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OUTCOME VS. MASTERY: A SEMANTIC ANALYSIS OF CURRICULAR FRAMING IN GRADUATE DATA ANALYTICS PROGRAMS

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ABSTRACT

Graduate programs in data analytics differ not only in content but also in how they frame the purpose of analytics education. This study investigates whether business and non-business programs exhibit distinct curricular framing orientations. It hypothesizes that business programs emphasize outcome-oriented framing, presenting analytics as a tool for decision-making and value delivery, while non-business programs emphasize mastery-oriented framing focused on technical depth and methodological rigor. To evaluate this distinction, the study analyzes 1,972 course descriptions from 109 graduate programs using natural language processing techniques capable of identifying semantic similarities in instructional language. The results reveal significant differences in how programs describe the role of analytics, with statistical and validation analyses supporting the hypothesized framing distinction. These findings position framing orientation as a structural feature of curriculum design and provide practical guidance for educators, curriculum developers, and academic leaders seeking to align analytics programs with institutional goals and workforce expectations.

KEYWORDS:
Data Analytics Curriculum, Framing Orientation, Graduate Education, Business Analytics Programs, Semantic Modeling, Curriculum Design Patterns, Natural Language Processing, Course Description Analysis

Introduction

As organizations increasingly rely on data to inform decision-making, the demand for professionals who can translate information into actionable insight continues to grow. Graduate programs in data analytics have emerged as a key pipeline for developing this workforce, equipping students with technical capabilities, analytical thinking, and domain-specific knowledge. Among these offerings, business analytics has evolved into a distinct area that integrates quantitative methods with managerial insight to address organizational challenges.

Designing effective data analytics curricula requires more than assembling a list of technical topics or

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mapping competencies to industry roles. Educators must respond to a complex set of pressures: aligning with accreditation standards, incorporating both business and technical knowledge, managing credit hour limitations, and accommodating varied faculty expertise(Gharehgozli, Gupta, & Seung-Kuk, 2024; Gupta, 2023). These constraints shape not only what is taught but also how programs structure learning experiences and frame the purpose of analytics education.

The challenge is not unique to business programs. Fields such as healthcare, engineering, and the social sciences also integrate data analytics into their graduate education, often drawing on similar tools and techniques. However, these disciplines differ in how they frame the role of analytics within their professional domains. For instance, healthcare analytics frequently emphasizes clinical outcomes and efficiency(Nkwanyana, Mathews, Zachary, & Bhayani, 2023), while engineering analytics may stress systems optimization and technical precision(Luis, Edgar, Alfonso, & Christopher, 2021). Such differences suggest that curricula are shaped by distinct assumptions about what analytics is for and how it should be applied.

This study argues that these differences are not limited to content but extend to how learning is framed. Specifically, it hypothesizes that business-oriented programs emphasize outcome-oriented framing, presenting analytics as a means to inform decisions, deliver value, and drive strategic outcomes. In contrast, non-business programs tend to emphasize mastery-oriented framing, portraying analytics as a methodological discipline focused on technical rigor and computational depth.

To explore this hypothesis, the study uses course descriptions as the unit of analysis. These short texts are often overlooked, yet they offer standardized and comparable signals of a program's instructional priorities and framing logic. While prior research has often focused on identifying what topics are taught using methods such as topic modeling or keyword analysis, this study takes a different approach. It examines how course descriptions construct meaning through semantic similarity analysis. This shift from topic-based to semantic-based analysis allows for the detection of structural patterns in how curricula are organized, and educational goals are communicated.

The study applies transformer-based language modeling and density-based clustering to analyze 1,972 course descriptions from 109 graduate data analytics programs across both business and non-business domains. By modeling the semantic space of these descriptions, it uncovers clusters of meaning that reflect recurring framing structures, referred to here as *Curricular Design Patterns*. These structural patterns emerge from recurring semantic similarities and capture how institutions describe the role of analytics within their programs. Rather than reflecting only topical content, they offer insight into how programs frame analytics as an educational pursuit, either as a tool for delivering outcomes or as a discipline rooted in technical mastery. These patterns are not predefined by taxonomies or competencies but emerge from how institutions describe the purpose and structure of analytics education.

This study investigates whether curricular framing differs by disciplinary context. Specifically, it asks: *Do graduate-level business and non-business data analytics programs differ in their curricular framing orientation, with business programs emphasizing outcomes and non-business programs emphasizing mastery?*

By addressing this question, the study offers a new lens for understanding how disciplinary context shapes

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not only the content of analytics education but also its underlying educational intent. It highlights framing orientation as a structural feature of program design that can influence learning outcomes, professional preparation, and interdisciplinary coherence. The findings also provide practical value for curriculum designers and academic leaders by clarifying how programs can differentiate themselves, align course structures with institutional goals, and respond more effectively to industry expectations.

Literature Review

As graduate programs in data analytics continue to expand, researchers have examined how curricula are developed, structured, and aligned with workforce needs. Much of the existing literature emphasizes the integration of technical and business competencies, as well as the use of frameworks to guide program design. However, relatively few studies have explored how different disciplines frame the purpose and role of analytics education. This distinction between *what* is taught and *how* learning is framed becomes especially important when comparing business and non-business programs. Although programs may draw on similar tools and techniques, they often differ in how they describe the goals and applications of analytics(Collier & Powell, 2024).

To contextualize this study's focus on framing orientation, this section reviews three streams of relevant literature. Section 2.1 summarizes the growth of graduate data analytics programs and how curricular priorities differ across academic domains. Section 2.2 explores how competency frameworks shape curriculum design and highlights the importance of instructional framing. Section 2.3 reviews methodological approaches to analyzing curricular content and presents the case for semantic modeling as a more direct way to evaluate how learning goals are expressed through language.

Graduate Analytics Education Across Domains

The growth of graduate programs in data analytics reflects increasing demand for professionals capable of transforming data into actionable insights across sectors. According to the Institute for Advanced Analytics (n.d.), the number of master's programs in analytics and data science in the United States has increased to more than300, producing 20,000 graduates annually. This expansion has driven efforts to balance technical proficiency, domain acumen, and responsiveness to workforce needs.

Business schools have played a central role in this growth by embedding analytics into their curricula to meet employer expectations and accreditation standards (Clayton & Clopton, 2019; Gharehgozli et al., 2024). Many institutions begin with graduate certificates before developing full degree programs (Bacic, Jukic, Malliaris, Nestorov, & Varma, 2023). These programs often form partnerships with departments in computer science, statistics, or information systems to ensure technical depth and curricular flexibility (Mitchell, Woolridge, & Johnson, 2021; Verma, Yurov, Lane, & Yurova, 2019). In institutions without standalone programs, analytics content may be embedded within electives or business concentrations (King, 2022).

As programs evolve, researchers have examined how disciplinary context shapes curricular emphasis. Aasheim, Williams, Rutner, and Gardiner (2015) compared undergraduate data analytics and data science programs and found that analytics curricula in business schools often emphasize applied decision-making, tool evaluation, and communication. In contrast, data science programs tend to prioritize programming, algorithm development, and advanced mathematics. These differences reflect the disciplinary roots of each

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program. Analytics is commonly grounded in applied business settings, while data science is more often situated in technical academic disciplines. Almgerbi, De Mauro, Kahlawi, and Poggioni(2022) extended this inquiry through a review of job postings and course offerings. Their findings revealed persistent gaps in areas such as data engineering, suggesting that institutional capabilities and disciplinary traditions may shape curriculum design more than direct employer feedback.

Practitioner literature supports this distinction. Provost and Fawcett (2013b) argue that the ability to think analytically about data, rather than simply operate tools, is essential for informed decision-making. In a related article, they differentiate data science as a discipline focused on creating generalizable models for extracting knowledge from data. Business analytics, in contrast, is described as the application of those models to solve domain-specific problems (Provost & Fawcett, 2013a). These perspectives suggest that curricula differ not only in content, but also in how programs define the purpose of analytics education. Some frame analytics as a tool for decision support, while others emphasize its role as a technical and methodological discipline.

Although these studies highlight meaningful differences in curricular emphasis, few have examined how those differences are expressed in the language used to describe learning goals and instructional intent. This study contributes to that conversation by focusing on how business and non-business programs differ in framing orientation, defined here as the way programs communicate the purpose, application, and intended outcomes of analytics education through course descriptions.

Framing Orientation in Curriculum Design

Designing analytics curricula involves balancing multiple demands, including technical rigor, domain relevance, pedagogical clarity, and responsiveness to labor market needs. To manage these demands, many programs adopt competency frameworks that outline the knowledge, skills, and abilities students are expected to acquire. These frameworks, developed in both academic and industry settings, serve as high-level guides for curriculum planning and course development.

Numerous studies have identified core competencies required for success in analytics-related roles. For example, Collier and Powell (2024) emphasize skills such as data management, statistical reasoning, and structured problem-solving. Others argue for the inclusion of business understanding, ethical reasoning, and communication alongside technical training (Bacic et al., 2023; Gupta, 2023). Competency models help programs define what students should learn and are often mapped to learning outcomes that guide both instructional planning and assessment.

However, several studies have also highlighted the importance of how competencies are delivered, not just what they include. Mitchell et al. (2021) found that business analytics professionals are expected to demonstrate communication skills, adaptability, and contextual awareness in organizational settings. These expectations influence curricular strategies that prioritize applied formats such as storytelling, concise writing, and audience-specific messaging. Mitchell and colleagues also note that real-time responsiveness, interpersonal credibility, and the ability to frame insights within business contexts are crucial. These findings suggest that curriculum design must address both the substance of instruction and the way learning is contextualized and practiced.

Competency-based models provide a useful foundation, but they offer limited insight into how learning is

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framed across an entire program. This limitation becomes especially important when comparing curricula across disciplines. For example, business programs frequently use case studies and applied decision-making scenarios. In contrast, programs rooted in science, engineering, or computing often focus on algorithmic development, simulation, or systems design (Aasheim et al., 2015; Provost & Fawcett, 2013b). These differences suggest distinct framing orientations. One may emphasize decision support and strategic outcomes, while the other may emphasize methodological mastery and computational sophistication.

This study adopts a structural perspective that focuses on these framing choices. Rather than evaluating whether a program includes certain competencies, it examines how course descriptions communicate the purpose of learning. This emphasis on framing orientation moves beyond content coverage to consider the educational intent behind a curriculum. By analyzing the language of course descriptions, the study identifies recurring patterns that reveal whether a program prioritizes applied outcomes, technical mastery, or both.

Understanding framing orientation in this way adds an important layer to curriculum design. It helps explain not only what is taught, but also how it is positioned in a particular way. These framing choices reflect deeper institutional values and disciplinary identities, which in turn shape how students prepare for professional roles. By surfacing these patterns, the study supports more intentional curriculum development and offers a new lens for comparing programs across domains.

Capturing Curricular Framing

Most prior research on analytics curricula has focused on identifying which topics are taught. Methods such as keyword analysis and topic modeling have helped surface common tools, techniques, and content themes. Topic modeling approaches, including Latent Dirichlet Allocation (LDA) and BERTopic, group documents based on patterns of word co-occurrence(Grootendorst, 2022; Karadağ, Parim, & Büyüklü, 2023; Nkwanyana et al., 2023). These techniques are effective for detecting recurring subject matter across programs, particularly when the goal is to map topical coverage or identify thematic clusters.

However, topic modeling is limited in its ability to capture how programs frame the purpose of learning. A course that discusses regression, simulation, or time series analysis may be grouped with others based on shared terminology, even if its instructional emphasis is entirely different. One course might describe these techniques as tools for supporting managerial decision-making, while another might focus on algorithmic implementation or theoretical precision. Topic models treat both as similar, even though they differ in intent.

To address this limitation, the current study uses semantic modeling, which focuses on the contextual meaning of language rather than its frequency. Transformer-based models such as DistilBERT encode each course description into a high-dimensional vector that reflects how words function within their surrounding context. These semantic embeddings enable comparison of course descriptions based on overall meaning, making it possible to detect whether they frame analytics as outcome-driven or mastery-focused, even when they contain overlapping technical content(Silva Barbon & Akabane, 2022).

This distinction is critical. Topic models infer latent thematic structures based on probabilistic relationships between terms. Resulting topics are abstract constructs that must be interpreted post hoc. In contrast, semantic embeddings are direct representations of meaning, generated through pre-trained language models that preserve contextual nuance. Rather than estimating what themes are present, semantic modeling allows

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for the direct measurement of similarity between how different programs describe analytics education.

This method aligns more directly with the study's goal: to assess differences in framing orientation across business and non-business analytics programs. By modeling course descriptions in semantic space and applying clustering techniques, the analysis identifies groups of courses that reflect similar instructional intent. These clusters, referred to here as Curricular Design Patterns (CDPs), are not predefined categories. Instead, they emerge as groupings from the structure of the semantic space, offering a lens into how different institutions organize and communicate the purpose of analytics education.

This approach offers a novel contribution to curriculum analysis by combining semantic modeling with unsupervised clustering to reveal patterns not evident through topic modeling or manual content review. It allows the study to move beyond listing what is taught and instead uncover how programs position the role of analytics within their broader educational goals.

Methodology

This study analyzed graduate-level data analytics programs to evaluate whether business and non-business curricula differ in how they frame the purpose of analytics education. The analysis followed a multi-step workflow that combined semantic similarity analysis, clustering, and interpretive validation to assess differences in framing orientation. Figure 1 illustrates the framing analysis pipeline, which included data preparation, modeling, and analysis.

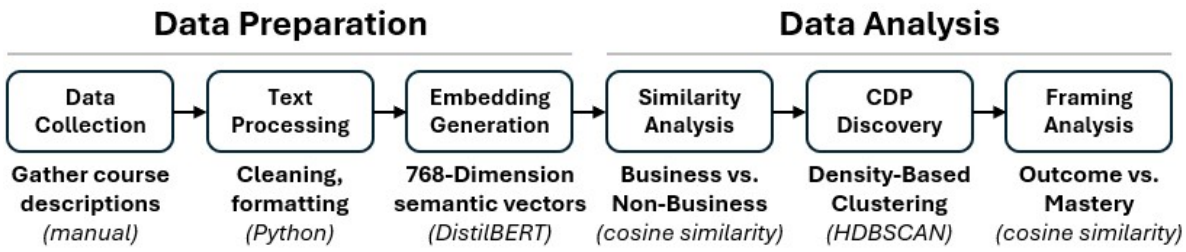

Figure 1. Framing Analysis Pipeline.

Overview of the study's analytic process. The workflow includes two main phases: Data Preparation and Data Analysis. Course descriptions were collected, preprocessed, and embedded using DistilBERT to generate semantic vectors. These embeddings were analyzed to assess semantic similarity between business and non-business programs, identify clusters of similar framing (Curricular Design Patterns), and test alignment with outcome- and mastery-oriented framing.

Data Collection and Preprocessing

Graduate programs were identified using the Institute for Advanced Analytics Program List, which catalogs analytics and data science degrees across the United States. A total of 109 programs were included in the final dataset, representing programs that publicly provided course descriptions through their university websites or online catalogs. Each program was reviewed and classified based on its institutional affiliation. Programs housed within a university's business school or college were categorized as business programs (for example, M.S. in Business Analytics or M.S. in Marketing Analytics). All other programs were categorized as non-business programs, including those offered through departments of computer science, engineering, statistics, or interdisciplinary units (for example, M.S. in Data Science or M.S. in Data Analytics

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Engineering). Of the 109 programs, 56 were classified as business and 53 as non-business. This classification supported the study's central comparison: whether programs differ in how they frame the purpose and role of analytics education.

Course descriptions were manually collected from these programs, yielding a total of 1,972 entries. Each description was paired with its corresponding course title to preserve context. Texts were converted to lowercase, stripped of extra whitespace, and cleaned of non-informative characters such as percent signs, formatting symbols, HTML artifacts, and course codes. Standard punctuation was retained to preserve sentence structure. The processed descriptions averaged 91 tokens per course (where a token approximates a word or text unit), with a standard deviation of 54.8 and a range from 2 to 450 tokens. Of the 1,972 courses, 964 were associated with business programs and 1,008 with non-business programs. The dataset was nearly balanced between required (922) and elective (1,050) courses. This preprocessing step ensured a standardized text corpus suitable for semantic modeling and comparison.

Following preprocessing, each course description was transformed into a 768-dimensional semantic vector using DistilBERT, a transformer-based language model from the BERT family(Sanh, 2019). DistilBERT was chosen for its efficiency and its ability to preserve contextual nuance. Unlike earlier word embedding methods that produce static representations (Mikolov, Sutskever, Chen, Corrado, & Dean, 2013; Pennington, Socher, & Manning, 2014), BERT-based models generate context-sensitive embeddings by analyzing the full sentence structure and word relationships (Devlin, Chang, Lee, & Toutanova, 2019). The study used these semantic vectors not only to compare what topics courses covered, but also to examine how those courses were framed, determining whether they emphasized practical application and decision-making or focused on technical depth and methodological rigor.

Semantic Similarity Analysis

To determine whether business and non-business programs differ in how they frame analytics education, the study compared the semantic similarity of course descriptions within and across the two groups. Cosine distance was used to calculate pairwise comparisons between embedded descriptions, resulting in three sets: 1) within business programs, 2) within non-business programs, and 3) between business and non-business programs. These comparisons formed the basis for evaluating whether programs express distinct framing orientations in their course language.

This stage addressed the study's central research question by testing the following hypotheses:

- **H1a**: The average semantic distance between business and non-business courses is greater than the average distance within business courses.
- **H1b**: The average semantic distance between business and non-business courses is greater than the average distance within non-business courses.

Independent sample t-tests were used to compare the mean distances across groups. Because high-dimensional sentence embeddings often produce similarity distributions that are not normally distributed, Wilcoxon Rank-Sum tests were also conducted as a non-parametric robustness check (Reimers & Gurevych, 2019). Effect sizes were computed using both Cohen's d and Cliff's Delta to assess the magnitude of observed differences, providing a practical interpretation alongside statistical significance.

In this context, greater cosine distance indicates lower semantic similarity, which reflects more distinct

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framing of analytics education. Smaller distances suggest that courses share a similar framing orientation, regardless of program type.

Clustering and Curricular Design Pattern Discovery

To evaluate whether business and non-business programs exhibit structural differences in how analytics education is framed, the study used clustering to group semantically similar course descriptions. These clusters, referred to as Curricular Design Patterns (CDPs), represent recurring semantic structures in course descriptions, reflecting patterns in language use rather than in specific topical content. These patterns do not correspond to predefined topics or competencies, but instead emerge organically from the semantic similarities among course descriptions.

Dimensionality reduction was performed using Uniform Manifold Approximation and Projection (UMAP), which reduced the original 768-dimensional DistilBERT embeddings to 150 dimensions. This step preserved local semantic relationships while improving computational efficiency and cluster separation(McInnes, 2018). Clustering was then conducted using HDBSCAN, a density-based algorithm that identifies natural groupings in the data based on local density without requiring the number of clusters to be set in advance (Campello, Moulavi, Zimek, & Sander, 2015).

The clustering process resulted in 33 distinct CDPs. An additional 295 courses (14.96 percent of the total) were classified as noise due to insufficient similarity with other entries. Cluster quality was evaluated using HDBSCAN stability scores, which measure how consistently a cluster is identified across varying density thresholds. The average stability score was 0.92. Of the 33 clusters, 28 exceeded the high-confidence threshold of 0.80, and none fell below 0.50, indicating that the identified clusters were well-defined and robust.

The analysis tested whether business and non-business courses were distributed differently across these clusters by evaluating two hypotheses:

- **H2a**: Business and non-business courses are not evenly distributed across Curricular Design Patterns.
- **H2b**: The distribution of business and non-business courses significantly differs within specific Curricular Design Patterns.

To test H2a, a Chi-Square Test of Independence was used to evaluate whether course type (business vs. non-business) was independent of CDP membership. To test H2b, separate chi-square tests were conducted for each cluster to assess whether the observed number of business and non-business courses deviated significantly from expected proportions. A Benjamini-Hochberg correction (Benjamini & Hochberg, 1995) was applied to control for false discovery rate across the 33 comparisons.

Based on the statistical results, each cluster was categorized according to the distribution of course types within it. Clusters that included a significantly higher proportion of business courses were labeled ‘Business’, while those with a significantly higher proportion of non-business courses were labeled ‘Non-Business’. Clusters in which the difference was not statistically significant were classified as ‘Shared’. These designations enabled subsequent interpretation of each CDP’s relevance to the framing orientations found in business and non-business programs.

Although the CDPs were generated as structural outputs, their composition and framing can also inform

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practical decisions about curriculum design, particularly for educators seeking to align program structure with domain-specific learning goals.

CDP Framing

To further explore how Curricular Design Patterns (CDPs) differ in framing orientation, the study conducted a framing review of course descriptions within each cluster. This involved reading the descriptions grouped within each CDP and identifying recurring patterns in language, tone, and instructional emphasis. The review did not attempt to assign formal labels to clusters. Instead, it focused on whether the semantic similarities within each cluster reflected a tendency toward outcome-oriented or mastery-oriented framing.

The review suggested a consistent pattern across domains. CDPs predominantly composed of business courses frequently emphasized applied outcomes, decision-making contexts, and organizational relevance. In contrast, CDPs with a higher concentration of non-business courses often highlighted methodological rigor, computational implementation, and statistical foundations. Some CDPs combined elements from both orientations, suggesting hybrid structures that blend practical application with technical depth.

To validate these interpretive patterns, a post hoc semantic similarity analysis was conducted using two hypothetical course descriptions. These descriptions were constructed to hold topical content constant while isolating differences in framing orientation. Both included references to common statistical techniques (e.g., regression, ANOVA, time series), but varied in how they described the instructional focus and intended outcomes. Figure 2 illustrates this structural comparison.

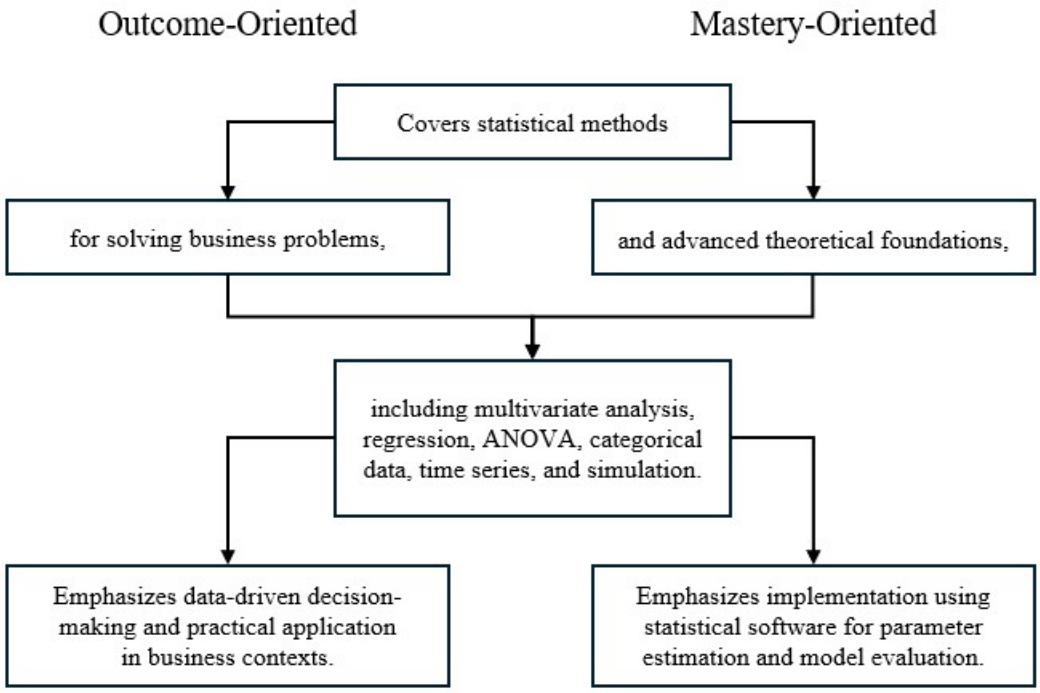

Figure 2. Framing Orientation.

Both hypothetical course descriptions reference the same topical content (center), but differ in how they frame its purpose. The outcome-oriented version emphasizes data-driven decision-making and application in business contexts. The mastery-oriented version emphasizes theoretical depth and implementation using statistical software.

For clarity, the two descriptions are also included below in full, as they form the basis for the semantic

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comparison:

- **Outcome-oriented**: Covers statistical methods for solving business problems, including multivariate analysis, regression, ANOVA, categorical data, time series, and simulation. Emphasizes data-driven decision-making and practical application in business contexts.
- **Mastery-oriented**: Covers statistical methods and advanced theoretical foundations, including multivariate analysis, regression, ANOVA, categorical data, time series, and simulation. Emphasizes implementation using statistical software for parameter estimation and model evaluation.

