_{i,t} + \alpha_5\ ROA_{i,t} + \alpha_6\ LEV_{i,t} + \alpha_7\ GROWTH_{i,t} + \alpha_8\ CINT_{i,t} + \alpha_9\ INVINT_{i,t} + \alpha_{10}\ TAC_{i,t} + \varepsilon_i \quad (3)$$

$$CETR_{i,t} = \alpha_0 + \alpha_1\ CSR_{i,t} + \alpha_2\ BIND + \alpha_3\ CSR{*}BIND + \alpha_4\ SIZE_{i,t} + \alpha_5\ ROA_{i,t} + \alpha_6\ LEV_{i,t} + \alpha_7\ GROWTH_{i,t} + \alpha_8\ CINT_{i,t} + \alpha_9\ INVINT_{i,t} + \alpha_{10}\ TAC_{i,t} + \varepsilon_i \quad (4)$$

FINDINGS

Descriptive Statistics

Table 4 presents the descriptive statistics of the research variables. The level of Cambodian companies' engagement in TA practices differs significantly, as there is a significant variance between the lowest and highest values of both ETR and CETR. Similarly, the minimum and maximum values of CSR are -0.254 and 0.653, respectively, indicating that sample companies' tendency to participate in charitable activities varies considerably.

Although there are no Cambodian listed companies without independent directors, the percentage of such directors does not exceed 29% of the total number of board members of these companies, as indicated by the descriptive statistics of the research variable related to board independence.

Although the descriptive statistics of SIZE specify that the size of sample companies is approximately similar, such indicators as ROA, LEV, and GROWTH exemplify the big variance in these firms' financial performance, financial leverage, and growth opportunities.

The average of CINT is higher than that of INVINT, which illustrates that sample companies are more capital-intensive. The quality of earnings of Cambodian companies varies substantially, as revealed by the statistical indicators of TAC.

Table 4: Descriptive statistics of research variables

	N	Mean	STD	MIN	MAX
ETR	45	0.192	0.4984	-2.8785	1
CETR	45	0.2088	0.4299	-1.7131	1.2623
CSR	45	0.2357	0.2371	-0.2541	0.6532
BIND	45	0.1701	0.0624	0.0571	0.2857
SIZE	45	20.2576	0.9010	17.9223	21.7106
ROA	45	0.0366	0.0386	-0.0802	0.1775
LEV	45	0.3839	0.2035	0.1022	0.9312
GROWTH	45	0.1125	0.162	-0.087	0.6617
CINT	45	0.4305	0.3004	0.0404	0.8885
INVINT	45	0.1121	0.1299	0	0.3844
TAC	45	-6758939	74947979	-263000000	254000000

Pairwise Correlation

Table 5 illustrates the correlation matrix employed to examine connections among them and evaluate the existence of multicollinearity. Multicollinearity is a concern when a coefficient's value exceeds 0.8 (Gujarati, 1995). In this study, all coefficient values remain below 0.80. The highest coefficient, 0.67, exists between CINT and SIZE. Consequently, multicollinearity appears insignificant in this analysis.

It can be shown that CSR correlates positively and significantly with both ETR and CETR, demonstrating that the level of engagement in TA practices is lower in firms with a higher tendency to be involved in CSR activities. As BIND is positively and significantly associated with ETR, CETR, and CSR, it can be specified that firms with a higher proportion of independent directors are less likely to engage in TA practices and more prone to participate in charitable activities. It can also be implied that Cambodian companies with superior earnings performance and significant capital intensity are less likely to participate in philanthropic endeavors.

	ETR	CETR	CSR	BIND	SIZE	ROA	LEV	GROWTH	CINT	INVINT	TAC
ETR	1										
CETR	0.5892***	1									
CSR	0.4674***	0.5176***	1								
BIND	0.3200**	0.4035***	0.2597*	1							
SIZE	0.16	0.0332	-0.0828	-0.3624**	1						
ROA	-0.0069	0.0291	-0.3346**	-0.3553**	0.5354***	1					
LEV	0.1617	0.1021	0.0882	0.2011	0.2783*	-0.1176	1				
GROWTH	0.0176	0.0519	-0.1146	0.1532	-0.0785	0.1898	0.4005***	1			
CINT	-0.0563	-0.0529	-0.4875***	0.5432***	0.6702***	0.4253***	-0.0357	-0.1442	1		
INVINT	0.0157	0.0032	0.2203	0.5937***	-0.4747***	-0.1763	-0.2333	-0.0343	-0.5591***	1	
TAC	-0.1111	-0.054	-0.0019	-0.0626	-0.2268	0.0835	-0.1005	0.3827***	-0.1706	0.0849	1

*, **, and *** indicate the level of significance at 0.1, 0.05, and 0.01, respectively.

Multivariate Regression Analysis

Panel regression analysis is employed to investigate the influence of CSR and control variables on TA, as measured by both ETR and CETR. Initially, we conducted a Hausman test to ascertain the appropriateness of random and fixed effect models. The results presented in Table 6 reveal that the random effect model is more suitable for the first two regression models, as indicated by its insignificant p-value for both models.

Table 6: Hausman test for the first two regression models

	ETR	CETR
chi2(8)	8.19	9.33
Prob>chi2	0.4999	0.3153

Table 7 displays the regression outcomes for CSR concerning both ETR and CETR. The results reveal positive estimated CSR coefficients in both regression analyses, specifically 0.3930528 and 2.12948, respectively. These coefficients are highly significant, with p-values below 0.01. This suggests that companies' involvement in TA practices decreases as they exhibit a greater inclination toward charitable contributions or donations. This finding aligns with previous empirical research conducted by Landry et al. (2013), Lanis and Ricardson (2012, 2015), and Watson (2015).

Table 7: Panel Regression of CSR on both ETR and CETR

	ETR	CETR
	Random effects coef. z-stat	**Random effects coef. t-stat**
CSR	0.3635598***	0.4213292***
BIND	1.197597***	0.8262014*
SIZE	0.019377	0.0147871
ROA	-0.0649688	1.043595
LEV	-0.088602	-0.1339444
GROWTH	0.1742596	0.2154523
CINT	0.1633429	0.0372692
INVINT	-0.2431741	0.2470708
TAC	-0.000000000107	-0.000000000786
Constant	-0.4737602	-0.426016
Wald chi2/F	25.66	28.04
	0.0023	0.0009
R	0.423	0.4448

*, **, and *** indicate the level of significance at 0.1, 0.05, and 0.01, respectively.

The above outcomes support the legitimacy theory, indicating that managers of listed Cambodian firms view tax payment as a CSR tool for fostering corporate legitimacy within society. They align with earlier empirical results by Landry et al. (2013), Lanis and Ricardson (2012, 2015), and Watson (2015), which suggest that CSR-focused companies eschew involvement in TA practices.

Panel data regression also explores how board independence moderates the connection between CSR and TA. Similar to prior regression tests, a Hausman test is first performed to determine whether a random or fixed effect model is more appropriate. As shown in Table 8, the random effect model is deemed more fitting for the latter two regression models, as evidenced by its non-significant p-value in both cases.

Table 8: Hausman test for the second two Regression models

	ETR	CETR
chi2(8)	4.82	12.94
Prob>chi2	0.8499	0.1655

Panel regression results on the effect of the moderating role of board independence on the relationship between CSR and TA measured by ETR and CETR, along with the control variables, are presented in Table 9. In the first model of this table, an interacting variable (CSR*IND) is introduced in the regression, in which ETR measures the TA. It is revealed that CSR*IND (coef = 2.079147, P < 0.05) is significantly positively related to ETR. Thus, this result supports H2, as the results suggest that the negative relationship between CSR engagement and TA is strengthened in firms with a high percentage of independent directors.

The same regression analysis was run in the second model 4, with TA measured by CETR instead of ETR, and the results are fairly similar, as CSR*IND (coef = 5.233097, P < 0.01) is significantly positively related to CETR. The similarity of the results between the two models reflects no difference in the moderating impact of board independence on the relationship between CSR and TA, whether ETR or CETR measures it.

Table 9: Panel Regression of CSR on both ETR and CETR

	ETR	CETR
	Random effects **coef.** **z-stat**	**Random effects** **coef.** **t-stat**
CSR	-0.0367195	-0.6595197
BIND	0.4364508	-0.0549402
CSR*BIND	2.079147**	5.233097**
SIZE	0.010117	-0.0059571
ROA	-0.2456253	0.839144
LEV	-0.0174172	-0.1127926
GROWTH	0.1905199	0.2087581
CINT	0.139301	0.1030586
INVINT	-0.1382835	0.2404148
TAC	-0.000000000138	-0.00000000046
Constant	-0.1804673	0.133181
Wald chi2/F	33.57	34.38
	0.0002	0.0002
R	0.4968	0.5028

*, **, and *** indicate the level of significance at 0.1, 0.05, and 0.01, respectively.

These findings show that independent directors act with stakeholders' interests by ensuring that companies comply with paying the fair share of tax besides motivating managers to engage in charitable activities.

CONCLUSION

Although several studies investigated the relationship between corporate social responsibility and tax avoidance, none have concentrated on examining this issue in the context of Cambodia. Therefore, this study delves into whether firms' involvement in ethical activities in Cambodia stems from maintaining legitimacy within society or risk management by analyzing a sample of 45 firm-year observations from 2014 to 2022. It also investigates whether the association between CSR and TA is moderated by the presence of independent directors with a higher percentage.

After adjusting for firm-specific variables, the empirical results reveal that Cambodian firms emphasizing CSR are less inclined to engage in TA practices. This behavior is also boosted in companies with a higher proportion of independent directors.

This study has certain limitations to consider. Due to data constraints, it primarily relies on firms' disclosed donation figures in financial statements, which might only partially reflect the genuine extent of CSR involvement. As a result, this could impact the accuracy of CSR assessment. It also depends upon the effective tax rate as a proxy of the engagement in TA practices. However, firms may benefit from various tax incentives, credits, or subsidies that lower their ETR. These benefits might not necessarily reflect aggressive TA but rather strategic tax planning within legal frameworks. It would be useful for future researchers to look at a sample of companies that have won awards with the American Chamber of Commerce regarding CSR and depend upon methodologies other than ETR in assessing the level of engagement in TA practices.

Although constrained by this limitation, it can be considered one of the first studies to explore the relationship between CSR and TA across a sample of Cambodian companies. The outcomes of this paper are also likely to enhance comprehension of CSR among regulators, standard setters, investors, and scholars concerned with ethical business practices. This study, in particular, strengthens the notion that maintaining a positive societal image incentivizes firms to participate in CSR initiatives. Subsequent investigations might explore this matter further by incorporating the moderating influence of diverse ownership structures and governance attributes other than board independence on the correlation between CSR involvement and TA.

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The Influence of Macroeconomic Variables onIndonesia's Non-cyclical Sector Stock Price Index Post-COVID-19 Pandemic

Syarifudin Putra Alwindaru[1], Afina Latifah[2], Aldenia Luthfian Ilma[3], Rusdi Hidayat Nugroho[4], and Lidya Veronica Christy Rihidima[5]

ABSTRACT

Purpose: *This study aims to analyze the effect of macroeconomic variables, namely the exchange rate, inflation, Real Sales Index (RSI), and M2, on Indonesia's non-cyclical sector stock price index after the COVID-19 pandemic.*

Methodology: *The study uses multiple linear regression to evaluate the partial and simultaneous effects of the study's selected variables on Indonesia's non-cyclical sector stock price index.*

Findings: *The results show that the exchange rate, inflation, and RSI partially do not have a significant impact, but the M2 broad money supply variable has a significant effect on the stock price index of the non-cyclical sector. These four variables simultaneously significantly influence the non-cyclical sector's stock price index.*

Implications: *The findings indicate that although some of the macroeconomic independent variables' influence on the stock price index of the non-cyclical sector tends to be weak, these variables together influence the movement of the stock price index.*

Originality: *The study provides insights for investors and policymakers on the importance of considering macroeconomic dynamics in managing portfolios and maintaining the stability of the non-cyclical sector.*

Limitations and directions for future research: *The study focuses only on the non-cyclical sector specific to a country, and the data is limited to the post-COVID-19 pandemic, from June 2023 to August 2024. Future research could explore incorporating additional relevant variables and broadening the scope to include a more diverse range of sectors and regions.*

Keywords: *Exchange rate; Inflation; Real Sales Index; M2 broad money supply; Non-cyclical sector*

1. Syarifudin Putra Alwindaru
   Universitas Pembangunan Nasional "Veteran" Jawa Timur
   Email: 24042910360@student.upnjatim.ac.id
2. Afina Latifah
   Universitas Pembangunan Nasional "Veteran" Jawa Timur
   Email: 24042910363@student.upnjatim.ac.id
3. Aldenia Luthfian Ilma
   Universitas Pembangunan Nasional "Veteran" Jawa Timur
   Email: 24042910366@student.upnjatim.ac.id
4. Rusdi Hidayat Nugroho
   Universitas Pembangunan Nasional "Veteran" Jawa Timur
   Email: rusdi_hidayat.adbis@upnjatim.ac.id
5. Lidya Veronica Christy Rihidima
   Universitas Pembangunan Nasional "Veteran" Jawa Timur
   Email: lidya.veronica.fisip@upnjatim.ac.id

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INTRODUCTION

After the COVID-19 pandemic, the global economy has experienced significant fluctuations that have affected various industrial sectors. However, economic turmoil does not affect the non-cyclical consumer sector that produces people's basic needs, such as primary consumer goods (Sastrasasmita, 2023).

Companies in the non-cyclical sector possess a unique characteristic because of their stability and limited sensitivity to economic fluctuations (Barsyah & Hermi, 2025).

In a situation like this, the non-cyclical sector plays an important role in maintaining economic stability and meeting people's needs sustainably.