Each hypothetical description was embedded using the same DistilBERT model applied throughout the study. Cosine similarity scores were then computed between the embedded descriptions and all course descriptions assigned to either business or non-business CDPs. Shared clusters were excluded from this analysis, not because they are unimportant, but to isolate domain-specific framing more clearly, since these clusters contained a mix of both course types and could obscure the patterns under investigation.

This validation step provided a targeted check on the qualitative interpretation. If the outcome-oriented description aligned more closely with business CDPs, and the mastery-oriented description aligned more closely with non-business CDPs, it would suggest that observed semantic differences were not solely a function of content, but reflected underlying differences in curricular framing.

Software and Computational Environment

All analyses were conducted in Python 3.11.10 using Jupyter Notebooks on a Windows 10 system. Semantic embeddings were generated using the Hugging Face Transformers library (v4.38.0) with PyTorch(v2.2.1+cu121). Dimensionality reduction and clustering were performed using UMAP (v0.5.3) and HDBSCAN (v0.8.39), respectively. Visualizations were created with Matplotlib (v3.9.2). Computations were executed on a system equipped with an NVIDIA GeForce GTX 1650 with Max-Q Design GPU. ChatGPT-4o was used to assist with software debugging, code optimization, idea generation, and language refinement. It played no role in data analysis, clustering, or statistical testing. All methodological decisions and analytic procedures were conducted by the researcher.

Results

This section presents the results of the study's two-phase analysis: data preparation and data analysis (see Figure 1). The results are organized around three analytic stages: semantic similarity analysis, clustering of semantically similar descriptions, and validation of framing differences across business and non-business programs. Together, these analyses address the study's central question: Do graduate-level business and non-business data analytics programs differ in their curricular framing orientation, with business programs emphasizing outcomes and non-business programs emphasizing mastery?

The dataset consisted of 1,972 graduate-level course descriptions drawn from 109 programs, including 964 from business programs and 1,008 from non-business programs. Required and elective courses were nearly evenly represented. After text preprocessing, each description was embedded using DistilBERT to produce a 768-dimensional semantic vector that captures contextual meaning. These vectors served as the basis for downstream analyses, including semantic comparison, clustering, and framing validation.

To visualize the semantic landscape of course descriptions, UMAP was used to reduce the 768-dimensional

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DistilBERT embeddings to two dimensions. As shown in Figure 3, course descriptions from business and non-business programs tend to cluster in distinct regions of semantic space. While some overlap is present, the overall pattern suggests consistent differences in how programs describe analytics content. This visual separation provides an initial indication of potential divergence in framing orientation, which is further explored in the following subsections.

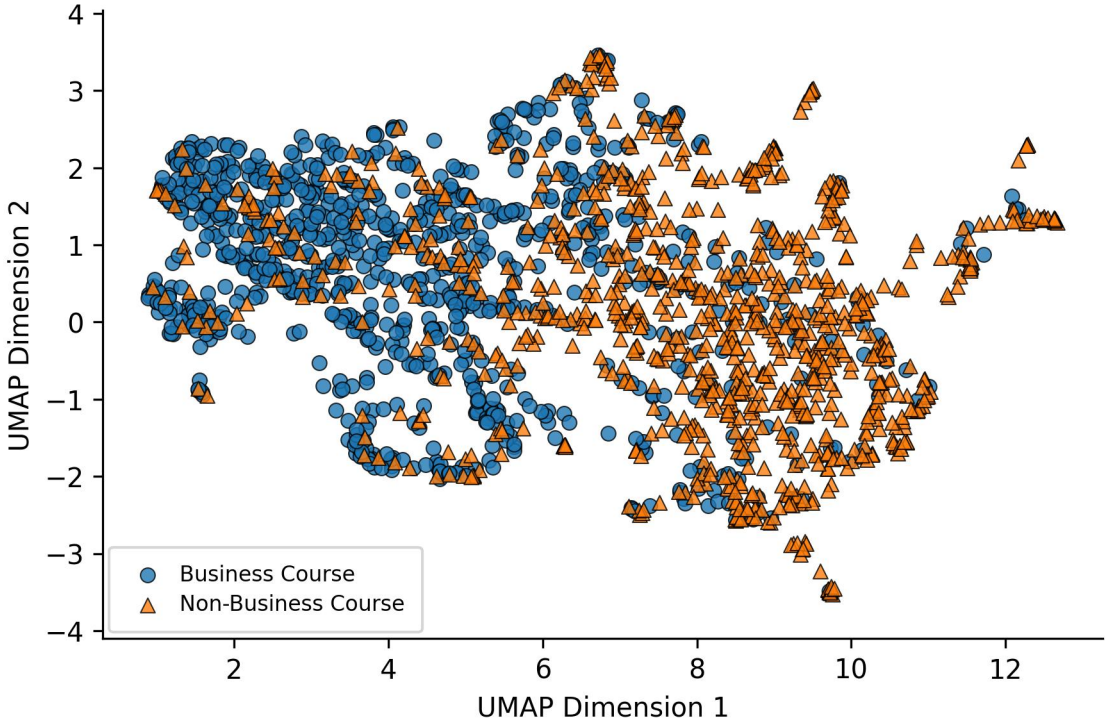

Figure 3. UMAP Projection of Course Description Embeddings.

Each point represents a single course description, embedded into a shared semantic space using DistilBERT. Blue circles correspond to business courses, and orange triangles correspond to non-business courses. The spatial separation reflects semantic divergence in how course content is framed across disciplinary contexts.

Semantic Differences Between Programs

To evaluate whether business and non-business programs describe analytics education using semantically distinct language, the study compared pairwise cosine distances between embedded course descriptions across three groups: within business programs, within non-business programs, and between business and non-business programs. Cosine distance served as a measure of semantic difference, where greater distance indicates lower similarity in how course descriptions are framed.

Each of the 1,972 course descriptions was embedded using DistilBERT to generate a 768-dimensional semantic vector. Pairwise cosine distances were then calculated for three comparison sets: business-to-business (929,296 pairs), non-business-to-non-business (1,016,064 pairs), and business-to-non-business (971,712 pairs). These comparisons quantified the degree of alignment in how course content is described across and within program types.

Summary statistics showed that between-group distances were meaningfully higher than within-group distances. The mean distance between business and non-business courses was 0.310 (SD = 0.124, Median = 0.295), compared to 0.228 (SD = 0.103, Median = 0.207) for business-to-business comparisons and 0.245

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(SD = 0.098, Median = 0.230) for non-business-to-non-business comparisons. All three distributions exhibited moderate right skew, with 3–5% of values exceeding the upper bound of the interquartile range.

Statistical tests confirmed that these differences were both significant and meaningful. Independent sample t-tests showed that between-group distances were significantly greater than within-group distances for both business ($t = -498.65$, $p < 0.0001$) and non-business courses ($t = -406.79$, $p < 0.0001$). These findings were corroborated by Wilcoxon Rank-Sum tests ($W = -482.05$ and -383.77, respectively; $p < 0.0001$), which were used as a non-parametric check due to the tendency of high-dimensional embeddings and cosine distances to violate assumptions of normality. Effect sizes reinforced the practical relevance of the findings, with a moderate to large effect for business programs (Cohen's $d = -0.722$; Cliff's Delta $= -0.404$) and a moderate effect for non-business programs (Cohen's $d = -0.579$; Cliff's Delta $= -0.314$).

Taken together, these results support H1a and H1b, indicating that course descriptions from business and non-business programs differ in how they semantically frame analytics education. While the analysis does not directly reveal the nature of these differences, the observed semantic divergence provides initial evidence that framing orientation may vary systematically between disciplinary contexts.

Structural Differences in Curricular Organization

To evaluate whether course descriptions cluster into structurally distinct patterns aligned with disciplinary context, the study applied density-based clustering to the semantic embeddings. The resulting groupings, referred to as Curricular Design Patterns (CDPs), represent shared framing structures based on how course objectives are described.

The clustering process produced 33 distinct CDPs, while 295 course descriptions (14.96%) were classified as noise due to insufficient similarity with other entries. Cluster quality was evaluated using HDBSCAN's stability scores, which indicate how consistently a cluster appears across different density thresholds. Stability scores range from 0 to 1, with values above 0.80 generally considered high confidence(Campello et al., 2015). The average stability score was 0.92, with 28 of 33 clusters (84.8%) exceeding the 0.80 threshold and none falling below 0.50, suggesting that the clusters were well-defined and robust.

To assess whether these clusters differed by program type, a Chi-Square Test of Independence was conducted. The test revealed a statistically significant association between course type (business vs. non-business) and CDP membership ($\chi^2 = 677.16$, $df = 32$, $p < 0.0001$), supporting H2a and indicating that business and non-business courses were not evenly distributed across clusters.

Post hoc chi-square tests, adjusted using a Benjamini-Hochberg correction to control the false discovery rate, revealed that 21 of the 33 CDPs had statistically significant differences in composition:

- 6 clusters were primarily composed of business courses,
- 15 clusters were primarily composed of non-business courses,
- 12 clusters had no significant difference and were classified as shared.

These findings support H2b and provide evidence that business and non-business programs tend to cluster around different semantic structures. While some overlap exists, the broader distribution indicates meaningful variation in how course content is organized and described across program types.

Figure 4 provides a visualization of these clusters in two-dimensional semantic space using UMAP. Each point represents a course description, colored by the dominant program type within its cluster. The outlined

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regions correspond to the 33 CDPs, with business-dominant clusters shown in blue, non-business clusters in orange, and shared clusters in gray.

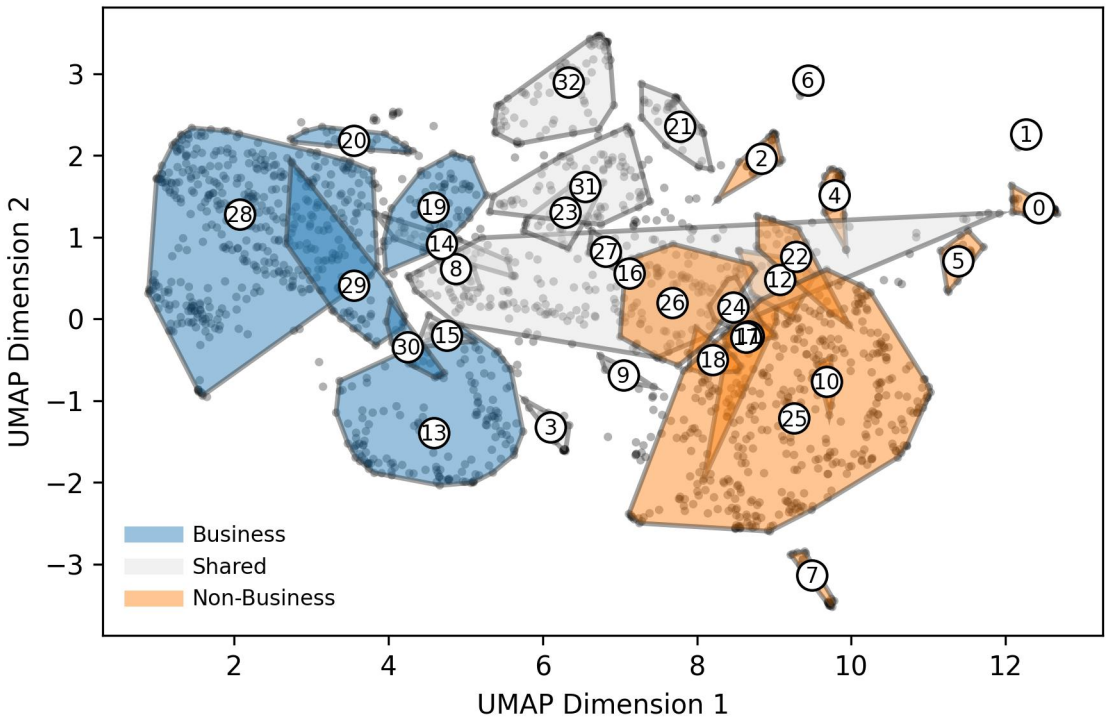

Figure 4. UMAP Projection of Curricular Design Patters (CDPs).

Each dot represents a course description embedded in semantic space. Clusters are outlined and numbered, with color indicating dominant program type: blue (business), orange (non-business), and gray (shared). Noise points not assigned to a cluster appear in the background.

Curricular Framing Validation

A manual review of course descriptions within each CDP revealed consistent differences in framing orientation. Business-focused CDPs commonly emphasized analytics as a tool for organizational decision-making, highlighting applied relevance, strategic integration, and stakeholder impact. Representative phrases drawn directly from these course descriptions included "*support strategic decision making*," "*develop strategic recommendations*," "*solving business problems*," and "*improve the company's competitiveness*."

In contrast, non-business CDPs placed greater emphasis on technical mastery, statistical theory, and computational implementation. These descriptions frequently featured phrases such as "*rigorous introduction to the theory of*," "*students will gain proficiency*," "*develop advanced skills in*," "*computational learning*," and "*use of statistical packages*."

These recurring phrases reflect language patterns that distinguished how business and non-business programs position the role of analytics in graduate education. The patterns themselves were identified during the framing review described in Section 3.4, which grouped courses based on shared language and instructional emphasis prior to the similarity analysis.

To validate these interpretive patterns, a post hoc semantic similarity test was conducted using two hypothetical course descriptions that held topical content constant but varied in how they framed

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instructional purpose (see Methodology section). Both descriptions referenced the same statistical methods, including multivariate analysis, regression, ANOVA, categorical data, time series, and simulation, but differed in framing orientation. One focused on practical application in business contexts and data-driven decision-making. The other emphasized theoretical depth, implementation using statistical software, and model evaluation.

Each description was embedded using the same DistilBERT model applied throughout the study. Cosine similarity scores were computed between the embedded descriptions and all course descriptions assigned to either business or non-business CDPs. Shared CDPs were excluded from this comparison to better isolate domain-specific framing tendencies.

Results indicated that the outcome-oriented description was more semantically similar to business CDP courses ($M = 0.6303$, $SD = 0.0452$) than to non-business CDP courses ($M = 0.5865$, $SD = 0.0527$). This difference was statistically significant ($U = 310710.00$, $p < 0.0001$) and associated with a large effect size ($d = 0.8914$). Conversely, the mastery-oriented description was more similar to non-business CDP courses ($M = 0.6325$, $SD = 0.0541$) than to business CDP courses ($M = 0.5816$, $SD = 0.0662$), also statistically significant ($U = 116344.00$, $p < 0.0001$) with a large effect ($d = -0.8426$).

These results reinforce the interpretation that business programs tend to frame analytics as a practical tool for decision-making, while non-business programs emphasize analytics as a domain of technical depth and methodological expertise. Together, the findings provide a foundation for considering how curricular framing reflects deeper structural and educational priorities across disciplinary contexts.

Discussion

This study examined whether graduate-level business and non-business data analytics programs differ in how they frame the purpose of analytics education. It explored the idea that business programs tend to adopt outcome-oriented framing, which positions analytics as a means for supporting decision-making and delivering value in organizational contexts. In contrast, non-business programs were expected to reflect mastery-oriented framing, focusing on technical depth, methodological precision, and computational implementation.

The results provide strong empirical support for this distinction. Rather than diverging solely in topical coverage, business and non-business programs exhibit meaningful semantic differences in framing orientation. Business programs commonly describe analytics as a tool for applied problem-solving. Non-business programs more often emphasize analytics as a technical and methodological domain. These differences were evident not only in statistical comparisons of semantic similarity but also in recurring language patterns within Curricular Design Patterns (CDPs). Phrases such as “support strategic decision making” and “solve business problems” were common among business CDPs, while non-business CDPs frequently emphasized “rigorous theoretical foundations” and “computational implementation.”

This distinction in framing suggests a deeper structural divergence in curricular priorities. Business programs appear to focus on preparing graduates to apply analytics in context-specific environments where decisions must be made. Non-business programs tend to prioritize foundational understanding, algorithmic development, and research-oriented analysis. These findings suggest that framing orientation plays a critical role in curriculum design, especially in interdisciplinary fields where methods may be shared but

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educational intent varies.

Implications for Business Analytics Education

The structural and semantic differences observed in this study highlight the importance of tailoring analytics education to the needs and expectations of specific domains. For business programs, the emphasis on outcome-oriented framing reflects a broader pedagogical priority: preparing students to use analytics in support of organizational decision-making. This requires more than technical competence. It involves equipping graduates with the ability to translate analytical results into actionable insights, communicate with stakeholders, and align data analysis with strategic objectives.

Curricular Design Patterns (CDPs) offer a useful lens for refining this approach. Patterns associated with business programs frequently incorporated language related to impact, action, and value creation. For example, course descriptions often referenced the need to "improve the company's competitiveness" or "develop strategic recommendations." These patterns reveal how business programs embed analytics within a broader framework of applied management and decision-making. Curriculum designers can use these patterns to assess whether individual courses contribute to this larger goal.

Notably, while business programs do include technically sophisticated topics and methods, they often describe them in relation to their decision-making utility. Statistical techniques, modeling tools, and analytical software are not absent from business CDPs, but they are typically presented as means to inform action or guide strategic choices. This framing contrasts with that of non-business programs, where similar topics are more often described in terms of theoretical understanding or methodological precision. Recognizing this distinction can help curriculum designers maintain technical depth while preserving a domain-relevant instructional narrative.

The findings also point to a broader opportunity. By foregrounding the role of analytics in decision-making, business programs can differentiate themselves within the growing field of data analytics education. Doing so not only supports workforce readiness but also reinforces the distinct contribution of business analytics as a subfield. Curriculum designers, faculty, and academic leaders should consider how framing choices embedded in course descriptions shape students' preparation and professional identity. These structural insights can also support accreditation reviews, program benchmarking, and curriculum reform efforts aligned with industry expectations for work-ready graduates.

Challenges for Curriculum Designers

The differences in Curricular Design Patterns (CDPs) highlight a central challenge for curriculum designers: balancing technical depth with applied relevance. This challenge is especially pronounced in business analytics programs, which must equip students with analytical skills while also preparing them to operate effectively in organizational settings. Programs that lean too heavily on technical mastery risk resembling traditional statistics or computer science curricula, while those that underemphasize core methods may leave students underprepared for the demands of data-intensive roles.

The structure of the CDPs illustrates these tensions. Some clusters are dominated by mastery-oriented language, emphasizing statistical theory, software implementation, and methodological rigor. Others are strongly outcome-oriented, focusing on problem-solving, decision support, and strategic application. These

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differences suggest that curriculum designers face important tradeoffs. Programs must decide not only what to include, but also how to frame analytical instruction in ways that align with disciplinary goals.

This complexity is further compounded by practical constraints. Faculty expertise plays a major role in shaping course content and emphasis. In business schools, instructors often come from traditional management disciplines, which may limit the integration of advanced technical topics unless interdisciplinary collaboration is pursued. Conversely, faculty from technical backgrounds may emphasize modeling or computation in ways that are less attuned to organizational context. Achieving curricular coherence across these perspectives requires coordination and shared vision.

Accreditation standards also influence curricular structure. For example, business programs accredited by bodies such as AACSB must incorporate learning goals related to communication, ethical decision-making, and managerial insight. These requirements may limit the number of credits available for technical coursework, requiring difficult decisions about how and where to integrate analytics content. Similarly, interdisciplinary dependencies can introduce scheduling challenges and content misalignment when courses are shared across departments.

By identifying the underlying structures of existing programs, CDPs offer a way to navigate these challenges more deliberately. They make visible the design choices that shape how analytics is taught and understood across contexts. This visibility can help curriculum designers better align programs with both internal goals and external expectations. While the structural patterns identified in this study offer useful insights, further research is needed to explore the mechanisms and implications of curricular framing more fully.

Future Research and Limitations

This study provides a structural foundation for understanding how graduate-level data analytics programs differ in curricular framing, but additional research is needed to capture the full depth and complexity of instructional design. Course descriptions offer useful insight into how programs publicly represent their content. However, the findings reflect how institutions describe their programs, not necessarily how they are taught. They may not fully reflect pedagogical intent, assessment strategies, or classroom emphasis. Future work could incorporate additional sources such as syllabi, learning outcomes, or instructor interviews to gain a more nuanced understanding of how analytical concepts are taught and applied.

Topic modeling presents another opportunity for expanding this analysis. While the current study emphasizes semantic framing, a topic-based approach could identify which analytical methods, tools, or domains appear across clusters. This would allow for a clearer comparison of content coverage between programs that differ in framing orientation. By combining semantic and topical analyses, future research could distinguish between what is taught and how it is positioned within the curriculum.

There are also limitations to the current approach. Clustering methods are effective for identifying general patterns, but they may overlook areas of overlap or hybrid instructional strategies. In addition, shared CDPs (those containing a mix of business and non-business courses) were excluded from some analyses to provide a clearer view of domain-specific trends. Although this improved interpretive clarity, it limited insight into how integrated or interdisciplinary programs may be evolving. These shared clusters could be examined more closely in future research to explore models that combine technical depth with applied orientation.

Finally, this study provides a static snapshot of the current curricular landscape. As industry expectations,

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accreditation standards, and institutional priorities evolve, the structure of data analytics programs is likely to shift as well. A longitudinal approach could track how Curricular Design Patterns change over time and examine whether framing orientations converge, diverge, or give rise to new hybrid models. Such research would offer valuable guidance for curriculum development in a field that continues to grow and diversify.

Conclusion

This study examined how graduate-level data analytics programs differ in how they frame the purpose of analytics education, with a focus on comparing business and non-business curricula. Using semantic modeling and clustering techniques, the analysis revealed consistent structural and linguistic patterns that reflect two distinct orientations: outcome-focused framing in business programs and mastery-focused framing in non-business programs. These orientations were evident not only in statistical comparisons but also in the language used to describe course objectives, instructional emphasis, and intended applications.

By introducing the concept of Curricular Design Patterns (CDPs), the study provides a new lens for identifying and interpreting structural differences across programs. Rather than emphasizing topical content alone, CDPs surface how courses position the role of analytics in professional preparation. This structural perspective offers practical value to curriculum designers, who must balance technical content, applied relevance, and institutional constraints.

The findings contribute to ongoing efforts to design responsive, domain-relevant analytics curricula. They also highlight the need for further inquiry into how framing decisions influence student learning, interdisciplinary coherence, and workforce alignment. As analytics continues to evolve across disciplines, understanding how programs frame their educational goals will be essential for shaping effective, purposeful instruction.

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EFFECTS OF AFFORDABILITY OF HOUSING ON EMPLOYERS IN THE TOURISM SECTOR IN THE NIAGARA REGION

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Abstract

Purpose:

This research investigates the impact of housing affordability on the tourism sector in the Niagara Region, where seasonal, low-wage, and entry-level jobs dominate. It explores how housing shortages affect employers and employees, particularly in terms of wage pressures, staff retention, and community well-being. The goal is to provide evidence-based insights to inform the Niagara Region's Affordable Housing Strategy.

Methodology:

A comparative case study approach was used, drawing on regional employment and housing data, policy documents, and interviews with local stakeholders. The study also analyzes housing initiatives from other tourism-dependent jurisdictions to identify best practices that could be adapted to the Niagara context.

Findings:

The lack of affordable housing contributes to workforce instability, higher turnover, and recruitment challenges in Niagara's tourism sector. Employers struggle to meet wage expectations that reflect high living costs, while workers face long commutes and housing insecurity. Case comparisons show that collaborative

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housing strategies involving government, business, and community organizations have proven effective elsewhere.

Originality of the Research:

This study uniquely connects housing affordability with workforce sustainability in a regional tourism economy. It offers targeted, practical solutions and emphasizes the importance of cross-sector collaboration to address a growing socio-economic challenge in Niagara.

Keywords: *Affordable Housing, Tourism Sector, Employee Retention, Seasonal Employment, Workforce Sustainability*

1. INTRODUCTION

The tourism sector, as defined by Statistics Canada (2023), encompasses activities catering to visitors, including transportation, accommodations, food and beverages, meetings and events, and attractions. Within the Niagara Region, this sector significantly influences job creation and housing market dynamics. However, seasonal employment and low-wage positions, particularly in entry-level roles such as housekeeping, front desks, cooks, and servers, pose challenges for housing affordability.

Housing affordability impacts the Niagara tourism communities by affecting employers, employees, and homeowners. To investigate problems the affordable housing shortage is causing within this sector of the Niagara Region, this report will research how Niagara communities are dealing with affordable housing shortages in comparison with other jurisdictions. The effect affordable housing has on the tourism industry will also be investigated. The development of tourism has influenced housing prices, as proven in research done in many places around the world, namely China (Song, 2023), Portugal (Cunha &Lobão, 2022), and Croatia (Josip Mikulić, 2021). Unaffordable housing indirectly impacts wages and employee retention in the area. Affordable housing in the tourism sector helps the area's livelihood, community, and individuals. Within this report, we will explore the impact affordable housing has on the tourism sector.