Investors are currently interested in stocks in the non-cyclical sector because the stocks are considered resilient to the ups and downs of economic conditions (Haryadi & Winarto, 2024). According to Krisnady et al. (2024), companies in the non-cyclical consumer sector are business entities whose operations remain relatively stable and are unaffected by seasonal changes or economic cycle fluctuations in a country.

This study is limited to post-COVID-19, so research comparing conditions before, during, and after the pandemic is needed for more comprehensive results. In addition, the Real Sales Index (RSI) variable used in this study is rarely the focus of research, especially regarding non-cyclical sectors. Although significant, the M2 broad money supply variable has also been limited in studies, making it relevant for further exploration. The non-cyclical sector index itself, although stable, has received less attention than the cyclical sector, opening up research opportunities to understand its sensitivity to macroeconomic variables under various conditions.

An in-depth regression analysis is required to understand how these variables affect the stock prices of the non-cyclical sector. This approach helps identify the impact and significance of each variable on stock price movements, thus providing strategic insights for investors and policymakers in maintaining the stability of this non-cyclical sector.

The remaining sections of this paper include a literature review covering key macroeconomic variables and their theoretical impact on stock prices. The research methodology section explains the data sources, sample selection, and statistical techniques used for analysis. Findings and discussions present the regression analysis results, followed by a conclusion summarizing the key insights and implications for investors and policymakers.

LITERATURE REVIEW

Inflation

According to Tripuspitorini (2021), inflation is a condition where the increase in prices of goods, in general, continuously occurs widely. The inflation rate's instability is due to global financial market uncertainty and the potential for rupiah exchange rate depreciation due to an increase in global policy interest rates (Nur & Fatwa, 2022).

According to Putong (2013), purchasing power is a community's ability to spend money on goods or services. In other words, if inflation occurs at a high level, it will weaken people's purchasing power because the price level in the market will increase.

Suginam et al. (2022) state that inflation does not adversely affect consumer buying interest in products. Maulana and Maulana (2024), based on the observations and interviews conducted, concluded that the macroeconomic review of inflation in Indonesia illustrates the complex relationship between this phenomenon and people's purchasing power; high inflation can put significant pressure on consumers' ability to buy goods and services, while moderate inflation with the right policies can provide opportunities for balanced economic growth. The study conducted by Samanta and Deo (2021) in India states that inflation has a negative short-term relationship with the Indian stock market, which is represented by the BSE Index.

According to Maulana and Maulana (2024), high inflation rates create uncertainty among consumers. When prices jump suddenly, people tend to be more cautious when spending their money. This caution can lead to decreased consumer spending, a major component of economic growth.

Thus, based on the above explanation, the study formulates the first hypothesis as follows:

H1: Inflation has a significant influence on non-cyclical sector stock prices.

Exchange Rate

According to Junaidi et al. (2021), the exchange rate is the price of a country's currency against another country's currency used for trade transactions. The currency's value is influenced by demand and supply in the country's currency. Exchange rates can change anytime due to various economic and political factors. The exchange rate is determined daily by Bank Indonesia, and it changes (Pangestuti, 2023).

The study conducted by Anan et al. (2024) reveals that exchange rates significantly influence the Composite Stock Price Index (IHSG). The findings indicate that the depreciation of the Indonesian rupiah against the US dollar (USD) is correlated with a decline in the performance of the IHSG. Chauque and Rayappan (2018) also show that exchange rates had a negative effect on the Malaysian stock market despite having a significant influence on the variation of the Malaysian stock market.

According to Achsani and Nababan (2008), changes in the exchange rate adversely affect the prices of goods in Indonesia in the sense that the depreciation of the exchange rate will increase the prices of domestic goods. Price plays an important role in influencing consumer decisions when buying products (Nazara & Yunita, 2023; Ikhwan & Aprianti, 2023). Thus, when making purchasing decisions, price is an important consideration because consumers want the money, they spend to match what they receive.

Sales growth is calculated to see the company's operational success in the past, and it is used to predict the company's growth and achievements in the future (Febriyanti & Sulistyowati, 2021). According to Prabasari and Amalia (2022), sales growth has a negative and insignificant effect on financial performance, the negative sign means that increasing sales tends to reduce financial performance and vice versa, but the effect is insignificant. However, this is different from the results of the study conducted by Maharani et al. (2024), which states that the sales growth variable positively affects firm value in non-cyclical consumer companies in 2018-2022.

Based on the above explanation, we formulate the second hypothesis as follows:

H2: The exchange rate significantly influences non-cyclical sector stock prices.

Real Sales Index (RSI)

According to the Bank Indonesia (2024), the Retail Sales Survey (RSS) is a monthly survey initiated in September 1999, designed to provide early insights into the trajectory of GDP growth from the consumption perspective. Since January 2015, the survey has been conducted with a purposive sampling method, targeting approximately 700 retailers across 10 major cities in Indonesia, including Jakarta, Semarang, Bandung, Surabaya, Medan, Purwokerto, Makassar, Manado, Banjarmasin, and Denpasar. The Real Sales Index (RSI) is computed using a weighted approach, incorporating commodity weights derived from the Input-Output (I-O) table and city weights based on factors such as market share of household consumption, regional domestic product relative to household consumption, and gross domestic product (GDP).

According to Apriani and Fadilla (2023), RSI is an indicator of household consumption monitored through retail sales. When the RSI figure rises, real sales of retail traders are assumed to increase, which indicates an increase in public consumption. Conversely, if the RSI figure falls, retail sales and public consumption are assumed to decrease.

Based on this explanation, it is concluded that the RSI can represent the movement of GDP from the consumption side. If the RSI experiences a movement, it can be seen that there is a movement in people's buying interest in goods and services. According to Dodds et al. (1991), buying interest is one of the factors that influence a consumer's purchasing decision. Increasing a person's buying interest will increase the likelihood of their purchase, which will affect the company's sales, as Maharani et al. (2024) explained. This states that the sales growth variable positively affects firm value in non-cyclical consumer companies.

Based on the above explanation, the study's third hypothesis is as follows:

H3: Real sales index has a significant influence on non-cyclical sector stock price.

M2 Broad Money Supply

Ogbanje and Ihemezie (2021) explain that broad money represents the amount of money circulating in an economy and has several economic impacts. According to Arif (2014), the money supply refers to the total amount of money officially issued by the central bank, including both physical currency (banknotes and coins) and non-physical forms of money, such as demand deposits, quasi-money (including savings and time deposits), and foreign currency holdings. In its broadest definition, this aggregate is referred to as M2, which includes all components of narrow money (M1) along with additional liquid financial instruments.

According to Tambunan (2011), too much money circulating in the community will create much demand. Conversely, too little money held by the community results in low demand in the community, which results in low production activities that can lead to economic recession. According to the study conducted by Fadhel (2025), money supply had a positive role in the Iraqi stock exchange (ISX); this result also reflected a reality of the Iraqi economy, with the ISX being the representation. The study of Samanta and Deo (2021) concludes that money supply does not affect the Indian stock market performance.

Adhista (2022) explains that the amount shows a significant positive effect on the exchange rate when an increase of one billion rupiah will reduce the exchange rate by 0.001015. The findings from Latara (2022) show that the amount of money in circulation positively and significantly affects household consumption. Also, it is explained that when there is a lot of money circulation in the community, people prefer to consume because the community holds much money, so this will increase consumption.

Based on the above explanation, the study formulates its fourth hypothesis as follows:

H4: M2 broad money supply has a significant influence on noncyclical sector stock price.

Non-Cyclical

The primary consumer goods industry, also known as the consumer non-cyclical sector, covers the production and distribution of consumer goods or primary goods whose needs are essential to society (Nugroho & Munari, 2021). Based on macroeconomic studies such as inflation (Maulana & Maulana, 2024), exchange rates (Achsani & Nababan, 2008), real sales index (Putong, 2013), and M2 broad money supply (Latara, 2022) can influence purchasing decisions, so that they can affect the value of the company, and in the end affects the company's stock price.

Based on the above explanations, our last hypothesis is as follows:

H5: Inflation, exchange rate, real sales index, and M2 broad money supply simultaneously significantly influence non-cyclical sector stock prices.

RESEARCH METHODOLOGY

Sample

The sample used in this study consists of monthly data of the non-cyclical sector stock index (JKNONCYC), inflation, USD/IDR exchange rate, real sales index, and M2 broad money supply, during the Indonesia post-COVID-19 pandemic period, specifically from June 2023 to August 2024 (15 Months). This period was chosen because, in June 2023, the Indonesian government formally rescinded the COVID-19 pandemic's designation as a public health emergency through the enactment of Presidential Decree No. 17 of 2023 (Indonesia, 2023). The data from the Bank of Indonesia (2024), known as JKNONCYC, is retrieved from Investing.com (2024).

Classic Assumption Test

The classic assumption test is a series of tests conducted to ensure that the linear regression model meets the validity requirements. These tests include several important aspects, such as normality, autocorrelation, multicollinearity, and heteroscedasticity. The primary purpose of these tests is to ensure unbiased and efficient parameter estimation and to avoid problems such as autocorrelation or multicollinearity that can distort regression results (Youssef, 2022).

A. Normality Test

The normality test aims to check whether the residuals of the regression model are normally distributed. Residual normality is required for the t and F tests to be valid. The normality test is carried out using the One-Sample Kolmogorov-Smirnov test, with a significance value of more than 0.05 indicating that the data is normally distributed (Mardiatmoko, 2024). If the residuals are not normal, the regression model may produce invalid estimates.

B. Autocorrelation Test

Autocorrelation occurs when a relationship exists between residuals at different periods in time series data. The Durbin-Watson test and the Breusch-Godfrey LM test are used to detect autocorrelation. The results of these tests indicate whether residuals in one period are related to those in another period. Autocorrelation can reduce the efficiency of estimating regression coefficients, so it is important to detect it before conducting further analysis (Youssef, 2022).

C. Multicollinearity Test

The multicollinearity test is conducted to check whether there is a strong linear relationship between the independent variables in the regression model. Multicollinearity can cause a large variance in the estimated regression coefficients. The test is conducted by looking at the Variance Inflation Factor (VIF) and Tolerance values. If the VIF value is less than 10 and the Tolerance value is more than 0.1, then there is no significant multicollinearity problem (Mardiatmoko, 2024).

D. Heteroscedasticity Test

Heteroscedasticity is a condition where the residual variance is not constant across the entire range of independent variable values. The heteroscedasticity testing method used is the Glejser Test method to detect heteroscedasticity. If the significance value is greater than 0.05, the regression model has no heteroscedasticity problem. Heteroscedasticity can cause coefficient estimates to be inefficient, so this test is important to ensure the quality of the regression model (Youssef, 2022).

Multiple Linear Regression

According to Sjawal et al. (2022), multiple linear regression is an analytical tool used to determine whether there is a significant influence of independent variables (X) on dependent variables (Y). In this study, multiple linear regression analysis is used to determine the significance level of the partial and simultaneous influence of inflation (X1), exchange rate (X2), real sales index (X3), M2 Broad Money Supply (X4) on the non-cyclical Index (Y).

RESULTS AND DISCUSSION

Classic Assumption Test

A. Normality Test

The results of the Shapiro-Wilk normality test in Table 1 show that the sig value of all variables is greater than 0.05. Thus, it can be concluded that the five variables used are normally distributed.

Table 1: Normality Test

Test of Normality							
	Kolmogorov-Smirnov				Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.	Result
X1	.105	15	.200	.971	15	.870	Accept
X2	.160	15	.200	.941	15	.393	Accept
X3	.119	15	.200	.923	15	.296	Accept
X4	.160	15	.200	.881	15	.049	Accept
Y	.145	15	.200	.906	15	.117	Accept

B. Autocorrelation Test

The autocorrelation test aims to determine whether there is a correlation between period t confounding errors and period t-1 errors in the regression model. In the Durbin-Watson table, where N = 15 and K = 4, the value of DL = 0.6852, and DU = 1.9774. In Table 2, the Durbin-Watson autocorrelation (DW) test is 1.997.

Table 2: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	Result
1	.924	.854	.795	11.73625	1.997	Accept

Riani and Iryani's (2023) guidelines for decision-making are as follows:

•If $DU < DW < 4 - DU$ and $DL < DW < 4 - DL$, then there is no autocorrelation in the data or $H0$ is accepted.

•If $DU > DW < 4 - DU$ and $DL > DW < 4 - DL$, then there is autocorrelation in the data or $H0$ is rejected.

•$DL < DW < DU$ and $4 - DL < DW < 4 - DU$

From the results of the autocorrelation test, it is found that DW is 1.997, DL is 0.6852, and DU is 1.9774. Thus, it is revealed that 1.9774 < 1.997 < 2.0226 and 0.6852 < 1.997 < 3.3148, meaning no autocorrelation exists in the data.

C. Multicollinearity Test

The multicollinearity test determines the presence or absence of multicollinearity symptoms by looking at the tolerance and VIF (Variance Inflation Factor) values. Table 3 states that the Tolerance number of the four variables has a value >0.1 and the VIF value of the four variables <10. From these results, it can be concluded that there are no multicollinear symptoms in the regression model.

Table 3: Multicolinearity Test

Model		Collinearity Statistics		
		Tolerance	VIF	Result
1	X1	.196	5.107	Accepted
	X2	.378	2.647	Accepted
	X3	.139	7.195	Accepted
	X4	.107	9.373	Accepted

Dependent Variable: Y

D. Heteroscedasticity Test

The heteroscedasticity test examines whether the regression model experiences symptoms of heteroscedasticity, which can cause the coefficient estimate to be inefficient. It uses the Glejser method. In Table 4, all independent variables have a sig value of more than .05, meaning there are no heteroscedasticity symptoms.

Table 4: Heteroscedasticity Test

	Unstd Coeff		Std Coeff Beta	t	Sig	Result
	B	Std. Error				
	-32.638	141.837		-.230	.823	
X1	7.023	10.535	.442	.667	.520	Accepted
X2	.001	.007	.037	.078	.939	Accepted
X3	-.037	.441	-.065	-.083	.936	Accepted
X4	.002	.023	.090	.100	.922	Accepted

Dependent Variable: ABS_RES

Multiple Linear Regression

t- Test

The t-test aims to determine whether or not the independent variable partially has a significant effect. The relationship can be seen from the sig value if <.05.