This report will give insight into how affordable housing impacts employers and employees—looking at the challenges within the retention of employees and attracting workers to the industry. Many workers may lack access to affordable housing in tourism areas, which can correlate with a higher turnover rate. Addressing the issues of affordable housing not only benefits employers but also gives a stable environment to employees. Hence, it is crucial to explore the effects the housing crisis has on each sector to broaden the implications for the region.

One of the objectives of this research is bringing forward ideas to help tackle the pressing issues and potential solutions, such as collaborative efforts between the Region, government, businesses, and community organizations. Incentives for developers prioritizing affordable housing projects could include streamlined approval processes—promoting mixed-use development to combine residential and commercial spaces and build upwards. Combinations of many solutions can be beneficial to some of the challenges that will be uncovered within this report.

This report, in the journey of indicating issues with housing affordability and comparison of different initiatives from multiple jurisdictions, will help further develop Niagara Region in their Affordable Housing Strategy and its implementation plan in the future. Moreover, it will help Niagara Region to look for areas of

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improvement and recommendations to solve the hardship of affording houses while affording other living expenses for home buyers.

2. RESEARCH QUESTIONS AND HYPOTHESES

RQ1: Does the affordability of housing negatively affect wages and costs for employers in the Tourism sector within the Niagara Region?

H1: As housing affordability decreases in the Niagara Region, employers in the Tourism sector are experiencing higher operating costs due to the pressure to increase wages to address employees' cost-of-living concerns.

H2: Having unaffordable housing can result in higher turnover rates.

RQ2a: What housing-related initiatives are being implemented in other jurisdictions to support the Tourism sector?

RQ2b: How are housing-related benefits distributed among impacted parties (employers, employees, ratepayers, others)?

H3: More housing-related initiatives are available for employers than employees.

H4: Employer-focused housing initiatives do not positively impact employees' housing affordability.

RQ2c: What can be done to ensure housing investments benefit employees rather than subsidizing private business profits?

3. LITERATURE REVIEW

An extensive review of previous work completed on affordable housing and the tourism sector within the country and the Niagara Region was conducted. Previous and current government reports, media, and news articles from various sources were also examined and cited throughout this report to build our research questions, recommendations, and conclusions.

3.1 Tourism in the Niagara Region

The tourism sector definition was adopted from Statistics Canada as "tourism is defined in the PTTSA as the set of productive activities that cater to visitors. A visitor is a traveller taking a trip to a main destination outside their usual environment for less than a year and for any main purpose (business, leisure, or another personal purpose) other than to be employed by a resident entity in the country or place visited. The concept of tourism is broad, covering more than just "leisure travel"; it includes travel for business, leisure, and other personal reasons, such as visiting friends and relatives, religious purposes, and medical treatment" (Statistics Canada, 2018). Tourism in Canada includes five key business lines: transportation, accommodations, food and beverages, meetings and events, and attractions (The Canadian Tourism Industry, n.d.). For this report's scope and time restriction, literature and research regarding transportation and attractions will be ignored.

The Niagara Region has been a popular tourist destination for many individuals because of its natural beauty, its rich historical culture, and overall entertainment (Niagara Falls Tourism, 2022). Niagara Falls welcomes more than 13 million visitors each year (TIAC, 2023), offering a diverse range of 2,800 tourism-oriented establishments. These include 1,231 full-service restaurants, 178 hotels and motels, 153 bed and breakfasts,

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109 performing arts establishments, 97 wineries, and 43 golf courses (Niagara Economic Development, n.d.). Due to the large influx of visitors, Niagara Falls has played a growing role in job creation and housing market developments. Specifically, according to the Niagara Tourism Profile (n.d.), "tourism jobs are increasing at a faster rate than total jobs in Niagara. From 2011 to 2018, tourism jobs increased by 17.9% while total jobs increase by 14.1%. It is a growing sector. Niagara has 1.8 times the concentration of tourism jobs than Ontario." Additionally, the Niagara Tourism Profile (n.d.) has established total tourism jobs by sector and provincial location quotients in the Niagara Region ranging from the year 2011 and 2018 in the figure below.

Table 1. Total Tourism Jobs by Sector and Provincial Location Quotients in the Niagara Region Ranging from the Year 2011 And 2018

Sector	2011	2018	Change	% Change	LQ
Total	33,936	39,995	6,059	17.9	1.8
Accommodation and hospitality	22,603	27,270	4,667	20.6	1.91
Arts, entertainment, and recreation	8,335	8,974	639	7.7	1.76
Beverage manufacturing	1,702	2,519	817	48.0	4.87
Transportation	751	828	77	10.3	0.57
Travel arrangement and reservation services	547	404	-143	-26.1	0.81

Source: Niagara Economic Development

The results from the figure indicate that in 2018, there were 39,995 jobs in the tourism sector, which was 17.9% more than in 2011 (an increase of 6,059 jobs). The provincial location quotient was 1.8, showing that Niagara had 1.8 times more tourism jobs compared to the total jobs in Ontario. A location quotient above 1.5 suggests a specialization in the tourism industry.

3.1.1 Tourism Seasonality

The UNWTO defines seasonality as: "a temporal imbalance in the phenomenon of tourism, which may be expressed in terms of dimensions of such elements as numbers of visitors, expenditure of visitors, traffic on highways and other forms of transportation, employment, and admissions to attractions." In other words, seasonality in tourism means that certain times of the year have more visitors, spending, traffic, jobs, and admissions to attractions than other times. According to the Niagara Falls Tourism Board, the tourist numbers for each season are as follows:

Table 2 Tourist Numbers for Each Season

Season	**Number of visitors**
Spring (March to May)	Approximately 2 million visitors
Summer (June to August)	Approximately 8 million visitors
Fall (September to November)	Approximately 3 million visitors
Winter (December to February)	Approximately 1 million visitors

Source: **Niagara Economic Development**

Based on the information gathered above, we can see that the rate of Niagara's tourism significantly decreases in the cooler months. Establishing a clear description of each tourism season is a vital component

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for this report, specifically as it relates to high, low/winter, and shoulder seasons. High season is a word commonly used in the tourist industry to refer to periods when travel demand reaches its peak (iGMS, 2023). Therefore, based on the data above, it is evident that the high season for the tourism sector in the Niagara Region occurs during the summer months (June-August), attracting approximately 8 million visitors. Whereas the opposite end of that spectrum can be defined as the low/winter season. The low/winter season, being the coldest time of the year in Niagara, only observes approximately 1 million visitors. Between the peak and off-peak season, the tourism sector also experiences a season called the shoulder season. The definition of shoulder season varies by destination; however, it typically refers to the period between a region's peak season and offseason (French, 2023). According to TIAC (2023), "in Canada, there are generally two shoulder seasons: the main shoulder season, which falls between September and November and the second shoulder season, typically in April and May".

During seasonal downturns, particularly in the low/winter and shoulder seasons, employers often resort to implementing layoffs. This practice not only impacts the surviving employee's morale but also exerts a substantial effect on those who have the responsibility of providing for themselves and dependents. The cyclical nature of these seasonal fluctuations can create significant challenges for both employers and employees, underscoring the need for strategic solutions to address the economic vulnerabilities associated with these periods.

3.1.2 Living Wage

Currently, entry-level customer service representative positions in Niagara are paid an average hourly rate of sixteen dollars; this data was collected before the province's minimum wage increase (Payscale, n.d.). However, living wage is a topic that has been analyzed for decades—the concept of living wage dates to the early days when workers demanded higher pay (Kagan, 2023). Throughout Canada, a living wage is assessed quite differently depending on what part of the country an individual resides. However, within the Niagara Region, it has been calculated based on a variety of factors, like food, shelter, clothing, transportation, communication, childcare, private health care insurance for prescription medication/dental coverage, continuing education for adults to upgrade skills, participation in the community (i.e. recreation and leisure). As a result, the living wage for 2023-2024 is $20.35 per hour (Living Wage Niagara, n.d.). "It has been calculated as an evidence-based hourly rate at which a household in Niagara can meet its basic needs. Living wage differs from minimum wage, the legal minimum all employers must pay. The living wage reflects what earners in a household need to be paid, based on the actual cost of living, and being included in a specific community" (Living Wage Niagara, n.d.). Entry level positions in this sector are not compensated a "living wage." The research identifies only 86 employers in the Niagara Region recognized to provide a living wage. Out of the 86 employers, not one employer from the entire tourism sector has been included.

3.1.3 Unaffordable Housing Market in the Niagara Region

Affordable housing has been defined in separate ways by different researchers. However, for this report, affordable housing has been described by the Niagara Region as "rental or ownership housing that costs less than 30% of a household's total annual income." It is "housing that fits the budget of low to moderate-income households while leaving enough money for them to meet other basic living costs such as

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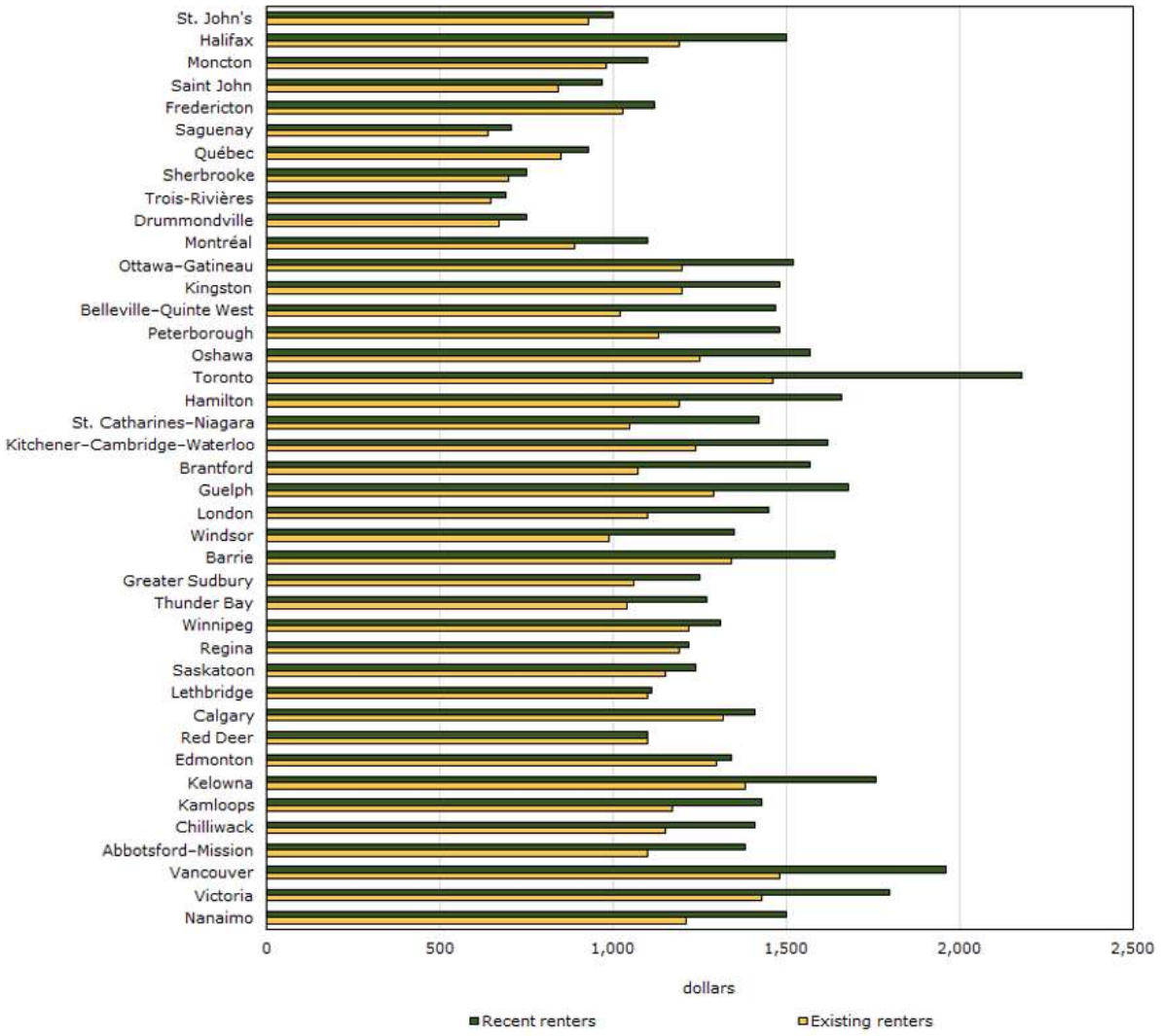
food, clothing, transportation, medical care and education" (Affordable Housing Strategy, 2022). The lack of adequate, affordable, housing is a growing crisis in Canada, with data revealing City of St. Catharines to have the eleventh highest rent rates in all of Canada and a shocking 20% increase in rent from 2021 throughout the region. It has been revealed that there is a surge of recent renters throughout the Niagara Region, as seen below in Figure 1 by Stats Canada; it can be identified as the vital need for affordable housing accessible to all medium-income individuals.

Figure 1: Median Monthly Shelter Cost of Two-bedroom Dwellings for Recent and Existing Renters in Census Metropolitan Areas



Source: Statistics Canada, Census of Population, 2021.

3.1.4 Initiatives

We need to recognize the incentives provided by the government to employers to offer the tourism sector adequate wages so that employees can afford the current housing market in Niagara. There are a variety of affordable housing initiatives provided by the federal government. In Canada, affordable housing strategies include National Housing Strategy (NHS), Making Housing More Affordable (MHMA) incentive, First

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Home Saving Account (FHSA), and Housing Accelerator Fund (HAF). The NHS consists of an $82+ billion plan creating a new generation of housing in Canada, giving more Canadians a place to call home. The initiatives under NHS include creating a new housing supply, modernizing existing housing, and utilizing applicable resources to support housing. The MHMA incentive includes Canadians by assisting in double construction, purchasing first homes, and protecting the needs of Aboriginals. The FHSA allows first-time home buyers to save up to forty thousand dollars tax-free. The HAF, a new housing accelerator fund, aims to create 100,000 new housing units over five years.

The initiatives above aim to make housing more affordable and accessible to Canadians. In regards to the tourism sector, several initiatives have been implemented to provide housing solutions for workers in this industry. The federal government initiated the Sectoral Workforce Solutions Program (SWSP) to assist key sectors, including tourism and hospitality, to recover post COVID-19 Pandemic. One of the focuses of this program is to fill the gap between labour demand of employers and the talent pool for key sectors by supporting the development of workforce through training and alignments of public policies. As stated by the Minister of Tourism and Associate Minister of Finance, Randy Boissonnault, "the funding announced today helps businesses get back on their feet and attract and retain the skilled workers the tourism industry needs" (Government of Canada Announces Support to the Tourism Sector to Create Jobs and Strengthen the Economy, 2021). Within Ontario, precisely due to COVID-19, the government has implemented a plan to assist with the concerns about the decrease in tourism. Although the government has pledged to provide support, the support should not have resulted from the pandemic (Ontario Supports the Tourism and Hospitality Sectors during COVID-19, 2021).

Based on the literature regarding tourism in the Niagara region, affordable housing in the region, living wage, and initiatives above, further discussions and recommendations for Niagara Region are established in the upcoming sections.

4. RESEARCH DESIGN

4.1 Data Collection

The hypotheses will be tested by using a combination of quantitative and qualitative research. The data will be collected through surveys from employees working in the tourism sector and interviews of various small and large businesses in the tourism sector within the Niagara Region. The confidential survey will be distributed in a convenience style; emailing to acquaintances, and posted in various groups on social media, which will be completed by those working in tourism. The data will reflect how housing unaffordability affects these employees, employers, and their perspectives on how effective existing housing initiatives (for employers) are in the Niagara Region. The research will adhere to ethical principles, which include informed consent and confidentiality. The participants will be notified of the purpose of the study.

The target population is all individuals that are over the age of 18, permanent residents of Canada or Canadian citizens, and presently employed in the tourism sector. Temporary residents of Canada - including but not limited to international students and temporary visitors, that are working in the tourism sector will be excluded. The surveys will be sent via email, as well as handed out in person, to over 100 individuals to ensure the data is reliable. The estimated response rate is 30%. The email will contain a link to link that will direct respondents to our Google document survey. Email reminders will be sent out to remind individuals to

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submit the survey. For the interviews, 10 employers from both small and large businesses in the Niagara Region's tourism sector will be interviewed. Interviews will be conducted in person, on Zoom, or by phone, whichever the employer prefers.

4.2 Data Analysis

The data was analyzed to identify trends, patterns, and correlations. For the survey, descriptive analysis, frequency analysis, and contingency table analysis was used to analyze the data from the responses. For the interview responses, we used the website Voyant for content analysis, which evaluated patterns such as frequently-used words and phrases.

5. FINDINGS

RQ1: Does the affordability of housing negatively affect wages and costs for employers within the Tourism sector in the Niagara Region?

The correlation between affordable housing and the impact it has on employers' wages and costs is a universal issue, specifically in the tourism sector. After extensive research we can interpret that the tourism sector experiences extremely high turnover rates which significantly increases costs, subsequently causing negative effects for the employer. In our opinion the turnover experienced in the tourism sector is linked to the issue of unaffordable housing. As of 2014, the statistics identify the turnover rate within the hospitality sector to be 62%, with no sign that this rate will decline in the following years (Murray, Elliot, et al, 2017, p. 2). Particularly in the tourism sector, turnover is observed due to the lack of affordable housing subsequently caused by inconsistent transportation times, varying hours of work, and seasonality. Turnover becomes costly to an employer specifically as it relates to further training and recruitment costs, customer relations, and loss of productivity and morale.

Turnover is experienced due to unaffordable housing in Niagara. Gaitán and Shroyer (2019), address that “high housing costs limit who can afford to live in a region, leading to a shortage of workers for lower-wage roles. With the exception of people who earn very high wages, job seekers are discouraged from moving into the region, and the region’s existing workers get pushed to less costly markets. This creates problems for attracting and retaining workers at any level.” Since housing costs substantially more in urban areas than in rural areas (Brown, 2023), including mortgage payments and rent, tourism sector entry level employees must relocate to areas that offer more affordable rent. The rural areas within the Niagara Region would include municipalities such as Fort Erie, Port Colborne, and Wainfleet (Niagara Region, 2023). When employees reside in rural communities because of the lack of affordable housing near their employment, it causes a catalyst of negative effects. The dependence on the transit system for employees residing in rural areas hinders their ability to commute to work. The Niagara Region’s transit system only expands within certain distances and has specific hours of operation. The transit system functions within Niagara Falls, St. Catharines, Port Colborne, and Fort Erie, with hours of operation ranging from 6:30am to 10:00pm (Niagara Region Transit, 2023). These transit times are a burden to those relying on their services to commute to and from work because Niagara Falls tourism operates 24 hours a day, seven days a week, year-round with scheduling being contingent upon seasonality, and specific employers' hours of operation (Niagara Falls Hotels & Calvin, 2020). Regardless of where an individual works within this sector (transportation,

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accommodations, food and beverages, meetings, and events, etc.), the employer is responsible for overseeing scheduling times, and holding an entry-level position will place you at the bottom of the scheduling hierarchy/organizational ladder. The lack of stable hours provided to entry-level employees' conflict with transit availability. Individuals that work in the tourism sector who are reliant on transit can be given a schedule that does not align with transit operation creating a barrier that negatively affects the employee and contributes to high turnover. Therefore, the issue with transit availability with employees who reside in rural areas because of lack of affordable housing causes a constraint within the tourism sector in Niagara. Furthermore, tourism seasonality has strong negative effects on housing affordability. Experts discuss that, "employment fluctuations, capital underutilization risks, revenue instabilities, and overpopulation are the most common side effects of tourism seasonality, all of which the housing literature has recognized as potential detriments to housing affordability" (Mikulić et al., 2021). Thus, seasonality is twofold: during busy times, the demand for short-term rentals increases, making housing less affordable for residents. Conversely, during slow periods, the lack of work creates an unstable job situation leading to turnover. Overall, turnover can be observed in the tourism sector due to seasonality, which is a prominent reason entry-level employees are having a challenge to afford housing.

From the information provided above, it is evident that unaffordable housing leads to increased turnover within an organization, resulting in higher costs for employers. Chase Charaba explains the costs associated with losing staff. There will be an increase in direct costs with hiring an employee such as advertising, interviewing, screening, and onboarding costs. There will be a loss of productivity as it may take up to two years for the new employee to reach the productivity of current employees. There may be a decrease in morale in other employees, as seeing high turnover in a company can cause them to become disengaged. For an employer, the average costs associated to replace an hourly employee is approximately $1,500 (Charaba, 2023, para. 21). For an organization, a decline in employee morale, productivity, and labor shortages not only impacts internal dynamics but can also be reflected in its relationship with customers. If customers have bad experiences due to labour shortages, or employee's overall demeanor, the likelihood for continuous support is low. It has been observed that "even when people love a company or product, 59% will walk away after several bad experiences, 17% after just one unpleasant experience. 32% of all customers would stop doing business with a brand they loved after one bad experience." (Puthiyamadam, n.d.).

RQ2a: What housing related initiatives are being implemented in other jurisdictions to support the Tourism sector? (Qualitative research question).

In the Muskoka, Parry Sound, Almaguin, and Algonquin Park region, the Regional Tourism Organization 12/Explorer's Edge has created the Catalyst Housing model, to attract workers by offering below-market rental housing, paired with career, life skills and financial literacy training. The model consists of two-year periods in which participants would be employed in the regional tourism industry. The model leverages public, private and non-profit investments and is intended to purpose local residents, Indigenous people, immigrants, women, youth, and students, that are considered marginalized groups (Home Stretched: Tackling Ontario's Housing Affordability Crisis, p, 5).

In Collingwood, to support tourism industry workers, the Blue Mountain Resort has created affordable housing for employees ranging from $115 to $150 per week. The housing is either single or double

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occupancy and includes furnishings, cable, and internet (Home Stretched: Tackling Ontario's Housing Affordability Crisis, p. 21).

British Columbia is creating new legislation to help with the development of smaller-scale, multi-unit housing for individuals, and to help fix outdated zoning regulations so that homes could be built at a faster rate. These changes will allow for three to four units allowed on smaller lots that are presently zoned as a single-family dwelling, or 6 units on larger lots currently zoned as single-family. This new legislation will allow for faster housing development approvals as they will shift local planning and zoning processes to happen up front (More small-scale multi-unit homes coming to B.C., para. 6-8).

While not geared specifically towards the tourism industry, a popular tourism destination, Montreal, has created the Montreal Social Housing By-Law for Developers, to tackle the unaffordable housing issue. This By-law requires developers to include affordable housing units in any new projects that are over 4,843 sq feet. If they choose not to include affordable housing units, they must either pay a fine, sell land below market cost, or turn over buildings to the city to make more affordable housing (Jonas, 2023, para. 2-6). Although the By-law does need some adjusting, as most developers chose to pay the fine as opposed to building units, it is a starting point to the creation of more social housing units.

RQ2b: How are the housing related benefits distributed among impacted parties within the Niagara Region (employers, employees, ratepayers, others)?

There are a few housing benefits that are available in Canada. One of them was Canada Housing Benefit (CHB) that tops up $500 only once for each low-income renter. After looking at First time Home Buyer Tax Credit, Home Buyer's Amount, Home Buyers' Plan, GST/HST New Housing Rebate, Canada Greener Homes grant, it can be generalized that those incentives and benefits are for home buyers which involves employees and the government rather than employers. Similar conclusion can be drawn for Ontario's Canada-Ontario Housing Benefit (COHB) and Niagara Region's Discretionary Housing Stability Benefits. Whether the benefits received creates a positive impact on the receiver, whether they can negatively impact the ratepayer and how effective these types of benefits work are not under the scope of this research and could be looked at in another research report.

When it comes to housing, the initiatives lean more toward individuals or home buyers – proven by multiple initiatives and benefits mentioned previously, rather than employer-employee relationship. The only initiative for tourism employers is SWSP, but one of its purposes is to address the workforce development needs of workers and employers in some key sectors. It is not necessarily an initiative that is housing related, so we can say that hypothesis H3 is not supported. Since that one initiative started after pandemic and is on-going at the time of this report writing, there is no conclusion for hypothesis H4 yet.

RQ2c: What can be done to ensure that these investments in housing are impacting affordability for employees and not just subsidizing private businesses profitability/profits? (Qualitative research question).

The Region can implement a clause in the lease or ownership that states the new renters/owners can only be first time home buyers. This can be implemented to ensure eligibility is based on individuals dealing with unattainable housing. This clause can be applied to any houses or newly developed areas that are built with the intention of being priced within or under 30% of the average household income. This ensures that new

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development is not purchased at a low price by entrepreneurs for real-estate ventures because they would be denied access to purchasing these properties. The contingency clause solution can be seen within the Singapore model (Lee, 2023). The Singapore housing policy helps to ensure home ownership for middle-class families. “New flats can only be sold to Singapore citizens and a series of priority schemes is used to allocate new units.” (Lee, 2023). Up to 95% of flat sales are sold only to first-time applicants creating homes available and attainable for prices within 30% of household income.

Legislation to regulate short-term housing can be implemented, as adapted in British Columbia. British Columbia introduced legislation with three key areas of focus: increasing fines to short-term rental owners that do not follow the laws and strengthening tools for local government; retuning more short-term rental homes to long-term and establishing provincial rules, and enforcement (BC Gov News, 2023, para. 6-10).

6. DISCUSSION

The Vice-chair of the Collingwood Business Improvement Association and co-owner of Fish and Sips restaurant, Paul Feather (2022), identifies a crucial concern that aligns closely with the focus of this report - that the challenge extends beyond housing affordability; it also involves insufficient availability. As Feather notes, “there isn’t enough rental stock for people to choose from”. Therefore, the ultimate issue at hand is the necessity for increased housing development to address the identified challenges. Feather's insight underscores the urgency of not only making housing more affordable but also ensuring an adequate supply to meet the growing demand in the region. Home development is the obvious solution to the problem, however, that process is tedious. An easier solution, drawn from the evidence above would be for employers to compensate their entry level workers' salaries that align with current market housing rates. This ensures employees can reside in the city in which they work. While this may initially appear as a potential negative impact on overall organizational profits, investing in employees serves as a preventive measure against the financial burdens associated with turnover (recruitment, hiring, customer loss, and reduced productivity and morale). The final aspect to discuss pertains to initiatives funded by the Government of Canada (Niagara Economic Development, n.d.). After exploring these initiatives, it is evident that the government offers substantial financial aid to the tourism sector. Nonetheless, this support does not appear to include efforts to offer entry-level workers a living wage, which would ensure their success and vitality. The incentives align more with increasing and rebuilding the tourism ecosystem. Initiatives should be provided to organizations in the tourism sector, specifically focusing on providing employees with a living salary.

6.1 Primary Research Results and Discussion

For this research report, we created two separate sets of questions; one being a survey, tailored for employees, and the other an interview questionnaire for employers. The creation of two separate data sources became evident because inquiries posed to an employer would inherently differ from an employee. The employees surveyed and employers interviewed are from entertainment and gaming enterprises, restaurants, vineyards, tourist attractions, cruises, hotels, resorts, spas, and salons.

6.2 Employee Surveys

Using convenience sampling, the questionnaires for employees were distributed to 41 employees who are at or above 18 years of age and are Canadian citizens or permanent residents; however, only 36 responses returned completed and submissible. The employee survey comprised dichotomous and ratio-scale questions

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as well as one open-ended question to gather data. The responses from employees were inputted into Google Forms and then downloaded to Excel to analyze. Reasonableness tests were conducted to ensure completed surveys were free from error, and that the data has validity (we identified surveys that were incomplete, typing errors, irrelevant answers).

We asked employees questions regarding the time they spent traveling to work, how many jobs they have, whether they are making a living wage of $20.35, if their housing is “affordable” by definition (less than 30% income), stress about rent or mortgage, intention to find another job.

Data reveals half of the respondents have an unaffordable rent/mortgage because their rent or mortgage was at 30% or more of their income. Twenty-five percent have achieved affordable housing, while the other 25% were unsure. Overall, 28% of all respondents considered that their rent or mortgage is affordable. However, 22% of respondents (8 respondents) have more than 1 job; the other 78% of all respondents (28 respondents) work a single job, 43% of which claimed that they are making a living wage.

Overall, 44.4% of all respondents (16 respondents) are making a living wage. Among those who are making living wages, regardless of how many jobs they hold, half indicate they are stressed about their housing affordability.

Table3: Profile of respondents

Demographic Information	**Frequency (N=36)**	**Percentage (%)**
Use public transportation to get to work	1	2.7%
Live in same city where they work	21	58.3%
Work late shift between 11pm and before 7am	14	38.9%
Make $20.35/hr or above	16	44.4%
Received a raise in the last 12 months	8	22.2%
Received housing incentive from their employer	1	2.7%

6.3 Employer Interviews

The employer questionnaires were composed of both dichotomous questions and open-ended questions that allowed us to gain more insight into tourism employers' perspectives on the housing crisis. Five organizations from small, medium, and large companies in the tourism sector in Niagara-On-The-Lake and Niagara Falls were interviewed to gather data. Although this required much more attention, it provided deep feedback for our research. To analyze the employer responses, a data software – Voyant (https://voyant-tools.org/) – was utilized to identify common themes.

Employers were asked questions about their turnover issues, hiring difficulties, and the salary range of their employees. They were also asked a series of questions to find out about their attitudes towards the housing crisis and attitudes towards housing-related incentives.

The results indicated that 80% of the employers are paying below living wage because their employees receive other kinds of incentives like tips, parking, and health benefits. The other 20% claimed that they only pay living wage to some positions that do not receive tips. While 80% of the employers believe that there are not any competitors in the area paying living wages to all employees, 20% of employers were

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unsure about competitors' paying living wage or not. Eighty percent of all employers believe that their pay is sufficient, and 100% of employers gave their employees a raise within the last 12 months.

Regarding hiring, turnover, and retention, 40% of employers are not hiring, 40% are hiring with no difficulty, and the other 20% are hiring with some difficulty because of certain highly skilled level requirements. 100% of employers believe that there is no turnover issue related to the housing crisis, while 60% of which reported no turnover issue and the other 40% reported turnover due to other reasons.

Regarding attitudes towards housing incentives, 80% of the employers are not open to hearing about the housing crisis and issues it can cause. A series of 7 questions were asked regarding attitudes towards housing incentives and fixing the housing crisis for their employees. Scores were assigned based on each answer the employer provided; yes was assigned a 1, no was assigned -1, and 0 was assigned if the employer was unsure or indecisive. The total score for each employer can range from -7 to 7, with the lower score implying a less importance of housing crisis, and the average score is -3.

6.4 Correlation Analysis

To test the research hypotheses, a correlation analysis was performed. The results are outlined in Table 2 below. The data revealed that hypothesis 1, "as housing affordability decreases in the Niagara Region, employers in the Tourism sector are experiencing higher operating costs due to the pressure to increase wages to address employees' cost-of-living concerns" was partially rejected, and further research is needed to support or reject hypothesis 2, "having unaffordable housing can result in higher turnover rates" was supported, while hypothesis 3 "there are more housing related initiatives for employers than for employees", and hypothesis 4, "housing related initiatives that are available for employers do not positively affect employees' housing affordability", could not be proved or disproved.

Table 4: Correlation Matrix

	Do you primarily use public transportation for commuting to and from work?	Do you reside in the same city/town where you are employed?	Do you work after 11PM and/or before 7AM?	How long do you spend commuting to/from work?	The living wage in Niagara Region has been calculated at $20.35. Do you make more than this amount?	How many jobs do you currently hold?	What is your current employment status?	Have you received a wage increase in the past 6 months?	rent/mortgage payment 30 percent or more of your gross income?	Have you received a housing incentive from your employer while being an employee?	Do you consider the cost of rent/mortgage to be overwhelmingly high?	Do you consider your rent/mortgage affordable?	Do you rent or own your home?	Is rent a stress factor in your life?	If another position in the place you live became available to work, would you consider working there, as opposed to commuting to work?	How long do you see yourself in your current position?
Do you primarily use public transportation for commuting to and from work?	100%															
Do you reside in the same city/town where you are employed?	14%	100%														
Do you work after 11PM and/or before 7AM?	-13%	-2%	100%													
How long do you spend commuting to/from work?	-7%	-46%	22%	100%												
The living wage in Niagara Region has been calculated at $20.35. Do you make more than this amount?	19%	-26%	-3%	-17%	100%											
How many jobs do you currently hold?	-8%	-8%	22%	43%	-4%	100%										
What is your current employment status?	8%	8%	-11%	-26%	11%	-12%	100%									
Have you received a wage increase in the past 6 months?	-6%	17%	-15%	-13%	15%	3%	42%	100%								
rent/mortgage payment 30 percent or more of your gross income?	-25%	-29%	17%	-1%	0%	15%	-5%	-30%	100%							
Have you received a housing incentive from your employer while being an employee?	-3%	14%	-13%	-7%	-16%	-8%	8%	-6%	-26%	100%						
Do you consider the cost of rent/mortgage to be overwhelmingly high?	5%	15%	3%	-4%	7%	-3%	-15%	-50%	9%	5%	100%					
Do you consider your rent/mortgage affordable?	-10%	-10%	14%	-24%	19%	2%	31%	4%	4%	27%	-26%	100%				
Do you rent or own your home?	-16%	-55%	-7%	24%	16%	-7%	-19%	-20%	25%	-16%	-12%	3%	100%			
Is rent a stress factor in your life?	12%	36%	8%	9%	-32%	4%	-27%	-24%	14%	-24%	43%	-61%	-28%	100%		
If another position in the place you live became available to work, would you consider working there, as opposed to commuting to work?	13%	30%	-11%	2%	-26%	17%	-38%	-33%	16%	-22%	19%	-44%	2%	57%	100%	
How long do you see yourself in your current position?	6%	-28%	4%	13%	30%	17%	0%	11%	-17%	6%	-10%	21%	20%	-24%	-25%	100%

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6.5 Significant Theme Identified: Stress

Stress significantly impacts employees in numerous ways such as work performance, physical and mental health, and the ability to balance work and life. Based on our results we can identify that stress constitutes a significant factor in employees' lives. In our survey, when asked whether rent contributes to stress, 67% of respondents agreed. Further analysis reveals correlations to stress, indicating 36% of the respondents live in the same city they work. Additionally, 43% of respondents expressed concerns that rent/mortgages are overwhelmingly high. Next, there is a strong correlation of 61% between stress and the perceived affordability of rent or mortgages, indicating that housing costs are a major stressor for many. The results and correlation of the employee survey note employees have high stress due to rent unaffordability, and transportation to work. Based on data collected, every employer agrees that they have an excellent perception of employee challenges and issues. However, through employee responses of issues and stress we can note that this is contradictory, as employers do not see this as a problem. The contradictory response is concerning. The results of our findings from employees, paired with employers' contradictory information, suggests that there is a need for employer training and education on the current unaffordable housing crisis and employee assistance programs. Employers should also ensure there is open communication with employees and engage in regular check-ins, surveys, and feedback to help identify individual staff needs.

Research Question 1: Does the affordability of housing negatively affect wages and costs for employers in the Tourism sector within the Niagara Region?

Hypothesis 1 proposed that as housing affordability decreases in the Niagara Region, employers in the Tourism sector are experiencing higher operating costs due to the pressure to increase wages to address employees' cost-of-living concerns. To examine this hypothesis and address cost of living concerns, data from employer questionnaires were analyzed. The findings reveal that while 60% of employers reported no extra expenses being incurred due to housing unaffordability, and 20% of employers stated there is a potential for a hiring and retention crisis, which could result in extra costs during the summer months. Alternatively, 20% of employers highlighted experiencing increased costs for additional security requirements. Due to the increased presence of homelessness, evening shift employees require additional security measures, as homeless individuals seek shelter in locations like parking garages. Lastly, research indicates the significant impact stress has on employees alternatively affecting their performance level. This elevated stress among employees leads to increased expenses for employers related to several things; as stated by the Canadian Centre for Occupational Health and Safety "These effects can then lead to additional stress-related illness, as well as higher cholesterol, depressive symptoms, and overall decreased health. The impact on the organization can include increased costs due to benefit payouts, absenteeism, disability, and turnover." (CCOHS, 2024). Therefore, hypothesis 1 is partially rejected.

Hypothesis 2 proposed that having unaffordable housing can result in higher turnover rates. However, the results from employee and employer surveys identify differentiating themes. Data reveals 60% of employers reported that their establishments did not experience high turnover rates directly attributed to unaffordable housing, denying the relation between turnover and the housing crisis. Rather, they indicated turnover included factors such as shift schedules, seasonality, and workplace culture. However, the data obtained from employee surveys indicate an alternative perspective, reinforcing hypothesis H2. Employees'

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inclination to seek better employment opportunities elsewhere is positively associated with factors including proximity to employment, and undue stress resulting from unaffordable housing. The data additionally uncovered a moderate negative correlation between living wage, job security (current employment status), pay raise, and the perception of housing affordability. The results of the employee survey suggest the hypothesis to be supported, indicating a correlation between unaffordable housing and turnover. However, the findings from the employer reveal a discrepancy in perspectives from the two groups. Overall, further investigation should be conducted to fully comprehend the underlying factors that contribute to this disparity.

Research Question 2a

The housing-related initiatives that are being implemented in other jurisdictions to support the Tourism sector include the creation of the Catalyst Housing model by Regional Tourism Organization 12/Explorer's Edge in the Muskoka, Parry Sound, Almaguin, and Algonquin Park area. This model has been implemented to attract workers by offering below-market rental housing, paired with career, life skills and financial literacy training. The model consists of two-year periods in which participants would be employed in the regional tourism industry. The model leverages public, private and non-profit investments and is intended to purpose local residents, Indigenous people, immigrants, women, youth, and students, that are considered marginalized groups (Home Stretched: Tackling Ontario's Housing Affordability Crisis, p, 5).

In Collingwood, to support tourism industry workers, the Blue Mountain Resort has created affordable housing for employees ranging from $115 to $150 per week. The housing is either single or double occupancy and includes furnishings, cable, and internet (Home Stretched: Tackling Ontario's Housing Affordability Crisis, p. 21).

British Columbia is creating new legislation to help with the development of smaller-scale, multi-unit housing for individuals, and to help fix outdated zoning regulations so that homes could be built at a faster rate. These changes will allow for three to four units allowed on smaller lots that are presently zoned as a single-family dwelling, or 6 units on larger lots currently zoned as single-family. This new legislation will allow for faster housing development approvals as they will shift local planning and zoning processes to happen up front (More small-scale multi-unit homes coming to B.C., para. 6-8).

While not geared specifically towards the tourism industry, a popular tourism destination, Montreal, has created the Montreal Social Housing By-Law for Developers, to tackle the unaffordable housing issue. This By-law requires developers to include affordable housing units in any new projects that are over 4,843 sq feet (about the area of a basketball court). If they choose not to include affordable housing units, they must either pay a fine, sell land below market cost, or turn over buildings to the city to make more affordable housing (Jonas, 2023, para. 2-6). Although the By-law does need some adjusting, as most developers chose to pay the fine as opposed to building units, it is a starting point to the creation of more social housing units.

Research Question 2b

Both hypothesis 3, "there are more housing related initiatives for employers than employees" and hypothesis 4, "housing related initiatives that are available for employees do not positively affect employees' housing affordability" were neither accepted nor rejected. Despite our rigorous efforts, we were unable to obtain conclusive answers from the information gathered from the survey and interviews, hindering our ability to

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validate or refute our hypotheses.

Employers, however, were asked “do you provide housing related incentives for your employees?”, “do you plan to provide housing related incentives for your employees?”, and “would you be interested in funding a program to help employees with affordable housing?”, all indicating no. Employers showed no inclination towards implementing housing-related initiatives, expressing a lack of interest due to their perception that housing incentives are not integral to their business operations.

Of the employees surveyed, 97.5% of employees stated they do not receive a housing incentive from their employer.

Research Question 2c

The qualitative research question, “what can be done to ensure that any investments in housing are impacting affordability for employees and not just subsidizing private businesses profitability/profits?” examines how investments in housing could make a real difference for employees by keeping costs down, rather than just boosting profits for private businesses. Based on the results, 20% of employers suggested there should be increased public transit, as parking in the tourism area could be an issue for staff who drive.

The results from the correlation analysis, similar to H2, offer differentiating viewpoints from employers and employees. We uncovered 20% of employers who stated they believe their employees would appreciate public transportation, whereas 100% of respondents who inserted a response to the open-ended question reported they would much prefer monetary gains to assist with unaffordable housing, such as a raise, incentive, and allowance. One hundred percent of the employers interviewed indicated they have a good perception of the challenges employees faced; however, it can be inferred from the lack of responses provided from employees that providing an answer would not result in any changes. Out of the 36 respondents, 20 respondents did not offer an opinion, or it was not relevant, leaving 16 respondents to provide answers which solely mentioned monetary gains to assist with the rising housing costs. Throughout this report, we have determined stress as a common theme that plays a pivotal role with employees; therefore, employers should offer EAPs to help alleviate this to reduce and help address any employee concerns.

Recommendations

Although Niagara Region has an Affordable Housing Strategy (2022), a few recommendations can be offered after the strategy is compared with other jurisdictions.

Increasing Affordable Housing Availability

While the main purpose of these recommendations is to increase the availability of affordable housing units, they are separated into two distinct categories: initiatives that directly affect affordable housing for tourism industry, and initiatives that affect Niagara Region generally.

For the first category of initiatives, Niagara Region can do further research on getting employers involved in the effort of increasing affordable housing availability through programs like Employer-Assisted Housing program, which can be referred to as EAH in the United States (National housing conference issues report entitled 'toolkit for building employer assisted housing programs', 2023). The concept of EAH is not new and was put aside after the Economic Recession in 2008 with the housing market crash. It is recently brought back to life in the US by their National Housing Conference with the publication of Toolkit for

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Building Employer Assisted Housing Programs (2023). To attract tourism sector employers' interest on this type of programs, there needs to be some incentives for employers like tax subsidies for those who participate in the affordable housing resolution.

For the second category of initiatives, Niagara Region should look at ways to increase the density of housing, as known as “Density Bonusing” (Town of Fort Erie). This would also mean that besides “maintaining existing community housing stock” as mentioned in Affordable Housing Strategy, municipality can look at allowing smaller units to be built. For example, modular construction, or allowing the construction of more units in one building, so that there will be more units per square foot. That said, the safety and sustainability of the building would be in balance with the increased density of housing units.

Besides initiatives, regulations could also be used to restrict the access of affordable housing units on real estate investors and to improve the access of affordable housing to first time home buyers. Marc Lee reported the housing strategy in Singapore as: “new Housing and Development Board flats can only be sold to Singapore citizens and a series of priority schemes is used to allocate new units. Up to 95% of flat sales are set aside for first-time applicants, including special priority for young couples” (Lee, 2023).

Niagara Region could also investigate the Montreal Social Housing By-Law mentioned in the Literature Review above to start encouraging the development of social housing units in the area. All the money collected from the fines from developers could be added to the funding for the homelessness action plan.

As stated in the Affordable Housing Strategy, Niagara Region should also streamline the regulations for building permit costs and timeframe that is accompanied with unnecessary developmental charges to avoid incidents like the dispute case of Silvergate Homes-Merritton Mills Inc. in St. Catharines (Walter, 2023); especially, if a business is under the process of building affordable units or community units. A streamlined process would boost the pace of development.

Maximizing the Use of Real Estate in the Tourism Area

Niagara Region should work with other neighbor municipalities, the Ontario province, and the federal government to decelerate the stocking of real estate as an investment to maximize the use of existing real estate. By doing so, more unused housing units can be released into the purchase market, or at least the rental market, which will increase the availability of housing in the market. According to Beth Potter, the President and CEO of Tourism Industry Association of Canada, in her reply to the Minister of Finance regarding Consultation on the Underused Property Tax, owners of a residential property that offers a short-term rental in tourist area should be subject to annual Underused Housing Tax and be mandated to declare income with Canada Revenue Agency (2021). The charges placed on unused property owners can then be used for the funding of community housing for low-income families.

Education and Employee Assistance Programs

Based on the significant responses from employees related to stress, we can recommend employers invest in EAPs for employees and training and development for top level managers. As mentioned throughout this report, stress is detrimental to one’s health and wellbeing and can have negative effects on performance in an organization. As stated by the Canadian Centre for Occupational Health and Safety “these effects can then lead to additional stress-related illness, as well as higher cholesterol, depressive symptoms, and overall decreased health. The impact on the organization can include increased costs due to benefit payouts,

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absenteeism, disability, and turnover." (CCOHS, 2024), therefore, we suggest investing in EAP's for employees will address stress concerns and additional training to enhance how employers respond to them.

7. CONCLUSION

There is a surge of unaffordable housing that is causing a housing crisis. The shortage is seen globally and throughout the Niagara Region. The issues within this shortage mainly pertaining to the tourism sector are the encompassing activities and the role tourism sectors play in job creation and housing market dynamics. Employers, employees, and homeowners are facing the burden of dealing with low shelter availability and housing being unfathomably unattainable. This burden is then placed on the growth, sustainability, and longevity of the tourism industry. The local community is declining; areas in which housing, schooling, and recreation should be provided are not growing due to the lack of housing in the area.

The unstable environment is causing a higher turnover rate and implications such as development is at a standstill. With the declining stable environment of the tourism sector this is directly affecting the level of care given to visitors, thus negatively impacting the tourism quality of the accommodation and activities within the industry. As stated, this continues to affect the development of the community and wages of employees, directly correlating to the allotted amount held within "less than 30% of a household's total annual income" when looking at an individual's income/savings.

The surveys are to determine and compare patterns across areas of the Niagara Region to show how much the tourism sector is affected by the decline in affordable housing. The data from the survey size of Niagara's tourism jurisdictions indicates how detrimental the crisis is to the economy and growth of the tourism industry. Recommendations and further research can be conducted to help create solution efforts.

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THE IMPACT OF BOARD OF DIRECTORS CHARACTERISTICS ON CAPITAL STRUCTURE DECISIONS ANDTHE MODERATING EFFECT OF GENDER DIVERSITY: EVIDENCE FROM LISTED COMPANIES ON HO CHI MINH STOCK EXCHANGE (HOSE)

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Abstract:

Corporate governance has become increasingly influential in shaping a firm's financial and strategic decisions. Determining capital structure decisions is essential for ensuring a firm's financial stability and supporting long-term strategic growth. Therefore, this study aims to examine the association between board attributes and firm leverage of listed firms on the Ho Chi Minh Stock Exchange and the moderated effect of gender diversity on the relationship between board characteristics and firm leverage. Using a sample of 1530 firm-year observations of 306 Vietnamese firms listed on HOSE during 5 years from 2019 to 2023 for this experiment, the results for the panel regression analysis show that a larger board and a more independent board positively affect firm leverage, whereas board nationality does not have a significant relationship with firm leverage.

Keywords: *Corporate governance; Capital structure; Board characteristics; Gender diversity.*

1. Introduction

The success of any business bears the important mark of a good corporate governance system (Aman & Nguyen, 2013). Corporate governance (CG) serves as a mechanism to direct and control management activities. It plays an important role in helping to minimize risks and increase the efficiency of business operations (Mande et al., 2012). A good governance system with effective management can help businesses mitigate the principal-agent conflict (La Porta et al., 2000). Companies with a good CG system will protect the interests of shareholders, which contributes to creating trust for domestic and foreign investors, thereby improving access to capital, and creating a premise for businesses to develop more sustainably (Ahmed Sheikh and Wang, 2012). In particular, in a developing economy and an increasingly expanding capital market, a business's capital structure becomes one of the key factors determining the company's growth and survival. The studies about CG help managers or policymakers have a comprehensive view of CG and how it affects an organization's effectiveness, from which they can propose better policies for their units.

Debt financing is one of the important financial decisions of enterprises, which can affect their

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profitability, risk, and long-term growth potential. Previous studies have shown that CG significantly affects the level of debt used by enterprises. An effective CG system can help enterprises access loans more easily, while poor governance can lead to higher financial risks (Javaid et al., 2023).

Gender equality has become an essential aspect of modern society, reflecting progress toward fairness and inclusiveness. Over the years, women have increasingly appeared in various fields, achieving greater representation in education, employment, and leadership. Public attention to gender equality is linked to increased board gender diversity, particularly in firms with cultures sympathetic to gender equality (Giannetti & Wang, 2020). Gender diversity is considered an important characteristic of an effective board (Milliken & Martins, 1996). The benefits of gender diversity may result from changes in board group dynamics (Wahid, 2019) and improved corporate cultures (Griffin et al., 2021). Compared to an all-male corporate board, a company with gender-diverse boards contributes to fewer financial reporting mistakes and less fraud (Wahid, 2019). Companies with gender-diverse boards are also championed for more innovation, more patents, and greater innovative efficiency (Griffin et al., 2021). This paper considers a conceptual model that estimates the relationship between corporate governance mechanisms and the capital structure of a firm with the moderating effect of gender diversity.