Table 5: t- Test results

	Unstd Coeff		Std Coeff Beta	t	Sig
	B	Std. Error			
	1866.129	234.425		7.960	<.001.
X1	-27.829	17.412	-.437	-1.598	.141
X2	-.011	.011	-.019	-1.012	.335
X3	.754	.729	-.065	1..034	.325
X4	-.120	.038	.090	-3.169	.010

Dependent Variable: Y

Based on Table 5, the Inflation (X1) calculation shows a sig value of .141, which means inflation has no significant effect on the non-cyclical index (Y). This finding supports previous research conducted by Pangestuti (2023), which states that inflation has no significant effect on stock prices.

The USD/IDR exchange rate (X2) calculation shows a sig value of .335, which means there is no significant effect on the non-cyclical index (Y). This finding supports the results of Santika et al. (2023), which indicate that the exchange rate has an insignificant relationship with stock prices.

The real sales index (X3) calculation shows a sig value of .325, indicating no significant effect on the non-cyclical index (Y).

The M2 Money Supply (X4) calculation shows a sig value of .010, which means there is a significant effect on the non-cyclical index (Y). This finding supports the study of Latara (2022), which states that M2 broad money supply affects stock prices.

Table 6: F Test

	Sum of Squares	df	Mean Square	F	Sig.
Regression	8035.980	4	2008.995	14.585	<.001
Residual	1377.397	10	137.740		
Total	9413.377	14			

a. Dependent Variable: y
b. Predictors: (Constant), X4, X1, X2, X3

Coefficient of Determination

The results of the data processing that has been carried out show that the R Square (Coefficient of Determination) value is .854, which means that the influence of the independent variable (X) on the dependent variable (Y) is 85.4% (Table 7).

Table 7: Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.924	.854	.795	11.73625

CONCLUSION

Based on the study results, the exchange rate, inflation, and real sales index (RSI) variables partially have no significant influence on the non-cyclical sector price index. However, the results show that the M2 Broad Money Supply has a significant influence on the non-cyclical sector stock price index. However, when the four variables are analyzed simultaneously, a significant influence on the stock price index of this sector is found. This shows that the exchange rate, inflation, and RSI are partially unable to explain changes in the non-cyclical stock price index. However, together, the interaction of these four macroeconomic variables can have a significant impact. The findings of this study contradict the earlier results of Barsyah and Hermi (2025) and Sastrasasmita (2023), which state that non-cyclical sector companies have stability when facing economic changes.

This study has certain limitations. First, it focuses exclusively on the non-cyclical sector, which, while providing insights into a stable market segment, may not fully capture the broader impact of macroeconomic variables on cyclical industries or other stock market indices. Future research could extend the analysis to cyclical sectors to compare how macroeconomic factors influence different industries.

Further, the study period is limited to Indonesia's post-COVID-19 pandemic (15 months of data). For future studies, it is recommended to incorporate additional relevant variables and broaden the scope to include a more diverse range of sectors and regions.

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Mall Shoppers and Their Decision-Making from Indian Perspective - A Critical Review of Literature

Adyasha Suvadarshini[1] and Tulika Singh[2]

ABSTRACT

Purpose: *This paper critically reviews the existing literature pertinent to the decision-making styles of mall shoppers in India. It also provides insights for mall owners, store managers, retailers, and sales staff on maximizing the experience of Indian mall shoppers in the light of competition and emerging technologies.*

Methodology: *The paper critically analyzes existing conceptual and empirical literature on consumers' buying decision-making styles, focusing on Indian mall shoppers.*

Findings: *Indian malls have constantly undergone adaptation and changes in both style and substance to entice increasingly sophisticated, fussy, and capricious consumers. Findings suggest that Indian mall shoppers widely exhibit price, recreational, quality, and novelty consciousness decision-making styles but are confused over choice and variety seeking.*

Implications: *The findings draw the attention of mall owners and retail marketers to understand shoppers' insights and orientation regarding product decision-making and store selection. Further, the study connotes specific facts for retailers and mall developers facing dilemmas about choosing the appropriate strategy for targeting shoppers and attracting greater footfall.*

Originality: *This study contributes to understanding the decision-making styles of mall shoppers in India through the literature. It provides valuable insights for academic researchers and marketers about the decision-making of Indian mall shoppers.*

Limitations and directions for future research: *Further research on the buying decision-making styles of Indian mall shoppers, including their changing tastes and preferences, could significantly contribute to design strategies by mall owners and retail marketers. Comparative analyses of mall-preferring shoppers and consumers preferring unorganized retail outlets could add value to understanding decision-making factors.*

Keywords: *Mall Shoppers; Retailing; Decision-making; Price Consciousness; Recreational Consciousness; Quality Consciousness; Novelty Consciousness*

[1] Adyasha Suvadarshini, PhD, Global Institute of Management Bhubaneswar, India
Email: adyasha@gim.edu.in
[2] Tulika Singh, PhD, Global Institute of Management Bhubaneswar, India
Email: dr.tulika@gim.edu.in

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INTRODUCTION

Shopping malls are envisaged to be frontrunners for the sprawling of organized retailing (Pookulangara & Knight, 2013). A *shopping mall* is a huge building or group comprising various stores and other business establishments solely selling various products or brands in retailing mode (Narahari & Kuvad, 2017). They are closed, climate-controlled, lighted shopping centers with retail stores on one or both sides of an enclosed walkway (Levy *et al.*, 2012). Modern shopping malls confer many entertainment alternatives, lifestyle products, and services, such as luxury shopping, game zones, beauty salons, cinemas, and food joints, to enhance shoppers' experience (Ibrahim & Ng, 2002). Modern-day malls are known to endow shoppers with the experiential and functional benefit of shopping from various merchandise, namely apparel, food, groceries, entertainment, convenience, and leisure, under a single structured roof with on-site parking (Dey *et al.*, 2019). These malls can be regarded as *One Stop Shop* that bestows a combo of services, quality time, entertainment, socialization, pleasure, and fun, merchandise to its consumers in the form of convenient access to a desirable mix of retailers and facilities within a managed environment to provide a satisfying and safe, shopping and leisure experience. Malls are viewed as embarking upon a new culture of branded products, quality lifestyle, recreation, and shopping.

Indian malls invariably have a hypermarket, a multiplex, a department store, a food court, and various brand outlets (Singh & Sahay, 2012). Malls have significantly transformed the lifestyles and behaviors of Indian consumers by offering them branded products (Dwivedi, 2009). In the past, Indian consumers had limited product choices owing to the compulsion to buy from nearby stores with limited assortment (Lysonski *et al.*, 1996). However, today, organized retailers, hypermarkets, and supermarkets offer more product variety to consumers. Undoubtedly, this leads to customers getting delighted and excited about getting what they desire conveniently in one location. A good location is among the most critical factors of a shopping mall (Bozdoğan, 2015). The physical visibility and feel of the product are other essential experiences that any mall can provide customers (Khare, 2012).