Corporate governance has attracted academic attention in the last few years, and many studies have examined the impact of corporate governance, especially board characteristics, on a variety of factors globally over the last several decades including firm performance (Ahmed et al., 2015; Bhagat et al., 2019; Alodat et al., 2022; Silpachai et al., 2024), risk-taking (Nguyen & Pascal, 2011; Nazir et al., 2023), and corporate social responsibility (Ullah et al., 2019, Mai et al, 2023). However, the research exploring the effect of board characteristics on capital structure is still limited and dominated in developed economies (Granado-Peiro and Lopez-Gracia, 2017; Kieschnick et al., 2018; Liao et al., 2015; Ezeani et al., 2023). The research in developing countries has not been studied much compared to developed markets, so more empirical evidence is needed in the context of developing markets, especially Vietnam, which still has many limitations in applying modern CG standards. Furthermore, gender equality is increasingly concerning and applied to corporate governance systems. Extensive research has examined board gender diversity and its impact on various factors, such as firm performance (Oldford et al., 2020; Zaid et al,.2020), and earnings management (Triki Damak, 2018; Mensah et al., 2023). However, its role in shaping capital structure remains largely underexplored. From the perspective of Vietnam, research on women's presence on the board of directors that affects capital structure remains relatively scarce in the field of corporate governance. Therefore, this study not only aims to emphasize the effect of aspects of board characteristics on capital composition but also further investigates the critical role of gender diversity in Vietnam-listed firms in managing financial leverage. Likewise, the underexplored area between agency theory and this relationship is sought to be addressed in this study.

Our research aims to comprehensively investigate the influence of board characteristics, including board size, board independence, and board nationality diversity, on capital structure decisions, specifically in the context of the Ho Chi Minh Stock Exchange (HOSE). It further explores whether gender diversity enhances or weakens the relationship between corporate governance and financial leverage decisions.

By the objectives mentioned above, the research questions are listed as follows:

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1. Which board characteristics (board size, board independence, or board nationality diversity) have a significant effect on a company's capital structure decisions?

2. How does gender diversity moderate the effect of corporate governance on a company's capital structure decisions?

2. Hypothesis Development

2.1 Board Size and Leverage

There isan abundance ofliterature thathas mixed results on the impact of board size and leverage level. Zaid et al. (2020) suggest that firms with large boards can benefit from wider networks and relationships between their members and external parties and have more ability to raise funds from external sources to maximize the firm's value. Similarly, Keerthana and Balagobei (2022) affirm that expanded board size is expected to be more effective in overseeing management by distributing responsibilities among its members, hence strengthening the company's reputation, which helps firms access debt financing at lower costs. Furthermore, Amin et al. (2022) found that larger boards with diverse experience and expertise provide better oversight of financial decisions, including the level of debt used, and reduce agency conflicts. But with an opposing view, Chukwunwike et al. (2024) revealed that larger board size tends to reduce their capital structure. Tawfeeq et al. (2018) also indicated board size has a significant negative effect on capital leverage because they prefer more equity in a firm's capital than debt. Along the same line, Ahmed et al. (2021) argued that the larger board size puts pressure on financial decisions, leading to lower leverage to optimize corporate performance. Following the principles of agency theory, we argue that larger board sizes will promote self-serving managerial actions, ensuring better corporate governance. As a result, creditors may perceive such firms as better able to protect their reputation and financial stability, leading to lower debt costs and thus improved access to finance. Based on these theoretical foundations and previous empirical findings, the first hypothesis is formulated as follows:

Hypothesis 1: There is a positive relationship between Board Size and the Firm's Leverage.

2.2 Board Independence and Leverage

Board independence plays an important role in Corporate Governance, enhancing transparency, and accountability and protecting shareholders' interests (Amin et al., 2022). Independent directors are not influenced by management, helping to make more objective decisions. In agency theory, a higher proportion of independent board members helps to monitor and restrain the self-interested behavior of the executive board, thereby minimizing conflicts of interest between managers and shareholders. Many studies showed a positive relationship between board independence and firm leverage. Zaid et al. (2020) argued that a higher level of independent non-executive directors in the boardroom leads to a higher level of firm's debt financing due to foresting lender trust and facilitating a collaborative environment for debt creation. Moreover, Amin et al. (2022) reported that the number of independent members in board positively influence the firm leverage level. On the contrary, Chukwunwike et al., (2024) reported board independence has a significant negative effect on the capital structure of big non-finance firms in Nigeria. Similarly, in Malaysian firms, board independence is negatively correlated with financial leverage (Tahir et al., 2023)

The presence of independent directors enhances oversight and mitigates the risk of self-interest, ensuring

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that debt is used prudently. This strengthens creditors' confidence as they may perceive these firms as more stable and make it easier for firms to secure loans on better terms. Therefore, from the discussion above, I propose:

Hypothesis 2: There is a positive relationship between Board Independence and the Firm's Leverage.

2.3 Board Nationality and Leverage

Board nationality is a common finding in board characteristics that represents the number of foreign members on the board of directors (Zaid et al., 2020). The board nationality diversity variable has still not gained much attention in previous research and has particularly not been comprehensively analyzed in the Vietnam context. Existing studies reveal different findings regarding the impact of board diversity on capital structure. Boards with foreign directors tend to maintain lower debt levels, possibly due to better information exchange and minimized adverse selection costs (Yousef et al., 2020). Similarly, Fitri and Erlita (2018) found that the presence of foreign directors on the board negatively affects the firm's capital structure. However, firms with board members from multiple cultural backgrounds are more likely to have higher debt levels than those with less diverse boards (Karakoç & Arcagök, 2023). According to Hutchinson et al. (2008), the degree of foreign control in a firm via the proportion of foreigners on the board is a positive and significant determinant of a firm's financial leverage position. This result emphasizes that foreign board dominance does not necessarily constrain local management, leading to a higher likelihood of using debt as a tool to control the use of free cash flow.

Assessing the impact of board diversity on debt is an important aspect of corporate governance research. It is argued that a diverse and international board can bring international expertise, higher governance standards, and stricter oversight, encouraging firms to engage in more cautious financial management and rely less on debt. Therefore, the following hypothesis is proposed for the current study:

Hypothesis 3: There is a positive relationship between Board Nationality and the Firm's Leverage.

2.4 The moderating role of gender diversity

Gender diversity is considered one of the important characteristics of an effective board (Milliken & Martins, 1996). The relationship between gender diversity and capital structure remains a contentious topic. The author argued that the presence of women on the board provides positive signals to debt providers regarding the repayment of debt and interest, which ultimately results in more availability of debt for the firm (Kaur & Singh, 2017). Gender diversity on corporate boards positively impacts firm leverage and enhances corporate governance quality (Amin et al., 2022, Fleitas-Castillo et al., 2024). Female representation on boards enhances independence and strengthens oversight, which can help minimize agency conflicts and mitigate information asymmetry between management and investors, thereby facilitating easier access to debt financing. Board characteristics that influence the firm's capital structure may be influenced by the level of women's representation on the board. Along the same line, an independent board with the appearance of female members significantly increases the debt-to-asset ratio of the bigger firm sample of non-finance firms (Chukwunwike et al., 2024). However, Adusei et al. (2019) found that a higher presence of women on boards strengthens the tendency to use less debt in countries with better institutional environments in micro-finance institutions. This also shows that there are quite a few conflicting opinions among existing studies on the moderating effect of gender diversity.

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Gender diversity on the board is a selection criterion that may influence financing decisions because it reflects a firm having a well-balanced CG system (Zaid et al., 2020). The size of the cost of debt is closely related to the firm's reputation for "debt servicing" which is closely related to board effectiveness. Therefore, the influence of board characteristics such as board size, board independence, and board nationality on the firm's capital structure will be greater when the board is more even between men and women. Therefore, the following hypothesis is proposed:

Hypothesis 4: The relationship between board size and firm's leverage level (Ha), board independence and firm's leverage level (Hb), board nationality and firm's leverage level (Hc) is stronger in firms with female presence on the board.

H4a. More gender diversity will strengthen the positive relationship between board size and the firm's leverage level.

H4b. More gender diversity will strengthen the positive relationship between board independence and the firm's leverage level.

H4c. More gender diversity will strengthen the positive relationship between board nationality and the firm's leverage level.

3. Methodology

3.1. Data collection

The research predominantly relies on secondary data collected through quantitative research methods. Company-related information, such as financial leverage and total assets, will be taken from Fiinpro and Thomson Reuters EIKON database. Corporate governance indicators related to BOD characteristics will be hand-collected on the annual reports of the companies (Zaid et al, 2020). The initial study's population comprised 411 enterprises listed on the Ho Chi Minh Stock Exchange (HOSE) within 5 years from 2019 to 2023. After excluding the financial firms and firms with missing information, the final sample consists of panel data of 306 firms and 1530 firm-year observations.

3.2 Variable definitions

3.2.1 Dependent variable

The dependent variable is the capital structure (LEVERAGE), measured using total assets over equity or total debt over total assets or debt over equity. Leverage shows how much a firm relies on debt financing in its capital structure (Pinto, 2020).

Based on the previous studies from Alhassan et al. (2021), Silpachai (2023), in this study, financial leverage is measured with the numerator for calculating leverage is total debt, which includes short-term and long-term interest-bearing debt, and the denominator is total assets, representing the book value of all of the firm's assets, as follows:

$$\text{Financial Leverage} = \frac{Total\ Debt}{Total\ Asset}$$

3.2.2 Independent variable

The first variable is board size (BODS), which represents the number of board members (Zaid et al., 2020; Alareeni & Hamdan, 2020; Amin et al., 2022)

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Second, board independence (BODI), which was measured by the ratio of independent directors to the total number of directors on the board (Zaid et al., 2019; Zaid et al., 2020).

$$\text{BODI} = \frac{Number\ of\ \text{Independent Directors}}{Total\ \text{number of directors}}$$

Third, board nationality diversity (BODN) measures the proportion of foreign directors on the board. (Ezeoha et al., 2008; Kanakriyah, 2021)

$$\text{BODN} = \frac{Number\ of\ \text{Foreign Directors}}{Total\ \text{number of directors}}$$

3.2.3 Moderating variable

The gender diversity might have a relationship with capital structure decisions (Nguyen, 2023; Adusei et al., 2013). As a result, I will analyze the nexus between board attributes and the firm's financing decision using both direct and indirect approaches. From this standpoint, the effect of gender diversity will be introduced as a moderating variable on the aforementioned relationship in the analysis. Following Amin et al. (2022), gender diversity (BODF) was measured as the proportion of female directors on the board.

$$\text{BODF} = \frac{Number\ of\ Female\ \text{Directors}}{Total\ \text{number of directors}}$$

3.2.4 Control variables

Firm size (SIZE) is measured as a natural logarithm of the total assets of the firm. Larger companies generally exhibit higher borrowing tendencies, benefiting from diversification and financial stability (Alves et al., 2015). Based on some previous studies presented by Rajan and Zingales (1995) and Booth et al. (2001), it was determined that the size of a company will have a positive impact on firm leverage. This conclusion was reached because larger companies have the potential to enhance their access to credit markets, lower bankruptcy risk and diversify operations, which makes them more creditworthy entities for debt financing.

$$\text{SIZE} = \ln(Total\ assets)$$

The return on assets (ROA) is also a control for profitability, which is calculated as the percentage of net income to total assets. Firms with strong financial performance, especially in terms of profitability, tend to exhibit stability and generate larger cash flows. They can therefore benefit from lower debt financing costs (Anderson et al., 2004), thereby incentivizing greater leverage. This variable is collected on Fiinpro.

$$\text{ROA} = \frac{Net\ income}{Total\ Assets}$$

Firm age (AGE) is measured by the number of years since the firm was established.

It is also important to control foreign ownership (FOR), the percentage of ownership held by foreign investors. The involvement of foreign investors in a company's ownership framework is seen as a beneficial funding source (Khasawneh and Staytieh, 2017). This factor is collected by hand from the annual report of each company.

From an econometric perspective, Bradley et al. (1984) argue that leverage ratios may vary across industries. Therefore, we include an industry dummy variable (INDUSTRY) to reduce bias in the result. In addition, I

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apply year-fixed effects (YEAR) to capture time-related fluctuations in the data, reflecting macroeconomic fluctuations (Alves et al., 2015).

3.3 Research Models

To investigate the direct relationship between board characteristics and capital structure, the regression model presented below was applied.

$$LEVERAGE_{it} = \beta_0 + \beta_1 BODS_{it} + \beta_2 BODI_{it} + \beta_3 BODN_{it} + \beta_4 ROA_{it} + \beta_5 FOR_{it} + \beta_6 SIZE_{it} + \beta_7 AGE + \sum TIME + \sum INDUSTRY + \varepsilon_{it} \quad (1)$$

where LEVERAGE is the dependent variable, measured by the ratio of debt to total assets for firm i at time t; Independent variables representing corporate governance mechanisms include Board size (BODS), Board independence (BODI), and Board nationality diversity (BODN). Several control variables are used including firm size (SIZE, to control for economies of scale), Profitability (ROA), Foreign Ownership (FOR), Firm Age (AGE), Time (YEAR, to control for time-fixed effects), Industry (INDUSTRY, to control industry attributes that may affect CG or CS). ε denotes the error term, whereas i represents firm, and t represents year.

To investigate whether the presence of women in BODs influences the relationship between BOD characteristics and financial capital structure, the following model is employed:

$$LEVERAGE_{it} = \beta_0 + \beta_1 BODS_{it} + \beta_2 BODI_{it} + \beta_3 BODN_{it} + \beta_4 BODF_{it} + \beta_5 BODS * BODF_{it} + \beta_6 BODI * BODF_{it} + \beta_7 BODN * BODF_{it} + \beta_8 ROA_{it} + \beta_9 FOR_{it} + \beta_{10} SIZE_{it} + \beta_{11} AGE + \sum TIME + \sum INDUSTRY + \varepsilon_{it} (2)$$

The difference between Model 1 and Model 2 is the appearance of the interaction between three characteristics of BOD and gender diversity (i.e. (BODS*BODF), (BODI*BODF) and (BODN*BODF)) to measure the moderating effect of gender diversity (BODF) on the effect of Corporate Governance on capital structure. The remaining variables remain the same as in Model 1.

4 Result

4.1 Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
LEVERAGE	1530	.224	.173	0	.96
BODS	1530	5.795	1.424	3	11
BODI	1530	.219	.163	0	.833
BODN	1530	.067	.167	0	1
BODF	1530	.17	.19	0	1
FOR	1530	.11	.167	0	.957
ROA	1530	.061	.077	-.364	.52
SIZE	1530	22.294	4.39	13.89	30.813
AGE	1530	27.183	14.119	1	65

Table 1: Descriptive Statistics

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Following the data analysis, descriptive statistics for 1,530 observations (306 Vietnamese firms from 2019–2023) are presented in Table 1. Leverage, calculated as total debt divided by total assets using data from Thomson Reuters Eikon, averages 0.224, indicating that 22.4% of assets are financed by debt—moderate compared to other emerging markets. Leverage ranges from 0% to 96%, with a standard deviation of 0.172. Board size averages 6 members (range: 3–11), aligning with Vietnamese regulations. Board independence averages 21.92%, with some firms lacking independent directors, reflecting pre-2020 corporate law conditions. Foreign board representation is low (mean: 6.68%) but varies widely. Gender diversity averages 17%, with a high standard deviation, indicating varied board inclusion across firms. Firm age averages 27.18 years (range: 1–65), suggesting a mix of new and established firms. Foreign ownership averages 11.05%, with significant disparities. Return on assets (ROA) averages 6.11%, but ranges from –36.42% to 51.97%, highlighting performance variability. Firm size, measured as the natural log of total assets, averages 22.29, covering a wide spectrum from small to large firms. These characteristics offer a comprehensive view of corporate structure and financial decisions in the Vietnamese market.

4.2 Correlation result

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) LEVERAGE	1.000								
(2) BODS	-0.020	1.000							
(3) BODI	0.146***	0.143***	1.000						
(4) BODN	-0.016	0.278***	0.034	1.000					
(5) BODF	-0.032	-0.019	0.032	-0.027	1.000				
(6) FOR	-0.086**	0.353	0.026	0.715**	0.045	1.000			
(7) ROA	-0.385***	0.046*	-0.138**	-0.005	0.036	0.165***	1.000		
(8) SIZE	0.029	-0.150***	-0.042	0.013	-0.032	-0.172***	-0.134***	1.000	
(9) AGE	-0.090***	-0.014	-0.136**	-0.053**	-0.008	-0.065*	0.067*	0.040	1.000

****p<0.01, **p<0.05, *p<0.1*

Table 4: Pairwise correlations

According to Gujarati et al. (2002) and Belinda et al. (2014), multicollinearity may arise when the correlation coefficient between independent variables exceeds ±0.8. Table 2 shows that all correlation values

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fall within this acceptable range, indicating no multicollinearity concerns. As hypothesized, leverage is positively and significantly correlated with board independence ($r = 0.146$, $p < 0.01$). Gender diversity shows a negative but insignificant correlation with leverage. Among control variables, firm age, ROA, and foreign ownership are negatively and significantly associated with leverage ($p < 0.01$), while firm size shows a positive but insignificant relationship. A notable correlation exists between board nationality and foreign ownership ($r = 0.715$), which, while strong, remains below the multicollinearity threshold. These results confirm the model's statistical reliability and align with corporate governance theory. Gender diversity also serves as a moderator, an appropriate approach given the weak correlations among other independent variables.

4.3 VIF model

Variance inflation factor (VIF) test is used to detect multicollinearity among independent variables in multiple linear regression models, with extensions proposed for ridge estimation (Román Salmerón Gómez et al., 2016). According to O'Brien (2007), VIF values between 1 and 10 indicate no serious multicollinearity among independent variables. In Model 1, the average VIF falls between 1 and 3, suggesting no multicollinearity issue. Specifically, although foreign ownership and board nationality have VIFs slightly above 2, all remaining independent variables remain within the acceptable range. Model 2 also exhibits that the overall average VIF is 2.75 is within an acceptable range. Most variables exhibit VIF values well below the commonly accepted threshold of 10, indicating no serious multicollinearity concern.

Variables	**Model 1**	**Model 2**
FOR	2.40	2.42
BODN	2.19	2.86
BODS	1.18	1.49
ROA	1.10	1.11
SIZE	1.09	1.11
BODI	1.06	1.75
AGE	1.03	1.03
BODF		6.80
BODSF		6.08
BODIF		3.80
BODNF		1.78
Mean VIF	1.44	2.75

Table 3: VIF model

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4.4 Hausman examination, fixed effect F-test examination for fixed effect and random effect model

First, to choose between OLS and REM, the Breusch-Pagan Lagrange Multiplier test is used to determine whether the Random Equation Model (REM) is a better fit than Pooled OLS. If the null hypothesis, which favors Pooled OLS, is rejected, REM seems to be the better choice and vice versa.

H_0: Pooled OLS is better than REM

H_1: REM is better than Pooled OLS

For the Hausman test, similarly, helps to differentiate between the FEM and REM, with the null hypothesis favoring REM and the alternative hypothesis favoring FEM. In the case that the null hypothesis is rejected, FEM seems to be a more appropriate model, otherwise, REM would be chosen (Hausman, 1978)

H_0: REM is better than FEM

H_1: FEM is better than REM.

With the first model, when the Breusch-Pagan Lagrange multiplier test was performed, the result showed that the p-value was 0, which showed that the null hypothesis was rejected; the REM model was a better fit than the Pool OLS. Then, the Hausman test showed that the p-value was also less than 0.05, namely 0, so the FEM model was the best fit for Model 1. Similar to Model 2, the Breusch-Pagan Lagrange multiplier and Hausman tests showed that the p-values of the two models were less than 0.05, specifically, 0, and 0.001, respectively. Therefore, after applying both tests, the null hypothesis H_0 was rejected, which means that the fixed-effects model (FEM) can be selected as the best regression model for Model 2.

To conclude, the fixed effects model (FEM) was deemed the most suitable choice for both models in terms of obtaining reliable and consistent estimates. Because corporate governance variables have low and firm-specific variation over time, the FEM is a good fit here. Our finding is consistent with previous empirical work, as many studies have used fixed effects models to reduce time-invariant heterogeneity across firms (Zaid et al., 2020; Amin et al., 2022). The use of FEM in this study provides further objectivity and validity of the analysis of the governance mechanisms-regulating relationship and firms' corporate leverage.

Examination	Model 1		Model 2	
	Breusch-Pagan Lagrange Multiplier test	Hausman test	Breusch-Pagan Lagrange Multiplier test	Hausman test
Chi-square	1845.19	45.42	1842.67	36.92
p-value	0	0	0	0.001

Table 4: Hausman and F-test examination

4.5 Model 1 result

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VARIABLES	LEVERAGE
BODS	-0.00572**
	(0.00284)
BODI	0.0264
	(0.0199)
BODN	-0.0902**
	(0.0450)
FOR	0.0117
	(0.0272)
ROA	-0.387***
	(0.0429)
SIZE	0.0816***
	(0.00781)
AGE	-0.00664***
	(0.00133)
Constant	-1.359***
	(0.163)
Observations	1,530
Number of Ticket_code	306
R-squared	0.143

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5: Model 1 result

Regarding the analysis of multiple regression, theFEresults in Table5show that Board size (BODS) and Board nationality (BODN) havenegative coefficients and are statistically significant at 5%, the coefficients are -0.00572 and -0.0902, respectively. However, the remaining characteristic of the board, namely, the board independence (BODI), has an insignificant association with a firm's leverage ratio.

Firstly, the board size shows a negative and statistically significant coefficient (β=-0.00572, p-value <0.05). Specifically, holding other variables constant, an increase of one member on the board is associated with an average decrease of approximately 0.5% in financial leverage. This implies that larger boards may be linked to lower use of debt financing, potentially due to more diverse opinions and greater ability to monitor management. Therefore, we reject H1. The result suggests that a larger board will have more diverse perspectives and increased scrutiny; firms may be more careful when employing debt financing, choosing equity instead of debt to prevent possible financial difficulties. This finding is consistent with the previous research (Berger et al., 1997; Butt and Hasan, 2009; Tahir et al., 2023; Bazhair, 2023), whereas this result is constrast with the studies of Zaid et al. (2020) and Amin et al. (2022).

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Moving to the board independence (BODI), because the p-value is higher than 0.1, suggesting an insignificant relationship with firm leverage.This implies that the presence of independent members on the board of directors does not have a significant effect on the level of financial leverage in this sample.Our result, therefore, rejects H2.

Thirdly, for board nationality diversity (BODN), there is a negative association between board nationality and leverage that is statistically significant, with the beta coefficient of this variable exhibitinga negative, nearly -0.09, and the p-value is lower than 0.05. This implies that a 1 percentage point increase in the proportion of foreign board members is associated with a 9% decrease in leverage, ceteris paribus. Therefore, we reject H3. This is possibly due to the diversity in national background may introduce different perspectives, stricter ethical standards, which can lead to more prudent financial decisions. The result may reflect that diverse boards might prefer lower debt levels to reduce financial risk and maintain long-term stability, especially in volatile or emerging markets like Vietnam. Furthermore, foreign directors may favour conservative capital structures since they are more cautious, because they are not familiar with the local legal or financial systems.This result is in line with prior research (Desai et al., 2004), which evidences that the presence of foreign directors on the company's boardroom has a negative effect on the firm's debt financing due to weak creditors' rights and scarce and expensive locally provided debt.However,this finding is incongruent withEzeoha et al. (2008); Du and Dai (2004) findings.

4.6 Model 2 result

VARIABLES	LEVERAGE
BODS	-0.0119***
	(0.00354)
BODI	0.0324
	(0.0240)
BODN	-0.0744
	(0.0523)
FOR	0.0173
	(0.0272)
ROA	-0.374***
	(0.0429)
SIZE	0.0810***
	(0.00781)
AGE	-0.00666***
	(0.00133)
BODF	-0.203***
	(0.0644)
BODSF	0.0328***
	(0.0125)
BODIF	-0.0148

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	(0.0830)
BODNF	-0.121
	(0.167)
Constant	-1.310***
	(0.164)
Observations	1,530
Number of Ticket Code	306
R-squared	0.153

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6: Model 2 result

Model 2 is conducted to investigate the impact of board characteristics and the moderating effect of gender diversity on firm leverage. This additional regression analyst conducted the regression analysis using the FEM model. The results are depicted in Table 6.

Regarding the moderating effect and the effect of female board members. BODF (Female Board Representation) has a positive and significant coefficient ($\beta = -0.203$, $p < 0.01$), indicating that compared to firms without female board members, those with female participation tend to have significantly lower leverage levels. For every 1% increase in the proportion of women on the board, the company's financial leverage will decrease by an average of 0.2 if other factors remain unchanged.