The mall boom in India has led to the mushrooming of malls across the different regions of the country (Kuruvilla & Joshi, 2010). The expansion of Indian retail can be visualized as rambling shopping centers, multi-plex malls, and huge complexes that offer shopping, entertainment, and food courts under one roof (Sathish & Raju, 2010). Indian consumers are currently characterized by a paradigmatic shift in buying motives, personality, interests, beliefs, values, and attitudes while leapfrogging from traditional Kirana stores to modern-day shopping malls (Shekar *et al.*, 2016). Thus, the retail industry in India has shown significant potential for development. The market indicates unprecedented growth, supported by favorable government policies and technological advancements.

This research aims to critically examine the perspectives of Indian mall shoppers in decision-making by extensively reviewing the literature. The following section reviews conceptual and empirical studies, including mall attributes influencing consumer buying decision-making and shopping orientation. This is followed by a review of Indian mall shoppers' decision-making styles, and the final section presents the conclusion and study implications.

REVIEW OF LITERATURE

Empirical studies show several benefits that attract mall shoppers, including their changed perspectives and lifestyles. Studies explored the roles played by malls in imparting functional and experiential benefits to people in small towns, although they are alien to the concept of malls. Also, studies reveal that male and female shoppers perceive differences between malls regarding social interaction issues (Khare, 2010).

Mall Attributes Influencing Consumer Buying Decision-Making

The availability of different retailing alternatives provides more options and choices to consumers. According to Areni and Kim (1993), the retail environment and attributes are important in eliciting positive responses about stores. A retail environment with positive stimuli motivates consumers to purchase, whereas an unattractive layout conveys negative cues, leading to displeasure and dissatisfaction (Mehrabian & Russell, 1974; Russell, 1979). The size of malls and the quality of the facilities are persuasive in drawing consumers to the stores, and unfavorable design elements dissuade them from visiting the malls (Brown, 1999). Malls with multiplexes, food courts, and recreational areas for children are emerging as one-stop locations for family outings and centers for teenagers' socialization (Martin & Turley, 2004).

Malls play a significant role in consumers' lifestyles (Terblanche, 1999) and accomplish the consumers' personal and social needs (Rintamäki et al., 2006; Tauber, 1972). Malls are also focal points of community entertainment and interaction (Holbrook & Hirschman, 1982), contributing to the socio-economic environment (Hernandez & Jones, 2005). The ambiance, layout of facilities, and the provision of entertainment (Babin *et al*., 1994; Jones, 1999) enhance the attractiveness of malls, which affects consumers' emotions (Bloch *et al*., 1994). The malls add an element of fun and entertainment to shopping experiences (Kumar & Karande, 2000; Napolitano *et al*., 2003). Recreational and entertainment facilities assist retailers in differentiating themselves (Beyard *et al*., 2001) by providing sensory stimulants (Bloch *et al*., 1994).

Kelemen and Kemeny (2019) analyze a short-term retail event similar in success to Black Friday but driven by different consumer motivations. Using a mixed-method approach such as phenomenological interviews and an online survey of 761 respondents, the study applied exploratory factor and hierarchical cluster analyses, followed by ANOVA, to identify three distinct shopper groups: Loyalists, Enthusiasts, and Newbies. Each group varies in task and social orientation and uses different strategies to achieve personal shopping goals. This study contributes to retail shopping orientation literature and provides strategic insights for retailers to enhance performance by targeting the most valuable customer segments.

The study of Yaaminidevi (2013) in Madurai, India, alludes to malls satisfying the utilitarian value searched by customers and offering them the desired recreational benefits. Ahmed and Mayya's (2015) study in the city of Mangalore in India revealed that consumers terrifically benefitted from the organized retail outlets in terms of a wider choice of products and well-known brands, one-stop shopping, new market arrivals, festive offers, huge discounts, and other benefits. Kaveh *et al.* (2021) examine how customer engagement in sales promotions influences purchase intention, using theories of value co-creation and customer engagement. Through PLSc-SEM analysis, the findings show that when customers choose promotional discounts that suit their preferences, their purchase intention is positively affected, mediated sequentially by perceived value and customer satisfaction. The study highlights the practical benefit of involving customers in promotional strategies to boost interest and engagement.

Environmental factors such as interior design, store layout, lighting, color, music, and overall cleanliness induce varying degrees of customer emotional reaction (Babin & Attaway, 2000; Babin *et al.*, 1994; Bitner, 1992). A pleasant environment elicits positive behavior (Mehrabian *et al.*, 1997). Mall ambiance and attractiveness are perceived as a key contributor to attracting shoppers to stores (Laroche *et al.*, 2005; Michon *et al*., 2008) and play a significant role in consumers' evaluations of products (Baker *et al*., 1994). Due to their architectural design, layout, ambiance, and synergies among retailing, eating, and entertaining (Beyard *et al*., 2001; De Nisco & Napolitano, 2006), malls have become tourist destinations (Ooi & Sim, 2007). The mall environment favors consumers' moods and augments their shopping experience (Michon *et al*., 2008). The malls archetypally house cinema theatres, food courts, recreational centers, and gaming areas where consumers can relax. The glamour of malls with sparkling hinterlands and multiple of stores is considered a breather from the hectic metropolitan lifestyles. Thus, the malls offer a wide range of stores such as departmental stores, apparel stores, and entertainment and leisure facilities (Abratt *et al*., 1985; Babin *et al*., 1994; McGoldrick & Thomson, 1992; Prendergast *et al*., 1998) are regarded as attractive destinations (Hernandez & Jones, 2005). According to Hook (1989), the impression of the mall is based upon the types of stores and entertainment facilities, a combination of tangible or functional factors and intangible or psychological factors. The choice of malls depends on several factors (Teller *et al*., 2008), with convenience having the most significant impact (Severin *et al*., 2001). Instead of visiting different retailers for different product categories, consumers visit malls and purchase all their household requirements. A wide selection of products can also lessen the perceived costs of travel time and effort associated with each shopping trip and ease the shopping task (Pan & Zinkhan, 2006).

Customers prefer malls based on attributes such as special ambient conditions, air conditioning facilities, scope for window shopping, food courts, entertainment like movie theatres, game zones, and others (Khare, 2012). In order to entice increasingly sophisticated, choosy, fussy, and fickle consumers, malls have continually exhibited adaptability and changeability in style and substance (Kushwaha *et al*., 2017). Shopping malls could magnetize higher customer traffic with factors such as ambiance, store assortment, sales promotions, and comparative economic gains (Rajagopal, 2009). Mall shoppers' perception of malls is influenced by dimensions of variety, quality, satisfaction value, and parking (Hauser & Koppelman, 1979). Thus, shoppers' perceptions can be measured in various dimensions, such as price, layout, ease of reaching the mall and parking, visual appearance, reputation, merchandise, services, hours of operation, and atmosphere (Downs, 1970).