Next, the interaction between board size and gender diversity (BODSF) also shows a significant effect with a beta coefficient of 0.0328 and is statistically significant at the 1% level. It shows that the presence of women increases the positive impact of board size on leverage. Specifically, if there are women on the Board of Directors, then when the Board Size increases by 1 member, the increase in leverage will be approximately 0.028 higher than that of the board without women.The result shows that our hypothesis H4a was supported. We argued that firms with larger board sizes possess a diverse set of knowledge, skills, expertise, and relationships with financial institutions. Therefore, when female representation is present within a larger board structure, women can be supported and access resources and financial management experience from other members, thereby creating balance and stability, increasing credibility with creditors. At the same time, in large boards, the presence of women is no longer simply an individual factor leading to excessive caution but becomes a balancing factor and enhances the effectiveness of collective supervision. Female directors are more likely to be stricter and more cautious in their oversight (Abobakr & Elgiziry, 2015). They tend to assess risks more closely, demand information transparency and clear decision-making processes, thereby providing better control, improving board effectiveness and building trust with creditors (Adam & Ferreira, 2009). When combined with a larger board, women are not the sole decision-makers but the ones who act as a check-and-balance mechanism, ensuring that debt is used efficiently and transparently. In risk-related decisions, they can play a supervisory role, providing prudential perspectives that complement the strategic ideas of other members. This collaborative dynamic enhances the quality of board deliberation, leads to a greater push for contributions to ensure that borrowing is used efficiently in a more

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controlled, considered and rational manner. Therefore, the presence of gender diversity increases the positive impact of board size on leverage. This result is consistent with previous literature of Bokpin and Arko (2009), Zaid et al. (2020) and Amin et al. (2022), which found that the presence of female directors enhances the association of the board size and financial decisions.

In contrast,the interaction between board independence and female directors and the interaction between board nationality diversity and female presence on the board exhibitthe negative beta coefficient and the p-values are higher than 10%. Therefore, we reject hypothesis H4b and H4c

5. Conclusion

In the context of enterprises increasingly paying attention to corporate governance as a fundamental factor in creating sustainable value, this study provides important theoretical and practical contributions revolving around the relationship between the characteristics of the Board of Directors and capital structure decisions, one of the key financial decisions of enterprises.

Academically, this study expands the contribution to existing literature. First, by focusing on listed companies in the Ho Chi Minh Stock Exchange (HOSE), this paper will contribute to a deeper understanding of the relationship between board characteristics and capital structure, particularly in the context of an emerging market like Vietnam, where corporate governance structures and financing decisions may differ significantly from those in developed economies. This addresses an existing gap in the literature, as limited studies have examined the intersection of board composition and capital structure in Vietnam's unique regulatory and financial environment. While most previous studies have focused on developed economies, this study adds a new perspective by examining the role of three main characteristics of the board of directors – size, independence and nationality diversity – in shaping the capital structure of enterprises. The combined application of Agency Theory and Resource Dependence Theory has helped clarify the dual role of the board of directors in monitoring the behavior of managers and supporting enterprises in accessing external financial resources. In addition, the special point of the study is the inclusion of gender – specifically the presence of women on the board of directors – as a moderator in the analytical model. Rather than looking at the individual impact of women, the study shows that when women are present on a large or highly independent board, they not only play a risk control role, but also contribute to improving the efficiency of using debt in a reasonable and controlled manner. This further clarifies the mechanism of "healthy positive impact" – where women do not increase leverage at all costs, but help businesses maintain optimal leverage levels to maximize corporate value. This is a new theoretical contribution, clearly demonstrating the positive role of women in an effective governance environment.

Second, this study highlights how diverse leadership shapes corporate financing decisions by examining the moderating role of gender diversity over the recent period from 2019 to 2023. The findings will not only contribute to academic literature but also offer valuable perspectives on the importance of diversity in boardrooms and its implications for financial stability, and capital structure optimization.

In terms of practice, the study's findings have practical implications for multiple stakeholders. The results of this study provide many valuable implications. For companies, managers can leverage these insights to design more effective board structures that align with optimal capital structure strategies by focusing on

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designing a board of directors with a reasonable size, with the participation of independent members and women is the right direction to enhance financial reputation and expand access to loan sources with more favorable conditions. There needs to be a balance between genders on the board of directors. For investors and creditors, these factors can also be used as signals to assess the quality of governance and the level of risk of the enterprise in investment and lending decisions. For policy makers, this study is the basis for considering issuing policies to encourage gender diversity on the board of directors, not only for the purpose of equality but also for the practical financial benefits that this factor brings. They also be careful because too much diversity of nationality and gender can lead to negative relationships.

In summary, this study not only contributes to the theoretical literature on corporate governance and corporate finance but also provides useful suggestions for designing appropriate governance mechanisms in the context of the Vietnamese market and similar developing countries.

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REPURPOSING LARGE LANGUAGE MODELS AS DEFENSIVE TOOLS AGAINST AI-GENERATED CYBER THREATS

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Abstract
Large language models (LLMs) such as GPT-4 are increasingly misused to generate phishing messages, malware, and automated exploits. This dual-use dilemma arises from their ability to produce highly contextual, convincing content with minimal user input. While current safeguards are fragmented and insufficient, this paper explores the potential of LLMs to serve as defensive tools. It examines their use in detecting and classifying malicious content, analyzing contextual intent, and supporting real-time threat mitigation. Through architectural innovations, explainable AI, and federated learning frameworks, LLMs can be repurposed for proactive cybersecurity. Challenges such as false positives, adversarial manipulation, and regulatory gaps are addressed, and recommendations for ethical enforcement and cross-platform standards are provided. This study contributes to the growing literature on trustworthy AI by proposing a framework for the responsible use of LLMs in mitigating AI-generated cyber threats.

Keywords: *Large Language Models (LLMs),AI-generated threats, phishing detection, explainable AI (XAI),cybersecurity automation, adversarial prompts, federated learning*

Introduction

Developing large language models (LLMs), including GPT-4, Claude, and PaLM, has brought revolutionary opportunities to various sectors, including education and research, customer service, and cybersecurity. These models utilize extensive neural architectures and internet corpora training to produce human-like text while solving complex problems and handling multiple use cases (OpenAI, 2023; Google DeepMind, 2024). The capability to generate text has created a dual-use problem because the same technology that drives innovation can be used to automate nefariousactivities.

Recent developments have demonstrated the growing misuse of LLMs in cyber threats. The models have become more popular among attackers who use them to create realistic phishing emails, polymorphic malware code, and automated social engineering tactics at a large scale (Afane et al., 2024; Nassi et al., 2023). The use of LLMs in phishing and malware creation differs from traditional methods because it does

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not require technical expertise or manual effort to generate harmful content with a few well-crafted prompts (Roy et al., 2023). The misuse of LLMs is made worse becausemany open-source or loosely governed LLMs lack sufficient safeguards, making it easier for malicious content to be generated and harder to trace (Bubeck et al., 2023).

The increasing dangers of AI systems continue to exist because there are insufficient standardized protection measures and ethical oversight systems across AI platforms. Current safety measures, such as content filtering and prompt moderation, vary widely by provider and often rely on opaque, proprietary models of harm detection that may not scale or generalize effectively (Anthropic, 2024; Vincent, 2023). Furthermore, the pace of LLM deployment has far outstripped the development of regulatory frameworks, raising urgent questions about how these tools can be aligned with principles of safety, accountability, and human oversight (Floridi & Cowls, 2023).

While much of the current discourse focuses on the dangers posed by malicious LLM usage, an emerging research question invites a more optimistic perspective: Can LLMs themselves be employed to detect and classify generated content as potentially malicious or benign? This question reframes LLMs as a source of risk and a potential line of defense. The detection of threats created by LLMs becomes possible through their contextual understanding, linguistic abilities, and adaptability, which enables them to function as an intelligent, scalable safeguard system for digital environments (Cao & Yang, 2023; Shen et al., 2023).

This research demonstrates that LLMs have major misuse potential, yet they can also serve as defensive tools to detect and control AI-assisted cyber threats. The research investigates the current threat environment, existing protection barriers, and LLM detection capabilities to create a basis for self-regulating AI cybersecurity systems. The research adds to trustworthy AI literature by providing a framework for responsible innovation deployment in critical fields like cybersecurity.

Background

Overview of Large Language Models (LLMs)

The natural language processing field has experienced a revolution by using large language models (LLMs), GPT-4, Claude, and PaLM, because they utilize transformer-based architectures to process vast internet corpora. The models demonstrate the ability to produce coherent text while answering complex questions, summarizing content, and writing code, which makes them versatile tools for various applications (Touvron et al., 2023; Google DeepMind, 2024). The models' capacity to understand and produce language with contextual nuance has created new possibilities in AI, yet they present unanticipated risks.

The growing availability of models through open APIs and open-source platforms has raised worries about their improper use. According to Bubeck et al. (2023), the early indications of reasoning ability and general intelligence-like behavior in GPT-4 have led to demands for enhanced oversight. The rapid spread of this technology exceeds the development of ethical and regulatory standards, especially concerning cybersecurity applications.

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Misuse of LLMs in Cybersecurity Contexts

The main danger of LLMs is their potential misuse for harmful activities. The rise of LLMs has enabled cybercriminals to develop convincing phishing emails, automated social engineering scripts, and polymorphic malware code (Afane et al., 2024; Nassi et al., 2023). These models have made it easier for attackers to execute complex cyberattacks because they have reduced the technical requirements for such operations.

Roy et al. (2023) highlight how LLMs can be manipulated using adversarial prompts to create phishing messages that mimic legitimate business correspondence. Koide et al. (2023) show that ChatGPT can be used to generate URLs for fake login pages and social engineering payloads. These capabilities enable attackers to scale their operations and personalize attacks quickly and accurately.

Another threat vector is the creation of malware scripts. LLMs have been shown to generate working exploit code in programming languages such as Python and PowerShell. Refining code through iterative prompts allows attackers to bypass basic static detection systems and tailor malware for specific environments (Nassi et al., 2023).

Current Safeguards and Their Limitations

Several AI platform providers have implemented safety measures such as prompt filtering, response moderation, and refusal strategies in response to these risks. The OpenAI GPT-4 system card demonstrates different alignment mechanisms alongside red-teaming efforts for misuse prevention (OpenAI, 2023). The safeguards implemented between vendors show significant variations, while their operational effectiveness remains unpredictable.

Vincent (2023) states that GPT-4 generates dangerous responses when users provide creative or indirect prompts. Zhang et al. (2024) analyze prompt injection and jailbreak attacks, demonstrating how adversaries can obtain harmful content from models with built-in safeguards.

Open-source LLMs, including LLaMA (Touvron et al., 2023), introduce extra risks because they operate outside centralized control. The open development process provides transparency and innovation, yet it creates conditions for threat actors to modify safety parameters or eliminate protective features.

Ethical Considerations

The dual-use characteristics of LLMs create fundamental ethical challenges. These tools enable knowledge democratization and productivity support, but threat actors can exploit them for destructive purposes. Floridi and Cowls (2023) establish a single ethical framework to regulate AI deployment that requires transparency, accountability, and human oversight.

Weidinger et al. (2022) identify social and ethical risks of LLMs through three main categories, which encompass misinformation alongside bias and malicious usage. The risks in cybersecurity become most severe because the resulting damage occurs quickly, while being measurable and extensive.

Brundage et al. (2023) advocate for proactive AI technology governance through scenario planning and policy measures that address new threats before they gain momentum. The authors emphasize the requirement of government collaboration with AI developers and cybersecurity experts to create resilient defense systems against LLM-enabled cyber threats.

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Despite these recommendations, there remains a significant lag between AI innovation and the implementation of comprehensive policy responses. The regulatory frameworks, including GDPR and sector-specific guidelines, fail to adequately protect LLMs' unique capabilities and risks (Shevlane et al., 2022). The cybersecurity community must explore technological solutions that follow ethical imperatives until robust cross-platform standards become available.

Summary

This background reveals that LLMs are technological innovations that create distinctive cybersecurity threats. Their dangerous applications in phishing, malware development, and social engineering attacks demonstrate the need for protective measures. At the same time, the limitations of current defenses and the lagging ethical frameworks require that the cybersecurity community rethink how LLMs are governed, deployed, and potentially used to defend against the threats they enable.

Discussion

LLMs as Classifiers of Malicious Content

Moreover, as LLMs are further developed to classify content, they can be tailored to identify industry-specific threats. For instance, a financial-sector LLM could be trained to detect fraudulent wire instructions or impersonations of bank officers. At the same time, one used in healthcare could flag unauthorized data access or social engineering attempts targeting electronic health records (EHRs). As more sectors adopt LLM-driven workflows, this specialization will become increasingly important to maintain relevance and operational effectiveness across domains.

LLMs are not just passive generative tools but can play an active role in identifying threats. Using natural language understanding capabilities, they can analyze nuanced phrasing, syntax patterns, and context to determine intent behind user inputs. The analytical function is an initial triage system that detects suspicious messages before human analysts receive alerts about potential threats. These classifiers function as interface-layer interceptors to detect harmful commands when applications receive user input.

Large language models (LLMs) can understand and create sophisticated language, enabling them to operate as classifiers that detect harmful content. LLMs can be transformed to analyze input and output semantics and intent to detect harmful use cases. These include detecting phishing messages, spam, social engineering attempts, and even embedded code with harmful intent. Shen et al. (2023) and Cao and Yang (2023) demonstrate that LLMs fine-tuned on phishing datasets can successfully classify malicious communication patterns by detecting urgency cues, deceptive tone, and domain spoofing.

The system operates with static datasets, but its capabilities can be expanded through dynamic learning methods. LLMs are adaptive threat detection systems when deployed in security operations centers (SOCs) because they learn from operational data. The system accepts new threat intelligence data in real time while human analysts create feedback loops to enhance future classification decisions. This is particularly beneficial in environments where evolving adversary tactics render traditional detection approaches obsolete within weeks.

Training LLMs on updated datasets that include adversarial samples and threat intelligence reports can further enhance these dynamic capabilities. The continuous fine-tuning process enables LLMs to acquire

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knowledge about emerging attack vectors. The models gain operational knowledge through reinforcement learning from human feedback (RLHF), allowing them to improve their classifications during successive deployments.

Additionally, LLMs can evaluate contextual metadata such as sender identity, behavioral history, or recipient permissions. For example, an email requesting password reset credentials might be benign from an IT administrator but suspicious from a third-party vendor. Contextual intelligence allows LLMs to distinguish between syntactically similar yet semantically different inputs.

Explainability remains a significant concern. Misclassification risks exist, over-blocking legitimate communication and under-blocking real threats. Wang et al. (2023) argue that integrating explainable AI (XAI) tools—such as token attribution, feature relevance visualization, and rule-based tracing—improves analyst trust and supports real-time investigative decision-making. Without interpretability, even accurate systems risk being sidelined due to operational opacity.

This need for transparency is especially critical in high-stakes environments, such as government networks or healthcare systems, where decision accountability is mandated. Explainable outputs support compliance and audit processes and enable better collaboration between automated systems and human decision-makers. Analysts are more likely to rely on AI-generated alerts if they understand their rationale.

Architecture for Self-Regulating LLMs

Self-regulating LLMs must also consider system interoperability and compliance. For instance, LLMs deployed in multinational corporations must deal with various legal frameworks such as GDPR in Europe and HIPAA in the U.S., each requiring different levels of data transparency and privacy protection. Embedding rule-based logic for these compliance obligations into the model's regulatory architecture ensures ethical alignment and reduces the risk of regulatory breaches. Another avenue involves incorporating real-time risk scoring mechanisms, which evaluate the probability and impact of a given response being harmful and adjust moderation levels accordingly.

LLMs must be designed with embedded regulatory structures to prevent malicious content generation while enabling useful applications. Bergeron et al. (2023) propose a conscience-based alignment framework, embedding ethical constraints during model training. These constraints limit the LLM's behavior in ways that prevent adversarial misuse, even when attackers use obfuscation or indirect commands.

Pisano et al. (2023) further outline a layered defense model, which includes pre-input validation, in-session prompt inspection, and post-generation filtering. Each layer operates with its own safety logic and escalation thresholds. For instance, if an input resembles known exploit instructions or aligns closely with flagged prompt clusters, it may be auto-blocked or routed for human moderation. This segmentation increases resilience while minimizing single points of failure.

Ghosh and Basu (2023) emphasize the importance of context sensitivity, advocating for models that respond differently based on user role, organizational policy, and risk environment. A cybersecurity analyst using an LLM for threat simulation should not encounter the same restrictions as a general user querying for software advice. Integrating identity and access management (IAM) tools allows LLMs to apply different moderation parameters dynamically depending on the context.

Another critical feature of self-regulating architectures is auditability. Events where prompts are blocked,

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moderated, or allowed should be automatically logged with metadata such as user ID, session context, and rationale. This audit trail supports post-incident reviews and contributes to model improvement through anomaly tracking and pattern recognition.

Detection Techniques

Another detection enhancement involves ensemble learning, where LLM outputs are cross-validated by multiple models trained on different datasets or using alternative architectures. This redundancy ensures that outlier or adversarial responses are more likely to be caught and flagged. Additionally, anomaly detection can be improved by integrating natural language inference (NLI). This allows the system to reason through the logical consistency of prompt-response pairs and identify intent mismatches that often precede malicious activity.

LLMs used for defense must be capable of detecting subtle malicious intent hidden in prompts and outputs. Traditional keyword spotting is insufficient; more advanced detection methods are required. Zhang et al. (2024) emphasize the importance of prompt structure analysis, particularly for injection attacks where adversaries append commands that subvert the model's original instructions.

Kumar and Chang (2023) propose prompt-aware scoring systems based on multi-factor risk assessment. These systems calculate a composite risk score by analyzing token patterns, semantic weight, history of misuse, and user session data. They adapt thresholds dynamically based on security posture—for example, an LLM used in a banking environment may enforce stricter controls than one used in a sandboxed research setting.

Reinforcement learning approaches introduced by Madani et al. (2023) allow the model to self-improve through reward-based feedback. Harmful completions are penalized while accurate threat classifications are rewarded, enabling model refinement in real-world deployments. Such continuous improvement cycles can be enhanced with adversarial training, where the model is challenged with intentionally deceptive inputs to improve robustness.

Zhang and Lin (2024) advocate for federated learning frameworks to scale threat detection without compromising privacy. Multiple organizations can collaboratively train detection models on their local data while sharing only aggregated updates. This results in highly generalizable detection models that benefit from diverse threat landscapes without exposing proprietary information.

Use Cases and Implementation Examples

Government agencies have also started exploring LLMs for threat detection and intelligence synthesis. For example, some agencies use LLMs to parse social media, dark web chatter, and technical threat intelligence feeds, generating concise reports on potential coordinated cyberattacks. These systems reduce analyst workload while accelerating threat response. In the private sector, cybersecurity startups leverage LLMs to provide automated penetration testing reports, guiding companies on unpatched vulnerabilities, weak configurations, and exploit simulations—functions traditionally carried out manually by red teams.

LLMs as cybersecurity tools have already seen practical applications across multiple domains. Roy et al. (2023) describe a phishing detection system embedded into enterprise email gateways. It analyzes incoming messages for impersonation attempts, suspicious links, and tonal anomalies such as excessive urgency. The system reduces false positives and negatives when paired with user behavioral baselines.

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Koide et al. (2023) applied LLMs to detect phishing websites. By reading HTML and evaluating semantic markers like fake login prompts, they trained models to compute trustworthiness scores for domains. This enables browsers and endpoint detection tools to warn users in real time, preventing engagement with harmful web infrastructure.

Nassi et al. (2023) developed a model that reviews code snippets, particularly in scripting languages like PowerShell and Python, identifying patterns associated with obfuscation, exfiltration, and lateral movement. Integrated with endpoint detection and response (EDR) systems, these LLMs can autonomously quarantine suspect code before execution.

Commercial vendors also deploy LLMs for SOC automation. In addition to detection, they help analysts generate incident reports, summarize complex alerts, and suggest response actions. The system enables junior analysts to address complex incidents that previously required senior staff intervention through LLM-generated guidance.

Challenges and Limitations

Another limitation is model brittleness when exposed to novel attack types. Zero-day exploits or newly discovered malware often contain linguistic and behavioral characteristics outside the model's learned experience. Addressing this requires integrating real-time threat feeds and developing rapid retraining frameworks. Moreover, the challenge of adversarial prompt chaining—where benign-looking inputs evolve through multi-step interactions into harmful outputs— presents an emerging frontier in LLM safety research. Session-level context tracking and conversational memory constraints must be integrated into LLM defense systems to counter this.

The defensive cybersecurity tools based on LLMs encounter multiple significant challenges and limitations. The main challenge with LLMs is the occurrence of false-positive results. Detection models that are too sensitive produce excessive false alarms about normal activities, creating alert fatigue for analysts. The security team's overall effectiveness decreases because of alert fatigue. Wang et al. (2023) highlight the need to adjust LLM-based detector precision for better noise reduction while preserving high sensitivity to actual threats.

False negatives also pose a serious concern. Malicious actors continuously innovate, developing adversarial prompts that appear innocuous on the surface but produce harmful outputs. Tayouri (2025) warns that current vector-based semantic detectors are particularly vulnerable to such evasions. For example, attackers may substitute synonyms or rephrase commands to bypass keyword-level detection, exploiting weaknesses in token embeddings. To mitigate this, continuous adversarial testing and red-teaming exercises are essential.

Another limitation is the difficulty of balancing model strictness with usability. Shevlane et al. (2022) note that over-restrictive moderation can block legitimate educational, testing, or research activities. Academic environments require this approach because cybersecurity training in these settings involves simulation and malware analysis. HITL systems that enable expert review and override functions help address this challenge by offering flexibility without compromising safety.

Furthermore, deploying and maintaining secure LLMs can be resource-intensive. Fine-tuning models, continual training updates, and running real-time moderation pipelines demand substantial computational

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power and engineering effort. Smaller organizations may lack the infrastructure or expertise required. Scalable solutions such as cloud-based inference services or model distillation can reduce costs by offloading heavy computation to specialized platforms.

Standardization and Enforcement

The urgency for enforceable standards is further magnified by the increasing deployment of open-source LLMs, which may lack embedded safeguards. Coordinated policy development can help mandate baseline safety practices across providers, such as requiring disclosure of safety filters or enabling opt-in content tracing for forensic audits. Furthermore, digital watermarking of LLM outputs could serve as a mechanism to track misuse or identify malicious repurposing of generated content across platforms. These emerging tools would complement regulatory oversight by enhancing technological traceability.

A major barrier to the effective deployment of LLMs for cybersecurity is the lack of cross-platform standards and enforcement protocols. Benishti (2023) underscores that AI providers vary widely in implementing safety measures. Some use rigorous prompt filtering, while others offer minimal oversight, creating inconsistencies that attackers can exploit by shifting between platforms.

Zaric (2024) points out that malicious content is context-dependent. A penetration testing environment allows vulnerability exploitation, but this practice remains invalid for open forums. Implementing enforcement mechanisms risks becoming too lenient or overly restrictive when contextual understanding is lacking. Adaptive governance structures that can read situational cues represent an essential requirement.

Ahmed and Rehman (2024) propose that explainable AI systems should be integrated into regulatory oversight systems. Auditors can use this system to understand moderation decision-making processes while verifying that ethical guidelines are consistently applied.

Establishing transparent systems remains crucial for users and regulators to develop mutual trust. The development of worldwide standards for LLM governance needs active collaboration between governments, private industry, and academic institutions. The establishment of foundational initiatives comes from organizations including NIST, ISO, and OECD. These organizations should establish standardized criteria for safety, fairness, and robustness. The EU AI Act and the U.S. AI Bill of Rights should receive legislative alignment with established benchmarks to achieve regulatory compliance and legal harmonization.

Summary of Key Contributions

In addition to identifying current LLM capabilities and limitations, this paper highlights a growing need for interdisciplinary collaboration among technologists, policymakers, and domain experts. The future effectiveness of LLMs in cybersecurity depends not only on technological progress but also on sustained human oversight and adaptive governance. Research must continue to explore hybrid models, integrating symbolic reasoning and traditional AI to mitigate hallucinations and false positives. This synergistic approach will likely yield more robust and reliable systems that can evolve with the threat landscape.

This discussion has examined the evolving role of LLMs in cybersecurity, specifically their emerging capacity to serve as defensive tools. Drawing on recent studies and implementation case studies, it is evident that LLMs can be fine-tuned and aligned to detect phishing attempts, adversarial prompts, and exploit code. Their ability to perform contextual analysis and generate human-readable assessments enhances operational efficiency in real-time environments.

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Architectural innovations such as conscience-based alignment, multi-layer moderation, and identity-aware prompt filtering offer robust defense against misuse. Additionally, technical advancements in detection—including prompt-aware scoring, reinforcement learning, and federated collaboration—demonstrate the potential for scalable, privacy-preserving deployment across sectors.

Use cases in email filtering, phishing site detection, and malware classification show the viability of these models in live environments. Vendors and security teams already see value in LLM-augmented workflows, particularly for automating triage and reporting.