The study of Hu and Jasper (2007) identified five major factors: convenience, choice, crowds, ambiance, parking, and hedonic shopping orientation, which stood very important for experienced and mature adults during mall shopping. Yavas's (2003) study connotes important attributes of shopping malls, including quality, price, cleanliness, courtesy, assortment, security, store hours, accessibility, and atmosphere. Zhuang *et al*. (2006) analyzed the impact of 13 situational factors on mall shoppers' choices, including assortment, atmosphere, convenience, and quality. The study on UAE shopping malls from the shoppers' perspective by El-Adly (2007) reported six mall attractiveness factors: comfort, entertainment, diversity, mall essence, convenience, and luxury. Research advocates that a shopping mall's image can be measured on five dimensions: access, price/promotion, store atmosphere, cross-category assortment, and within-category assortment (Hedhli & Chebat, 2009). A study on shopping mall preferences of teens of 12 - 17 years showed that significant attributes relate to the friendliness of malls, presence of cool stores, conduciveness for hanging out with friends, and attractiveness (Wendy & Sandra, 2005). A study on Southern Africa highlighted various features in shopping malls, such as merchandisers, accessibility, service, amenities, ambiance, promotion, entertainment, security, and many more influencing shoppers' buying behavior (Dubihlela & Dubihlela, 2014). Several studies infer that shopping center image has been influenced by four principal attributes: merchandise mix, accessibility, services, and atmospherics (Dennis *et al*., 2001; Finn & Louviere, 1996; Frasquet *et al*., 2001). A high level of performance management with apt customer support and service also popularizes malls among shoppers (Forslund, 2015). Retail mall stores use discounts, loyalty cards, price-offs, and freebies as promotional tools (Khare & Mayo, 2010). Shoppers also get captivated by factors like discounts and sales schemes, even if they have minimal requirements. The study also recognized the prominence of private labels or retailer brands and the price difference they offer as the main reason for increased footfall (Burt & Davies, 2010). The retailer's brands provide standardized quality and greater quantity than national brands. Retailer brands contribute more profits by curtailing channel incentives, influencing a mall's success. According to Kushwaha (2017), consumers' behavior in malls is influenced by service experience, internal environment, convenience, utilitarian aspects, acoustics (music), proximity, and demonstration.

Othman *et al.* (2022) explore factors influencing customer purchase intention in a shopping mall context in Malaysia, focusing on product offerings, store environment, perceived value, and price. Using a correlational design and hierarchical regression analysis on 157 survey responses, the findings reveal that price and product offerings significantly drive purchase intention, while perceived value predicts customer satisfaction. However, customer satisfaction does not mediate the relationship between these factors and purchase intention. Further, Chen *et al.* (2021) use in-store ambulatory eye-tracking to examine how lateral and vertical biases influence consumer attention in a grocery store. Analyzing shoppers' visual fixations and movements, the researchers found that shoppers pay more attention to products on their right side when walking down aisles. However, contrary to common belief, eye level is not the most attention-grabbing area. Instead, products located about 14.7 inches below eye level—around chest level—receive the most visual attention. These findings challenge traditional retail assumptions about product placement.

Shopping Orientation

Consumers visit malls and make buying decisions with a specific attitude or style. Different categories of products and services involve different shopping attitudes. Dholakia (1999) pointed out that the behavior related to shopping for gifts is different from the behavior related to shopping for groceries. According to Vijayasarathy (2003), consumers' motivations and attitudes play a significant role in determining consumers' shopping orientations.

Sproles and Kendall (1986) proposed that consumers' decision-making style is their mental orientation toward shopping for a product or selecting a store. According to the authors, consumers may espouse a composition of more than one style while arriving at a buying decision. Based on wide-ranging studies, Sproles and Kendall (1986) developed a Consumer Style Inventory (CSI) entailing eight dimensions of decision-making: perfectionism, brand-consciousness, novelty and fashion consciousness, recreational-hedonistic consciousness, price and value-for-money consciousness, impulsiveness, confused by over choice and habitual and brand-loyal orientation as thumb rules.

A clear understanding of the consumers' orientation toward shopping can assist retailers in crafting effective retail promotional strategies and planning appropriate strategies for maximizing satisfaction and fulfilling consumers' shopping needs (Seock & Sauls, 2008). Studies show that consumer decision styles or CSI are significantly related to the choice and evaluation of stores (Lumpkin & Hawes, 1985; Moye & Kincade, 2002; Seock & Chen-Yu, 2007; Seock & Sauls, 2008).

Perfectionist consumers have greater expectations and seek the best overall quality and functionality of the products and services. Brand-conscious consumers purchase reputed and well-known brands and perceive that high-priced products are better quality. They prefer to buy products and services at specialty stores. Novelty and fashion-conscious consumers seek excitement and pleasure in new and innovative items; these consumers update themselves with the latest styles, fads, and trends. Recreational, hedonistic consumers find shopping pleasurable, fun-filled, and enjoyable. Price-conscious or value-for-money-seeking consumers often compare products, look for discounts and price-offs, and consider the lowest-priced products. Impulsive consumers go on shopping trips casually and are least concerned about price and quality, but they often regret their purchases. Confused by over-choice, consumers find it challenging to make decisions because of multiple options and information overload. Habitual and brand-loyal consumers are loyal and stick with their favorite brands and shops. Thus, consumers approach the marketplace with a specific attitude toward buying the products or services.

Watanabe *et al.* (2019) evaluate how culture, store image, and customer satisfaction influence purchase intention in Brazilian supermarkets. Using survey data from 443 consumers and structural equation modeling, the findings show that store image and customer satisfaction significantly enhance purchase intention, while the cultural dimension of individualism-collectivism has no direct effect. The study highlights that store layout, service, product variety, and quality are key to increasing satisfaction and purchase intention. The study fills a gap in the literature by examining these relationships in the supermarket context, although limitations include convenience sampling and the exclusion of vertical/horizontal cultural distinctions. Likewise, Diallo *et al.* (2018) examine how mall service quality influences customer loyalty across three developing countries such as Morocco, Senegal, and Tunisia, including how cultural context moderates these relationships. Using data from 750 customers, the research reveals that service quality and its dimensions, such as physical aspects, reliability, problem-solving, and staff attention, affect loyalty through the mediation of customer satisfaction and perceived value. However, the impact varies by country: service quality strongly drives loyalty in Morocco and Senegal, while customer satisfaction more significantly influences loyalty in Senegal and Tunisia. The findings highlight that cultural context shapes how service quality affects customer loyalty, resulting in differing patterns across countries.

DECISION-MAKING STYLES OF INDIAN MALL SHOPPERS

In recent years, very few studies have reported on the constituent factors of shopping malls in India and how they influence decision-making (Kushwaha *et al.,* 2017). According to Bailey (2003), Indian consumers prefer shopping malls as they offer easy access to all products under one roof. A survey to investigate the shopping motivation of Indian customers unveiled nine factors divided into two dimensions: utilitarian and hedonic. All nine factors vaulted different areas, such as economic, enjoyment, gratification, and idea shopping, affecting the motivation of Indian customers to do shopping at shopping malls (Patel & Sharma, 2009). The study of Devgan and Kaur (2010) reveals that Indian mall shoppers want to get the best value for the money they spend.