Precision, adversarial resilience, operational cost, and usability challenges persist. Without comprehensive policy frameworks and regulatory enforcement, adoption may remain fragmented. Future progress depends on collaborative standards, transparent auditability, and the responsible integration of human oversight.

Ultimately, LLMs represent a paradigm shift in the threat landscape and the defense response. Responsible use of their capabilities will be essential to transform them from liabilities into assets, ensuring they enhance rather than degrade cybersecurity systems.

Conclusion

Large language models (LLMs) represent one of the most critical dual-use challenges cybersecurity faces today.On one hand, LLMs are capable of remarkable feats—understanding language context, generating intelligent responses, and supporting critical operations across domains. On the other hand, they can be exploited by malicious actors to create phishing content, malware scripts, and social engineering exploits with unprecedented realism and scale (Afane et al., 2024; Roy et al., 2023). This paper has examined the growing threat of such misuse and proposed a proactive response: repurposing LLMs as defensive tools capable of classifying and neutralizing malicious content.

The discussion emphasized that when fine-tuned with threat intelligence and contextual awareness, LLMs can detect phishing messages, flag adversarial prompts, and identify code sequences indicative of exploits (Shen et al., 2023; Nassi et al., 2023). Their linguistic fluency allows them to understand subtle cues such as tone, urgency, and implied deception—traits that traditional rule-based systems often overlook. Architectures incorporating ethical alignment mechanisms, such as conscience-based frameworks and multi-layer moderation systems, offer scalable models for embedding safeguards directly into LLM pipelines (Bergeron et al., 2023; Pisano et al., 2023).

Advanced detection techniques like reinforcement learning, prompt-aware scoring, and federated learning enhance the adaptability and precision of LLM-based defense systems (Madani et al., 2023; Zhang & Lin, 2024). Real-world applications, from phishing email screening to exploit code identification, validate the feasibility of using these models in security operations centers and endpoint detection platforms (Koide et al., 2023; Ghosh & Basu, 2023). Moreover, LLMs can assist with incident triage by generating readable summaries, recommending responses, and supporting less experienced analysts in high-pressure environments.

Despite their promise, challenges persist. False positives can overwhelm security teams, while adversarial attacks may evade detection through semantic manipulation (Wang et al., 2023; Tayouri, 2025). Over-restriction may limit legitimate use, and the computational burden of continual retraining can be

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prohibitive for smaller organizations. The existing limitations require human-in-the-loop (HITL) strategies and transparent governance mechanisms.

A particularly critical gap remains in standardization and ethical enforcement. Current platform-specific safeguards are inconsistent, and there is no universally accepted benchmark for evaluating the safety and responsibility of LLM deployments (Benishti, 2023; Ahmed & Rehman, 2024). Cross-sector collaboration is essential to develop shared protocols, contextual risk models, and audit mechanisms that ensure effective and ethically aligned LLMs.

In conclusion, while LLMs undeniably introduce new risks into the cybersecurity ecosystem, they represent a transformative opportunity for defensive innovation. By equipping LLMs with the capacity to detect, classify, and prevent harmful outputs, the cybersecurity community can turn a source of risk into a frontline asset. This goal demands technical expertise, regulatory awareness, and ethical commitment. The development of LLM capabilities demands strategies to transform them into protective agents instead of threats to digital system integrity.

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ENHANCING ORGANIZATIONAL PERFORMANCE: VITAL IN LEADING TO PROGRESSION OF HUMAN RESOURCES AND ORGANIZATIONS

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Abstract

In all types of organizations, there are individuals, belonging to all job positions in the hierarchy. All the members need to put in their best efforts in leading to up-gradation of organizational performance. They need to be well-informed in terms of their job duties and responsibilities. Furthermore, they need to augment information in terms of different types of methodologies and procedures. In addition, individuals need to inculcate the traits of morality, ethics, diligence and conscientiousness. Furthermore, there are number of other factors in terms of which individuals need to be aware of, i.e. pioneering methods and materials, resources, overall environmental conditions and so forth. In addition, emphasis needs to be put on leading to up-gradation of different types of skills and abilities. The individuals need to augment information in terms of all these factors throughout their jobs. As a consequence, they will render an important contribution in enhancing organizational performance. When the workforce is working diligently in enhancing organizational performance, they will contribute effectively in incurring the feeling of job satisfaction and retaining their jobs. Hence, bringing about improvements in organizational performance is regarded as one of the major goals of individuals, belonging to all job positions. Therefore, it is understood on a comprehensive basis that enhancing organizational performance is vital in leading to progression of human resources and organizations. The main concepts that are taken into account in this research paper are, understanding the meaning and significance of enhancing organizational performance, measures to be put into operation in enhancing organizational performance and advantages of enhancing organizational performance.

Keywords: *Abilities, Effective, Enhancing, Job Duties, Methodologies, Organizations, Organizational Performance, Skills*

Introduction

The organizations are of different types, i.e. educational institutions of all levels, training centres, production and manufacturing organizations, services organizations, financial institutions, non-government organizations, agencies and so forth. In all types of organizations, there are individuals, belonging to all job positions in the hierarchy. All members need to be committed towards enhancing organizational

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performance. In all job positions, the individuals are required to carry out number of job duties and responsibilities. These are complicated and manageable, these are implemented in less amount of time or can be more time-consuming and these are carried out on one's own or through working in collaboration and integration with other members. Furthermore, they are required to augment information in terms of techniques, which are facilitating in carrying out all types of job duties and responsibilities in a well-ordered and satisfactory manner (Hanly, 2020). Hence, it is understood on a comprehensive basis, possession of information in terms of job duties and techniques is facilitating in bringing about improvements in organizational performance. Therefore, throughout the implementation of job duties and responsibilities, the individuals are required to be well-informed in terms of different types of techniques, which would be facilitating in generating desired outcomes.

Throughout the implementation of job duties and responsibilities, individuals need to augment information in terms of various types of methodologies and procedures. These are referred to the ways of doing well in all types of job duties and responsibilities. One needs to acquire an efficient understanding of the concepts. Furthermore, one needs to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an effective manner. As a consequence, individuals will contribute in an appropriate manner in leading to up-gradation of confidence levels. Furthermore, individuals will render an important contribution in overcoming the feelings of apprehensiveness and vulnerability (Goldby, n.d.). The employers, supervisors and colleagues are individuals, who are imparting information in terms of various types of methodologies and procedures. Furthermore, individuals need to reinforce the traits of efficiency, honesty and truthfulness. These need to be honed in order to carry out various types of job duties in a well-ordered manner and generate desired outcomes. Therefore, it is well-understood, being well-versed in terms of various types of methodologies and procedures is facilitating in enhancing organizational performance.

Understanding the Meaning and Significance of Enhancing Organizational Performance

With advancements taking place and with the advent of modernization and globalization, individuals need to be well-informed in terms of various types of modern, scientific and innovative methods and materials. The individuals, belonging to all job positions in all types of organizations are making use of these methods and materials. The different types of these methods and materials are, utilization of various types of tools, devices, apparatus, equipment, machinery, gear and technologies. One needs to acquire an efficient understanding of the concepts. Furthermore, one needs to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an effective manner. As a consequence, individuals will contribute in an appropriate manner in leading to up-gradation of confidence levels. Furthermore, individuals will render an important contribution in overcoming the feelings of apprehensiveness and vulnerability.

When recruitment and selection of individuals takes place and within the course of implementation of various types of job duties and responsibilities, the individuals get enrolled in training and development programs. These are the programs, which are facilitating in augmenting information in terms of various types of these methods and materials. These are required to be put into operation in an adequate manner in

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order to carry out all types of job duties and responsibilities in an effective manner. Hence, these are facilitating in meeting the expectations of individuals in leadership positions. Therefore, individuals are able to acquire an efficient understanding of the meaning and significance of enhancing organizational performance, when information is generated regarding various types of modern, scientific and innovative methods and materials.

Within the course of putting into operation various types of job duties and responsibilities, there are occurrences of various types of problems. The areas in terms of which these are experienced are, job duties, responsibilities, methodologies, procedures, approaches, techniques, work pressure, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, unawareness in terms of various factors, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities and so forth. The influence of various types of problems is experienced in a major or minor form. Hence, individuals need to provide solutions to these in an effective manner. It is indispensable to provide adequate solutions, so the individuals are able to carry out all types of job duties and responsibilities in a successful manner.

The solutions to different types of problems are provided on one's own or through obtaining assistance and support from other members. Hence, it is of utmost significance for individuals to form cordial and amiable terms and relationships with other individuals. This is regarded essential in order to not only obtain help and support from others, but also in leading to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. As a consequence, individuals will contribute in overcoming all types of impediments within the course of doing well in all types of job duties and responsibilities and generating desired outcomes. Therefore, one is able to acquire an understanding of the meaning and significance of enhancing organizational performance, when solutions are provided to various types of problems in an appropriate manner.

The individuals, belonging to all job positions in the hierarchy are required to be well-informed in terms of ways of forming cordial and amiable terms and relationships with each other. It is apparently understood that there are some job duties and responsibilities, which are carried out on an individual basis, whereas, there are others, which are implemented through working in collaboration and integration with other members. In order to carry out this task, there are various factors in terms of which one needs to be aware, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude. As a consequence of acknowledging and implementing all these factors, one will contribute in an effective manner in carrying out this task.

As a consequence, individuals will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. This is facilitated as, through communicating with others in an effective manner, individuals will contribute in honing interest and enthusiasm levels. As a consequence, individuals will contribute in overcoming all types of impediments within the course of doing well in all types of job duties and responsibilities and generating desired outcomes. In this manner, individuals will be well-prepared in terms of ways of enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Therefore, an understanding of

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the meaning and significance of enhancing organizational performance is acquired, when cordial and amiable terms and relationships are formed with other members.

Measures to be put into operation in Enhancing Organizational Performance

An aimless life is a meaningless life. Hence, individuals, belonging to all occupations, communities and socio-economic backgrounds have different types of goals and objectives to achieve. The different aspects in terms of which these are formulated are, education, careers, employment opportunities, resources, assets, property, family, relationships, settlement, personality traits and overall standards of living. When the individuals are fortunate enough to acquire employment opportunities, they need to put in their best efforts in carrying out all types of job duties and responsibilities in a well-ordered manner. Furthermore, they will be well-prepared in terms of ways of achieving organizational goals and leading to up-gradation of overall structure of the organizations (Gangolli, Duggal, &Shukla, 2005).

Throughout the implementation of job duties and responsibilities, the individuals, belonging to all job positions in the hierarchy need to be well-informed in terms of measures that are approving in enhancing organizational performance. All types of measures are to be put into operation in a well-ordered and satisfactory manner. Furthermore, positivity needs to be reinforced in all types of measures. One of the important aspects that needs to be taken into account is, all types of measures are to be approving in leading to up-gradation of competencies and abilities among individuals to enhance their organizational performance. Therefore, measures to be put into operation in enhancing organizational performance are stated as follows:

Making Wise and Productive Decisions

Within all types of organizations, individuals in leadership positions are vested with the authority and responsibility of making wise and productive decisions in terms of various factors, i.e. recruitment and selection methods, training and development programs, job duties, responsibilities, methodologies, procedures, techniques, approaches, resources, infrastructure, amenities and facilities. On the other hand, members, belonging to all job positions need to make wise and productive decisions in terms of various factors, i.e. job duties, methodologies, procedures, techniques, materials and so forth. Within the course of putting into operation the decision-making processes, analysis needs to be conducted in terms of various types of methodologies and procedures. After the analysis is conducted, selection is made of the most favourable and worthwhile methodology and procedure. Furthermore, critical-thinking skills need to be honed. These are facilitating in putting into operation rational, logical and methodological thinking. Hence, the up-gradation of analytical and critical-thinking skills are facilitating in making wise and productive decisions in terms of various aspects.

As a consequence of making wise and productive decisions, individuals will render an important contribution in enhancing organizational performance. One of the important aspects that needs to be taken into account is, these are facilitating in making selection of alternatives, which are necessary in doing well in all types of job duties and responsibilities. Furthermore, individuals will contribute in an effective manner in generating desired outcomes. In this manner, individuals in leadership positions will be pleased. Therefore, making wise and productive decisions is regarded as one of the indispensable measures to be put into

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operation in enhancing organizational performance.

Augmenting Skills and Abilities

In all types of organizations, individuals, belonging to all job positions in the hierarchy need to put emphasis on leading to up-gradation of skills and abilities. The various types of skills that need to be honed are, communication skills, decision-making skills, time-management skills, leadership skills, negotiation skills, personal skills, presentation skills, professional skills, technical skills, creative skills, analytical skills, critical-thinking skills, artistic skills, intellectual skills and educational skills. On the other hand, abilities, which need to be honed are, convincing, persuasion, planning, organizing, directing, controlling, co-ordinating, leading, negotiating, emotional intelligence, systems thinking, possessing the abilities to work under stress, putting in efforts to one's best abilities, coping with various types of dilemmas and challenging situations in an adequate manner and carrying out all types of job duties and responsibilities in a well-organized manner. Throughout the implementation of job duties and responsibilities, the individuals need to lead to up-gradation of different types of skills and abilities.

As a consequence of augmenting various types of skills and abilities, individuals will render an important contribution in enhancing organizational performance. One of the important aspects that needs to be taken into account is, these are facilitating in doing well in all types of job duties and responsibilities, enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Furthermore, individuals will contribute in an effective manner in generating desired outcomes. In this manner, the expectations will be met of individuals in leadership positions. Therefore, augmenting skills and abilities is one of the significant measures to be put into operation in enhancing organizational performance.

Being well-informed in terms of Job Duties and Responsibilities

In all job positions, the individuals are required to carry out number of job duties and responsibilities in a satisfactory manner. These are complicated and manageable, these are implemented in less amount of time or can be more time-consuming and these are carried out on one's own or through working in collaboration and integration with other members. Furthermore, they are required to augment information in terms of techniques, which are facilitating in carrying out all types of job duties and responsibilities in a well-organized and satisfactory manner. These are the ways, which are facilitating in doing well in all types of job duties and responsibilities. Furthermore, desired outcomes will be generated.

Hence, it is understood on a comprehensive basis, possession of information in terms of job duties and techniques is facilitating in bringing about improvements in organizational performance. Hence, throughout the implementation of job duties and responsibilities, the individuals are required to be well-informed in terms of different types of techniques, which would be facilitating in doing well in these and generating desired outcomes. As a consequence, individuals will contribute in an efficacious manner in pleasing employers and supervisors. Hence, the possession of adequate information in terms of these is facilitating in incurring the feeling of job satisfaction and retaining one's jobs. Therefore, being well-informed in terms of job duties and responsibilities is an eminent measure to be put into operation in enhancing organizational performance.

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Being well-aware regarding Methodologies and Procedures

Throughout the implementation of job duties and responsibilities, individuals need to augment information in terms of various types of methodologies and procedures. These are referred to the ways of doing well in all types of job duties and responsibilities. One needs to acquire an efficient understanding of the concepts. Furthermore, one needs to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an effective manner. As a consequence, individuals will contribute in an appropriate manner in leading to up-gradation of confidence levels. Furthermore, individuals will render an important contribution in overcoming the feelings of apprehensiveness and vulnerability. These are considered to be barriers and need to be overcome in an effective manner in order to generate desired outcomes.

The employers, supervisors and colleagues are individuals, who are imparting information in terms of various types of methodologies and procedures. In addition, conducting research through utilizing various sources is facilitating in augmenting information and understanding. Furthermore, individuals need to reinforce the traits of efficiency, honesty and truthfulness. These need to be honed in order to carry out various types of job duties in a well-ordered manner and generate desired outcomes. Hence, it is well-understood, being well-versed in terms of various types of methodologies and procedures is facilitating in enhancing organizational performance. Therefore, being well-aware regarding methodologies and procedures is an expedient measure to be put into operation in enhancing organizational performance.

Utilizing Pioneering Methods and Materials

With the advent of technologies, individuals need to be well-informed in terms of various types of pioneering methods and materials. The individuals, belonging to all job positions in all types of organizations are making use of these methods and materials. The different types of these methods and materials are, utilization of various types of tools, devices, apparatus, equipment, machinery, gear and technologies. One needs to acquire an efficient understanding of the concepts. Furthermore, one needs to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an effective manner. As a consequence, individuals will contribute in an appropriate manner in leading to up-gradation of confidence levels. Furthermore, individuals will render an important contribution in overcoming the feelings of apprehensiveness and vulnerability.

When recruitment and selection of individuals takes place and within the course of implementation of various types of job duties and responsibilities, the individuals get enrolled in training and development programs. These are the programs, which are facilitating in augmenting information in terms of various types of these methods and materials. Furthermore, there is recruitment of well-qualified and competent trainers, which are facilitating in augmenting information in terms of these methods and materials. These are required to be put into operation in a satisfactory manner in order to carry out all types of job duties and responsibilities in an effective manner. Hence, these are facilitating in meeting the expectations of individuals in leadership positions. Therefore, utilizing pioneering methods and materialsis a renowned measure to be put into operation in enhancing organizational performance.

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Providing Solutions to various Problems

Within the course of putting into operation various types of job duties and responsibilities, there are occurrences of different types of problems. The areas in terms of which these are experienced are, job duties, responsibilities, methodologies, procedures, approaches, techniques, work pressure, lack of implementation of time-management skills, lack of analytical, critical-thinking and problem-solving skills, unawareness in terms of various factors, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities, peer issues, health problems and illnesses and so forth. The individuals need to provide solutions to these in an effective manner. Furthermore, these need to be prevented from giving rise to impediments within the course of carrying out all types of job duties and responsibilities in a successful manner.

The solutions to different types of problems are provided on one's own or through obtaining help from other members. Hence, it is of utmost significance for individuals to form cordial and amiable terms and relationships with other individuals. This is regarded as vital in order to not only obtain assistance and support from others, but also in leading to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. As a consequence, individuals will contribute in overcoming all types of impediments within the course of doing well in all types of job duties and responsibilities and generating desired outcomes. Therefore, providing solutions to various problems is a decisive measure to be put into operation in enhancing organizational performance.

Developing Mutual Understanding with others

The individuals, belonging to all job positions in the hierarchy are required to be well-informed in terms of ways of forming cordial and amiable terms and relationships with each other. It is apparently understood that there are some job duties and responsibilities, which are carried out on an individual basis, whereas, there are others, which are implemented through working in co-ordination with other members. In order to carry out this task, there are various factors in terms of which one needs to be aware, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; reinforcing the traits of efficiency, honesty and truthfulness; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude. As a consequence of acknowledging and implementing all these factors, one will contribute in an effective manner in carrying out this task.

As a consequence, individuals will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. This is facilitated as, through communicating with others in an effective manner, individuals will contribute in honing interest and enthusiasm levels. As a consequence, individuals will contribute in overcoming all types of impediments within the course of doing well in all types of job duties and responsibilities and generating desired outcomes. In this manner, individuals will be well-prepared in terms of ways of enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Therefore, developing mutual understanding with othersis an imperative measure to be put into operation in enhancing organizational

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performance.

Inculcating the Traits of Morality and Ethics

The individuals, belonging to all occupations, communities and socio-economic backgrounds need to inculcate the traits of morality and ethics in their personal and professional lives. Within all types of organizations, all members, belonging to all job positions in the hierarchy need to inculcate the traits of morality and ethics. These are the traits, which are facilitating in differentiating between various types of appropriate and inappropriate factors; reinforcing a constructive approach; forming positive viewpoints in terms of various factors and individuals; leading to up-gradation of motivation and concentration levels; leading to up-gradation of different types of skills and abilities; putting in efforts to one's best abilities; possessing the abilities to work under stress; promoting a normal mind-set; coping with psychological problems of anger, stress, anxiety, frustration and depression and carrying out all types of job duties and responsibilities in a well-organized and satisfactory manner. As a consequence of acknowledging and implementing these traits, individuals will contribute in an effective manner in enhancing organizational performance.

As a consequence, individuals will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. Furthermore, they will be well-prepared in terms of factors, which are facilitating in doing well in all types of job duties and responsibilities in an efficacious manner. In this manner, individuals in leadership positions will be pleased with the job performance of the workforce. Hence, these traits are regarded as vital in promoting enhancement of organizational performance. Therefore, inculcating the traits of morality and ethicsis a favourable measure to be put into operation in enhancing organizational performance.

Implementing the Traits of Diligence, Resourcefulness and Conscientiousness

Implementing the traits of diligence, resourcefulness and conscientiousness is regarded as vital for individuals, belonging to all job positions in the hierarchy. These are the traits, which are facilitating in honing analytical and critical-thinking skills; making wise and productive decisions; being well-informed in terms of job duties and responsibilities; being well-aware regarding methodologies and procedures; utilizing various types of pioneering methods and materials; leading to up-gradation of motivation and concentration levels; leading to up-gradation of different types of skills and abilities; putting in efforts to one's best abilities; possessing the abilities to work under stress; providing solutions to various types of problems and carrying out all types of job duties and responsibilities in a well-ordered and satisfactory manner. As a consequence of acknowledging and implementing these traits, individuals will contribute in an effective manner in enhancing organizational performance (Gusdorf, 2008).

As a consequence, individuals will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. Furthermore, they will be well-prepared in terms of factors, which are facilitating in doing well in all types of job duties and responsibilities in an appropriate manner. In this manner, individuals in leadership positions will be pleased with the job performance of the workforce. Hence, these traits are regarded as vital in promoting

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enhancement of organizational performance. Therefore, implementing the traits of diligence, resourcefulness and conscientiousnessis an advantageous measure to be put into operation in enhancing organizational performance.

Creating an Amiable and Pleasant Environment within Workplace

The individuals, belonging to all job positions in the hierarchy are required to be well-informed in terms of factors, which are facilitating in creating an amiable and pleasant environment within workplace. The different factors are, implementing effective communication processes; making wise and productive decisions; being well-informed in terms of job duties and responsibilities; being well-aware regarding methodologies and procedures; utilizing various types of pioneering methods and materials; leading to up-gradation of motivation and concentration levels; leading to up-gradation of different types of skills and abilities; inculcating the traits of morality and ethics; implementing the traits of diligence, resourcefulness and conscientiousness; reinforcing the traits of efficiency, honesty and truthfulness; managing financial, human, technical, material and information resources; providing infrastructure, amenities and facilities and developing mutual understanding with others. As a consequence of acknowledging and implementing these factors, individuals will contribute in a satisfactory manner in enhancing organizational performance.

As a consequence, individuals will put in their best efforts towards putting into operation various types of job duties and responsibilities. Furthermore, they will be well-prepared in terms of methodologies and approaches, which are facilitating in doing well in all types of job duties and responsibilities in an appropriate manner. In this manner, individuals in leadership positions will be pleased with the job performance of the workforce. Hence, these factors are regarded as meaningful in promoting enhancement of organizational performance. Therefore, creating an amiable and pleasant environment within workplace is a useful measure to be put into operation in enhancing organizational performance.

Advantages of Enhancing Organizational Performance

In all types of organizations, there are individuals, belonging to all job positions in the hierarchy. All members need to be committed towards enhancing organizational performance. In all job positions, the individuals are required to carry out number of job duties and responsibilities. Furthermore, throughout their jobs, they need to be well-informed in terms of various types of methodologies and procedures. The individuals need to acquire their understanding in an efficacious manner. In addition, one needs to put emphasis on leading to up-gradation of confidence levels (Hanchar, 2018). Hence, it is well-understood, augmenting information in terms of essential factors will contribute in an efficacious manner in promoting enhancement of organizational performance. This is considered to be advantageous on a comprehensive basis. Therefore, advantages of enhancing organizational performance are, promoting enhancement of career prospects; meeting the expectations of leaders; incurring the feeling of job satisfaction and retaining their jobs. These are stated as follows:

Promoting Enhancement of Career Prospects

Promoting enhancement of career prospects is regarded as one of the major goals of individuals, belonging

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to all job positions in the hierarchy. In order to achieve this goal, individuals need to be well-equipped in terms of their job duties and responsibilities. Furthermore, they are required to augment information in terms of various types of techniques, which are facilitating in carrying out all types of job duties and responsibilities in a well-organized and satisfactory manner. In addition, it is necessary for individuals to be well-informed in terms of traits of morality, ethics, diligence and conscientiousness. These need to be reinforced in order to carry out all types of tasks and activities in a well-ordered manner. Hence, it is necessary for all individuals to be well-prepared in terms of various types of competencies and abilities. As a consequence of acknowledging and implementing essential factors, individuals will contribute in promoting enhancement of career prospects. Therefore, promoting enhancement of career prospects is regarded as one of the indispensable advantages of enhancing organizational performance.