Research reveals that shopping malls' image is the most essential dimension of attractiveness in India (Banerjee, 2012). The shopping mall image is a holistic entity entailing retail mix, infrastructure, and atmosphere (Leo & Philippe, 2002). It is a multidimensional concept encompassing tangible (functional attributes), such as its physical features, and intangible attributes, which include its atmospheric qualities (McGoldrick, 2002). Further, studies suggest a strong correlation between the frequency of visits (Haynes & Talpade, 1996), amount of purchase (Spies *et al*., 1997), desire to stay (Wakefield & Baker, 1998), and re-patronage intention (Spies *et al*., 1997; Wakefield & Baker, 1998).

Patel's (2008) study exhibits Indian mall shoppers' decision-making styles of price consciousness, quality consciousness, recreational, confused by over-choice, novelty consciousness, and variety seeking. Similarly, Ravindran *et al.* (2009) study in Kerala State, although it confirmed the decision-making styles of Indian mall shoppers, as revealed by Patel (2008), could not confirm brand consciousness, fashion-consciousness, impulsiveness, and brand loyalty. However, male and female consumers were considered quality-conscious and price-conscious, and the young consumers were more recreational than older. Overall, the study reveals whether young, middle-aged, or old shoppers hailing from Kerala State in India were found to be variety seekers, novelty conscious, and confused by over-choice.

Studies of Indian mall shoppers identified six decision-making styles: price consciousness, quality consciousness, recreational facilities, confusion by over-choice, novelty consciousness, and variety consciousness (Sahoo & Dash, 2010). However, it is very imperative to study the decision-making behavior of Indian customers as more and more domestic and international players are entering the Indian retail sector (Sahoo & Dash, 2010). Most studies conducted in different regions of the country reveal similar things. The study of Kaurav *et al*. (2011) in central India, in the State of Madhya Pradesh (Gwalior), alluded that mall shoppers were price-conscious, quality-conscious, recreational, novelty-conscious, and variety-seeking. The study of Singh and Tripathi (2012) in the State of Madhya Pradesh (Bhopal) explored nine decision-making styles of mall shoppers towards the purchase of food products, namely shopping enjoyment, habitual buying, brand consciousness, perfectionism and quality consciousness, brand loyalty, confused by over choices, impulse buying, and store loyalty.

Considering the gender dimension, female shoppers in India tend to do more planned shopping. According to Narahari and Kuvad (2017), male consumers exhibited preponderance towards price-consciousness and hedonistic-recreational buying. Studies of customers from the younger and older generations reveal interesting findings. Khare's (2012) study in North India suggests that older consumers (40–50 years and 50 years and above) differ from younger consumers (20–30 years and 30–40 years) in their shopping orientations as younger consumers look for more variety and recreation. The findings indicate that younger consumers were more conscious about branded products, sought new products and novelty in their purchase decisions, and emphasized the recreational aspects of shopping. Thus, the availability of branded products, new styles, and fashions has redefined shopping for the younger generation, who are more aware of global brands and prefer expensive brands. Bedi and Lal's (2014) findings reveal that Indian youth were brand-conscious, quality-conscious, recreational, impulsive, confused by choice, and brand-loyal. They were not price-conscious, as they could afford more for brands and quality. Linson and John (2018) arrived at the result that mall-preferring shoppers and consumers preferring unorganized retail outlets differed from other shoppers in the traits of price consciousness, quality consciousness, recreational facilities, confused by over-choice, novelty consciousness, and variety consciousness based on their study conducted in Thrissur and Ernakulam district in the Kerala State.

CONCLUSION AND POLICY IMPLICATIONS

This study unfurls research on consumers' buying decision-making styles, focusing on Indian mall shoppers. Decision-making is a complex area in the context of consumer behavior, as behaviors are uncertain to predict and analyze. There is limited research on the decision-making styles of Indian shoppers in malls. The review of studies revealed that

Indian mall shoppers widely exhibit the decision-making traits of price consciousness, quality consciousness, recreational hedonism, novelty consciousness, confusion over choice, and variety-seeking. The literature also shows that brand consciousness, fashion consciousness, brand loyalty, and impulsiveness are less discussed themes. Thus, this calls for the attention of mall owners and retail marketers.

India scores higher on the collectivistic dimension, so whether it is metros or small towns, shopping is a shared experience with family, friends, and known people for significant chunks of people. Although emerging online product stores provide products and services at higher discounted prices and deliver the products conveniently to doorsteps, people still yearn for a common destination to gather, socialize, connect, and engage. For teenagers, malls are becoming the best-opted centers to hang around, and for other age groups, malls are locations for quality time spent with family and socialization. So, shopping malls are being developed to provide a space for activity centers in the social fabric of communities, giving higher prominence to cultural consciousness. The influence of mall attributes such as decor, layout, services, variety of stores, and entertainment facilities must be considered while planning malls in smaller cities. Also, mall retailers must understand the tastes and preferences of the consumers and strategize their promotional plans. The greater impetus should be directed towards managing stores, staff, service, and layout because malls epitomize umbrella services encasing different goods and services. Retailers should provide value for the money spent by the customer and effectively position the products as the current customer is more empowered, well-informed, and ready with well-grounded homework, and after all, they want the utmost value for the money they spend.

Mall owners and developers should emphasize developing the recreational dimensions of malls so that shoppers can enjoy a pleasant shopping experience with family and friends.

Store managers should focus on brand assortment and stocking qualitative merchandise at affordable prices, as Indian mall shoppers tend to be price and quality-conscious. Marketers must formulate effective pricing strategies that consider cultural milieus.

Retailers should offer novel and fashionable items that may seem exciting and trendsetting to shoppers. In the current context, youths are highly influenced by fashion influencers. So, marketers need to do more groundwork on building fashion consciousness across demographics. Most importantly, mall stores should focus on having greater variety.

The store managers should instill brand awareness and brand familiarity among consumers. They should accentuate the penchant for brand loyalty among frequently visiting shoppers through loyalty programs or other relevant strategies. In order to stimulate impulsiveness among shoppers, different forms of visual merchandising, like product displays, warm interiors, mannequin displays, visuals, light effects, color combinations, acoustics, and promotional signages, should be incorporated. Since the perceived benefits may differ among consumer groups based on demographic variations, strategies should be customized and conscious of sub-cultural dimensions.

The sales staff should be highly competent and well-trained to cooperate with shoppers, provide requisite brand or product information, and effectively demonstrate the products' utility. This may delight customers and deter their confusion and dissatisfaction.

As customer-generated reviews on social media, blogs, websites, etc., minimize retailers' control over customers, it has become customary to understand customer behavior and preferences. Further, understanding and molding rural consumers' mindsets should be a priority for mall retailers.

Additional research should focus on understanding the buying decision-making styles of mall-visiting consumers and aligning marketing strategies to increase mall productivity and boost sales.

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