Meeting the Expectations of Leaders

As a consequence of generating information in terms of all the factors, which are facilitating in enhancing organizational performance, individuals will put in their best efforts in meeting the expectations of individuals in leadership positions. As a consequence of augmenting various types of skills and abilities, individuals will render an important contribution in enhancing organizational performance. One of the important aspects that needs to be taken into account is, these are facilitating in doing well in all types of job duties and responsibilities, enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Furthermore, individuals will contribute in an effective manner in generating desired outcomes. In this manner, the expectations will be met of individuals in leadership positions. Therefore, meeting the expectations of leaders is one of the significant advantages of enhancing organizational performance.

Incurring the feeling of Job Satisfaction

As a consequence of enhancing organizational performance, individuals will generate information regarding all the factors which are facilitating in incurring the feeling of job satisfaction. The different types of factors are, implementing effective communication processes; making wise and productive decisions; being well-informed in terms of job duties and responsibilities; being well-aware regarding methodologies and procedures; utilizing various types of pioneering methods and materials; leading to up-gradation of motivation and concentration levels; leading to up-gradation of different types of skills and abilities; inculcating the traits of morality and ethics; implementing the traits of diligence, resourcefulness and conscientiousness; reinforcing the traits of efficiency, honesty and truthfulness and carrying out all types of tasks and activities in a well-organized manner. As a consequence, individuals will render an important contribution in incurring the feeling of job satisfaction. Therefore, incurring the feeling of job satisfaction is an eminent advantage of enhancing organizational performance.

Retaining their Jobs

The individuals, belonging to all job positions in the hierarchy are required to be well-informed in terms of factors, which are facilitating in retaining their jobs. In order to retain one's jobs, individuals need to be

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well-informed regarding certain factors, i.e. honing analytical and critical-thinking skills; making wise and productive decisions; being well-informed in terms of job duties and responsibilities; being well-aware regarding methodologies and procedures; utilizing various types of pioneering methods and materials; leading to up-gradation of motivation and concentration levels; leading to up-gradation of different types of skills and abilities; putting in efforts to one's best abilities; possessing the abilities to work under stress; providing solutions to various types of problems and carrying out all types of job duties and responsibilities in a well-ordered and satisfactory manner. As a consequence of enhancing organizational performance, individuals will generate information regarding all these factors. Therefore, retaining their jobs is expedient advantage of enhancing organizational performance.

Conclusion

Enhancing organizational performance is essential for all members in all types of organizations. Measures to be put into operation in enhancing organizational performance are, making wise and productive decisions, augmenting skills and abilities, being well-informed in terms of job duties and responsibilities, being well-aware regarding methodologies and procedures, utilizing pioneering methods and materials, providing solutions to various problems, developing mutual understanding with others, inculcating the traits of morality and ethics, implementing the traits of diligence, resourcefulness and conscientiousness and creating an amiable and pleasant environment within workplace. Enhancing organizational performance is advantageous to workforce and overall organizations. Finally, it can be stated, enhancing organizational performance is facilitating in promoting well-being of workforce and organizational structures.

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GLOBAL ECONOMIC POLICY UNCERTAINTY AND CORPORATE RISK-TAKING UNDER THE MODERATING EFFECT OF STATE OWNERSHIP: EMPIRICAL EVIDENCE FROM NON-FINANCIAL FIRMS LISTED ON HOSE IN VIETNAM

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Abstract

This study investigates the effect of Global Economic Policy Uncertainty (GEPU) on corporate risk-taking behaviors, with a particular focus on the moderating role of state ownership. Using a panel dataset of 347 non-financial firms listed on the Ho Chi Minh Stock Exchange (HoSE) over the 2019–2023period and employing the Fixed-Effect Model (FEM), the study finds that GEPU does not have a statistically significant impact on risk-taking. However, the interaction between GEPU and state ownership is negative and significant, indicating that state ownership strengthens the negative influence of GEPU on corporate risk-taking. This result implies that firms with a higher level of state ownership tend to adopt much more cautious strategies in response to global uncertainty, possibly due to government oversights, access to state resources, and long-term stability objectives.Additionally, firm-specific factors such as size, leverage, and profitability are found to be negatively associated with risk-taking, while sales growth has a positive effect. These results highlight the importance of both external uncertainty and internal characteristics in shaping risk-taking behaviors. These findings also underline the roles of ownership structure and firm-specific factors in influencing corporate reactions to global uncertainty in the Vietnamese setting.

Keywords: *Global economic policy uncertainty, corporate risk-taking, state ownership, Vietnamesecompany*
JEL Classifications: G32, G38, E60

1. Introduction

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Economic policy uncertainty (EPU) has become a surging area of research in financial and economic analysis due to its robust implications on business decision-making, investment decisions, and financial stability. Policymakers, investors, and business leaders closely monitor the dynamics in economic policies since unexpected changes may create uncertainty in business conditions and financial markets. Baker et al. (2016) develop the Economic Policy Uncertainty (EPU) Index, which has largely been used as a proxy for the level of economic policy uncertainty. They find that higher EPU negatively impacts corporate investments and financial risk-taking, particularly in less stable regulatory environments of emerging economies.

Corporate risk-taking is a significant factor that determines the growth potential and financial well-being of a company. Strategic investment choices, merger and acquisition decisions, leveraging, and entering new markets constitute the risk-taking behavior. Companies have the tendency to modify their risk-taking approach on the basis of exogenous economic environments, i.e., policy uncertainty. There is empirical evidence to demonstrate that the higher level of EPU causes firms to be more willing to have conservative financial policies, delay investment plans, reduce capital spendings, and avoid high-risk projects (Gulen & Ion, 2016; Wang et al., 2014). However,other studies suggest that policy uncertainty might encourage risk-taking behaviors since firms try to exploit uncertain market environments and achieve short-run financial returns (Zhang et al., 2021).

A crucial aspect of corporate risk-taking is state ownership—a factor that influences how firms respond to economic uncertainty. State-owned enterprises (SOEs) often benefit from government backing, preferential financing, and policy-driven incentives, which can lead to either more aggressive risk-taking or risk-averse behaviors, depending on the economic climate and political landscape (Boubakri et al., 2013; Yu et al., 2022). In Vietnam, SOEs play a dominant role in the economy, accounting for a significant share of national GDP and capital allocation. The Vietnamese government's regulatory policies strongly influence corporate governance, investment strategies, and risk appetite among SOEs. However, the interaction between state ownership and EPU in shaping corporate risk-taking remains an underexplored area in financial research, particularly in the context of Vietnam's emerging economy.

In this study, we investigate the influence of global economic policy uncertainty (GEPU) on corporate risk-taking in Vietnam and examine whether state ownership moderatesthis relationship, using a sample of 347 Vietnamese non-financial firms listed on the Ho Chi Minh Stock Exchange (HoSE) during the period from 2019 and 2023. To the best of our knowledge, this study is the first to examine the effect of global economic policy uncertainty on Vietnamese corporate risk-taking. Moreover, there are very few studies investigating the moderating effect of state ownership on the GEPU's impact on corporate risk-taking.Most existing studies focus on developed markets, such as the United States, China, and European nations (Li & Bai, 2023; Wen et al., 2021), leaving a significant research gap regarding how firms in Vietnam react to policy uncertainty and whether state ownership amplifies or mitigates this effect.Therefore, ourresearch is expected to provide some implications on the role of ownership structure as well as governance that can help firms be better governed and develop a good risk-management practice in times of economic and political uncertainty.

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The remainder of this paper proceeds as follows. Section 2 presents a brief overview of the literature and develops hypotheses. Section 3 outlines the data and methodology. Section 4 analyzes and discusses the empirical results. Section 5 concludes this paper and offers some recommendations.

2. Literature review and Hypothesis development

2.1. Theories of risk-taking behavior

2.1.1. Prospect theory

Prospect Theory, introduced by Kahneman and Tversky (1979), presents analternative model that better aligns with real-life decision making under uncertainty, particularly in business risk-taking behavior. Under this theory, businesses, when faced with possible losses relative to a reference point (i.e., past profits or peer benchmark), take excessive risks to recover losses. Empirical data supports this framework. Breuer et al. (2014) present the place of loss aversion in business dividend policies across 32 countries, finding that loss-averse investors desire greater dividends while patient investors desire fewer. Similarly, Teece and Pisano (2018) explore applications and challenges of the theory in strategic management and organizational behavior and point out its relevance as well as complexity in management research.

2.1.2. Theagency theory

Agency Theory, developed by Jensen et al. (1976), targets conflicts that result from the divergence of ownership and control within firms, wherein managers (agents) can pursue self-interests at the expense of shareholders (principals). Monitoring and bonding mechanisms are essential to reconcile these interests and minimize agency costs. Ownership structure plays a fundamental concern: concentrated ownership can enhance firm performance via aligning manager-shareholder incentives (La Porta et al., 1999), but there is still the risk of power abuse by controlling shareholders at the expense of minority ones (Shleifer &Vishny, 1997). When ownership is dispersed, external governance tools such as boards and auditors are used to resolve agency problems (Fama& Jensen, 1983). The effect of ownership on the conflicts of agency varies by legal, cultural, and market context. Recent studies (Kraakman et al., 2006; Tayeh et al., 2023) emphasize the role of institutional structures in shaping corporate governance outcomes.

2.2. The Global Economic Policy Uncertainty and Corporate Risk-taking

2.2.1. The Impact of Economic Policy Uncertainty on the Economy

Economic Policy Uncertainty (EPU) measures the uncertainty of government policies, such as monetary, fiscal, trade, and regulatory policies, and these policies significantly affect economic performance. Its effects are vast and range from investments, financial markets, inflation, to trade; and it has both positive and negative impacts on most sectors of the economy (Bloom, 2009). For example, Li and Bai (2023) show that the impact of GEPU on Chinese, U.S., and European Union manufacturing companies between 2008 and 2023 are driven by major global events such as the European debt crisis and Ukraine conflict. According to Gulen and Ion (2016), policy uncertainty negatively affects firm-level capital investments and policy makers must take into account the possible uncertainty.

Financial markets are very vulnerable to EPU.Policy changes induce volatility because investors have

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difficulties dealing with uncertainty (Baker et al., 2016). Arouri et al. (2016) document that high EPU decreases U.S. stock returns, especially when volatility is high. Bhagat et al. (2013) also record similar detrimental effects of EPU on India's GDP, fixed investment, and stock market. Monetary policy uncertainty (MPU), one of the components of EPU, also has negative impacts on firm investments by adding to managerial uncertainty and financing constraints (Husted et al., 2020).

The spillover effects of EPU are transmitted throughout the world and accompanied by trade linkages. Bhagat et al. (2013) confirm that uncertainty in policy for developed economies such as the U.S., China, and Japan lowers Thailand's macroeconomic activity, particularly exports and imports. While most research is used for developed economies, emerging markets such as Vietnam are more vulnerable due to their poorer institutions and reliance on foreign investments. The spillovereffects include capital flight, depreciation of currency, and depressed productivity growth (Abid &Rault, 2021; Aslan &Acikgoz, 2023; Balcilar et al., 2019).

In the context of Vietnam, Global EPU has damped economic growth through increasing trade deficits, reducing consumer markets, and aggravating inflationary pressures (Tam, 2018; Lam et al., 2023). Cao and Vo (2025) also prove that heightened geopolitical and policy uncertainties raise the volatility of the stock market, deterring investor confidence and capital inflows. As a highly open economy, Vietnam's exposure to external shocks accentuates the supreme importance of managing economic policy uncertainty for safeguarding sustainable growth.

2.2.2. The Impact of Global Economic Policy Uncertainty on Corporate Risk-taking

Corporate risk-taking plays a vital role in shaping a company's financial performance and growth potential (Bromiley, 1991; John et al., 2008). It represents a firm's willingness to engage in investment decisions with varying levels of risk. A higher degree of corporate risk-taking suggests a greater inclination toward high-risk projects, reflecting the company's overall risk appetite in strategic decision-making (Liu et al., 2023).

Policy-related uncertainty is widely recognized as a major factor affecting corporate investment decisions. EPU has been shown to influence firms' risk-taking behavior in both positive and negative ways. A study by Zhang et al. (2021) examines how EPU influences corporate risk-taking through the lenses of loss aversion and opportunity expectations, using data from Chinese listed companies (2003–2019). While a higher EPU makes financing more challenging, the findings reveal that it actually encourages corporate risk-taking through the development of financialization.

However, most studies suggest that EPU negatively affects corporate risk-taking as firms often respond by delaying or reducing high-risk projects to minimize potential losses. Increased EPU is associated with lower corporate risk-taking, as firms prioritize financial stability over expansion in uncertain policy environments (Wang et al., 2014). A study conducted by Wen et al. (2021) examines the impact of EPU on corporate risk-taking, using firm-level data from China spanning from 2007 to 2018. The findings indicate that EPU has a significantly negative effect, leading to a reduction in corporate risk-taking behavior. Another study conducted by Wang et al. (2017) using data from Chinese listed firms, also find that both policy and market uncertainties can negatively affect corporate R&D investments, thus firms tend to lower their risk-taking

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behavior in the period of high market uncertainty. Furthermore, Kang et al. (2014) find that firm-level uncertainty combined with EPU discourages enterprises from making investments and the depressing effect of policy uncertainty on firm-level investments is greater during recession. Vural-Yavaş (2020) explore the effects of EPU on corporate risk-taking, analyzing data from 15 developed European countries (1999–2017). The results show that firms become more risk-averse following an EPU shock, regardless of macroeconomic conditions. Furthermore, using a sample of 151,483 observations across 18 countries over the period from 2005 to 2016, Tran (2019)argues that EPU negatively affects corporate risk-taking, and its influence occurs through two mechanisms. First, because policy uncertainty worsens the information asymmetry between lenders and borrowers and increases the volatility of enterprises' future cash flows, it raises the costs of external borrowing (Waisman et al., 2015). Second, managerial conservative increases when economic policy is undefined (Gormley &Matsa, 2016; Jensen et al., 1976). To reduce the chance of jeopardizing their personal interests, managers favor investment projects with more stable cash flows (Giambona et al., 2017). As a result, businesses take less risks when EPU is high.

In general, EPU influences corporate risk-taking in several ways. First, uncertainty regarding future government policies directly impacts business policy decisions, shaping firms' risk-taking strategies (Nguyen & Phan, 2017). Second, political uncertainty can elevate the costs associated with external financing. Cho and Kim (2023) find that heightened political uncertainty increases lenders' risk perceptions, leading to higher interest rates and stricter lending terms. As a result, firms face greater financing constraints, reducing their willingness to engage in corporate risk-taking and discouraging high-risk investments. Finally, several studies have demonstrated that heightened EPU leads to a reduction in corporate capital investments (Gulen & Ion, 2015; Wang et al., 2014).

Most research on the connection between EPU and corporate risk-taking has been conducted in developed economies. Nguyen and Vo (2024) examine the effects of uncertainty across different regions, beginning with the U.S. and expanding to global and Asian economies. Their findings highlight inconsistencies in previous studies and underscore the necessity for further research in Vietnam. Cao (2024) presents the first study in Vietnam to analyze the impact of global economic policy uncertainty (GEPU) on corporate investment behaviors. The findings indicate a negative relationship between the global EPU index and corporate investments, suggesting that increased global policy uncertainty discourages investments among Vietnamese firms.

Based on the findings and arguments in previous studies, we propose the following hypothesis.

Hypothesis 1: Global EPU negatively affects corporate risk-taking in Vietnam.

2.3. State Ownership and the Effect of Global Economic Policy Uncertainty on Corporate Risk-taking

State ownership plays an important role in influencing corporate risk-taking behaviors through influencing strategic decisions, investment strategies, and financial management. State-owned firms are likely to react differently to EPU than privately owned firms due to government backing, capital availability, and specific managerial incentives.

Research reveals mixed effects of state ownership.Some studiesindicate that state ownership encourages

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excessive risk-taking. Ho et al. (2020) find that among listed companies in Vietnam, state ownership is positively associated with aggressive risk-taking due to the double-agency problem, whereby state agents pursue high-risk behaviors for private rewards. Similarly, Yu et al. (2022) state that implicit government support provides SOEs with a financial buffer against risk, facilitating riskier investment despite economic policy uncertainty. However,Boubakri et al. (2013) argue that state ownership decreases risk-taking, especially in high EPU, with state control resulting in more conservative corporate strategy.

SOEs' closeness to government also makes them more responsive to policy shifts, being more reactive and risk-averse in their management (Wang & Huang, 2014; Zhang et al., 2021). In Vietnam, even though they account for a paltry 0.4% of companies, SOEs control a substantial chunk of capital (28.8%) and GDP (20%) (Dang et al., 2021). Their operation is under pressure from high operational costs, political pressures, and complex governance, which restricts flexibility compared to private firms (Phuong & Vu, 2020). Our study bridges the empirical gap on the impact of EPU on SOEs' risk-taking in Vietnam and attempts to explain the moderating effect of state ownership on corporate risk behaviors under policy uncertainty. Due to the mixed results in the literature, we present the hypotheses as below.

Hypothesis 2.1: State ownership strengthens the negative effect of Global EPU on corporate risk-taking.

Hypothesis 2.2: State ownership weakens the negative effect of Global EPU on corporate risk-taking.

3. Data and Methodology

3.1. Data collection

This paper uses data of Vietnamese non-financial listed firms on the Ho Chi Minh Stock Exchange(HoSE) over a five-year period from 2019 to 2023. Firm-level data are retrieved from the Thomson Reuters EIKON database, while the Global EPU index is obtained from the website https://www.policyuncertainty.com/global_monthly.html(Davis, 2016). The data of state ownership are hand-collected from audited annual reports.Firms with incomplete or erroneous data are omitted from the analysis to ensure accuracy and reliability.The final sample after deleting missing observations and errors has 1,668 firm-year observations.

3.2. Research methodology

3.2.1. The measurement of Global EPU index

The Global Economic Policy Uncertainty (GEPU) index is a widely used measure that captures the level of uncertainty in economic policies across multiple countries. EPU was first developed by Baker et al. (2016) and has been expanded to include global trends in policy uncertainty. The index aggregates country-specific EPU indices by analyzing media coverage, government reports, and economic forecasts to assess the degree of unpredictability in economic policy decisions. The first and most flexible component measures policy-related uncertainty using newspaper coverage frequency, capturing concerns about policy decisions, economic effects, and uncertainties related to non-economic policies like military actions. The second component assesses disagreement among economists on economic forecasts, utilizing data from the Congressional Budget Office, particularly on temporary federal tax provisions. The third component

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quantifies uncertainty by tracking the number of expiring federal tax provisions, based on data from the Survey of Professional Forecasters. These elements collectively provide a comprehensive measure of policy-related economic uncertainty across short-term and long-term horizons.

The GEPU index, as constructed by Davis (2016), is a GDP-weighted average of multiple country-specific EPU indexes, ensuring that larger economies contribute more significantly to the measure of GEPU. Additionally, Davis (2016) expands the EPU dataset to cover a broader set of countries beyond those initially included in Baker et al. (2016), making it a more representative indicator of worldwide economic policy uncertainty. To maintain consistency in comparisons over time, the index is normalized to a mean of 100, allowing for easier interpretation of fluctuations in economic uncertainty across different time periods. Additionally, adjustments are made to account for changes in media reporting frequency, economic fluctuations, and country-specific conditions. This process ensures that the index accurately reflects global economic policy uncertainty rather than temporary shifts in media coverage or short-term economic volatility.

This study utilizes the monthly GEPU index from Davis (2016), available on https://www.policyuncertainty.com/global_monthly.html, and the average method is applied to calculate the annual GEPU index value. The GEPU index has two variations: one based on current-price GDP and another adjusted for purchasing power parity (PPP). Since the differences between the two measures are minimal and they can be used interchangeably, this research adopts the GEPU index based on current-price GDP for the analysis.

GEPU = Mean of twelve monthly Global EPU indexes.

3.2.2. The measurement of Corporate Risk-taking

The dependent variable, corporate risk-taking, is measured by two proxies: Return on equity (ROE) volatility and industry-adjusted ROE volatility.

Following the methodology of Pennathur et al. (2012) and Zhu & Yang (2016), ROE volatility is calculated as the standard deviation of ROE over a five-year period from (t-4) to t, where ROE is defined as net income after tax divided by total equity.

$$RISK1 = \sigma ROE_{it}$$

Besides this measure, to account for the industry effect on ROE, an industry-adjusted ROE is also utilized, as suggested by Mishra (2011). The industry-adjusted ROE volatility iscalculated as the standard deviation of industry-adjusted ROE over a five-year periodfrom (t-4) to t, wherethe industry-adjusted ROE is determined by subtracting the annual industry mean ROE from each firm's ROE, ensuring that firm-specific risk-taking behavior is isolated from broader industry trends.

$$RISK2 = \sigma(Adj\_ROE_{it})$$

Where,

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$$Adj\_ROE_{it} = ROE_{it} - \overline{ROE_{jt}}$$

ROE_{it} : ROE of firm i at time t
$\overline{ROE_{jt}}$: Industry-average ROE of industry j at time t

3.2.3. Research models

The following model is suggested to determine how Global EPU affects the corporate risk-taking of companies listed on HoSE(Hypothesis 1)based on the reviewed literature.

$$\boldsymbol{RISK = \beta_0 + \beta_1 GEPU_t + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 LIQ_{it} + \beta_5 ROA_{it} + \beta_6 SALES_{it} + \varepsilon_{it}} \ (\mathbf{1})$$

The dependent variable is RISK1 and RISK2 indicating corporate risk-taking as computed in Section 3.2.2 above. The independent variable is Global EPU (GEPU). The control variables include Firm size (SIZE), Leverage (LEV), Liquidity (LIQ), Profitability (ROA), and Sales Growth (SALES). The subscripts *i*, *t,* and *ε* denote, respectively, the firm, year, and error term.

Hypotheses 2.1 and 2.2 test the interaction between state ownership (STATE) and Global EPU (GEPU) in the impact on corporate risk-taking. The following equation is employed to test these hypotheses:

$$\boldsymbol{RISK = \beta_0 + \beta_1 GEPU_t + \beta_2 GEPU_t STATE_{it} + \beta_3 STATE_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 LIQ_{it} + \beta_7 ROA_{it} + \beta_8 SALES_{it} + \varepsilon_{it}} (\mathbf{2})$$

The difference between Equation 1 and Equation 2 is the appearance of the interaction term GEPU*STATE and the STATE variable. The interaction terms is employed in order to measure the moderating effect of state ownership (STATE) on the impact of GEPU on corporate risk-taking (RISK). Other control variables are the same as in Equation 1.

Table 1: Definition of variables

Variables	Definition
Dependent variable	
Risk-taking (RISK1)	Standard deviation of ROE over a 5-year period from (t-4) to t $ROE = \frac{Net\ income}{Total\ equity}$
Risk-taking (RISK2)	Standard deviation of industry_adjustedROE over a 5-year periodfrom (t-4) to t $Adj\_ROE_{it} = ROE_{it} - \overline{ROE_{jt}}$
Independent variable	
Global economic policy uncertainty (GEPU)	Average of 12 monthly indexes of global economic policy uncertainty

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Moderating factor	
State ownership (STATE)	The proportion of state shares to total shares
Control variables	
Firm size (SIZE)	$SIZE = Ln(Total\ assets)$
Leverage (LEV)	$LEV = \frac{Long-term\ debt\ +\ Short-term\ debt}{Total\ assets}$
Liquidity (LIQ)	$LIQ = \frac{Current\ assets}{Current\ liabilities}$
Profitability (ROA)	$ROA = \frac{Net\ income}{Total\ assets}$
Sales growth (SALES)	$SALES = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}}$

This study utilizes three panel-data regression techniques: Pooled-OLS (Ordinary Least Squares) regression, Fixed-Effect Model (FEM), and Random-Effect Model (REM) to investigate the strength and direction of the relationships among variables.Table 2 shows the tests conducted to choose the best model. The superiority of FEM over Pooled OLS is determined using the F-test. The Breusch-Pagan Lagrange Multiplier (LM) test is used to choose the better model between Pooled OLS and REM. Finally, FEM and REM are compared using the Hausman test to determine which model is more appropriate.

Table 2: Summary of Tests and Models

F-test	LM test	Hausman test	The chosen model
H_0 is not rejected	H_0 is not rejected		Pooled OLS
H_0 is not rejected	H_0 is rejected		REM
H_0 is rejected	H_0 is not rejected		FEM
H_0 is rejected	H_0 is rejected	H_0 is rejected	FEM
H_0 is rejected	H_0 is rejected	H_0 is not rejected	REM

Source: Le & Phan (2017)

4. Empirical results

4.1. Overview of Global EPU

Figure 1 shows the Global Economic Policy Uncertainty (GEPU) index from 2019 to 2023 with significant fluctuations, which can be attributed to various major events that occurred around the world during this period.

In 2019, the GEPU was relatively high at around 258.349. This can be because of the continuing trade

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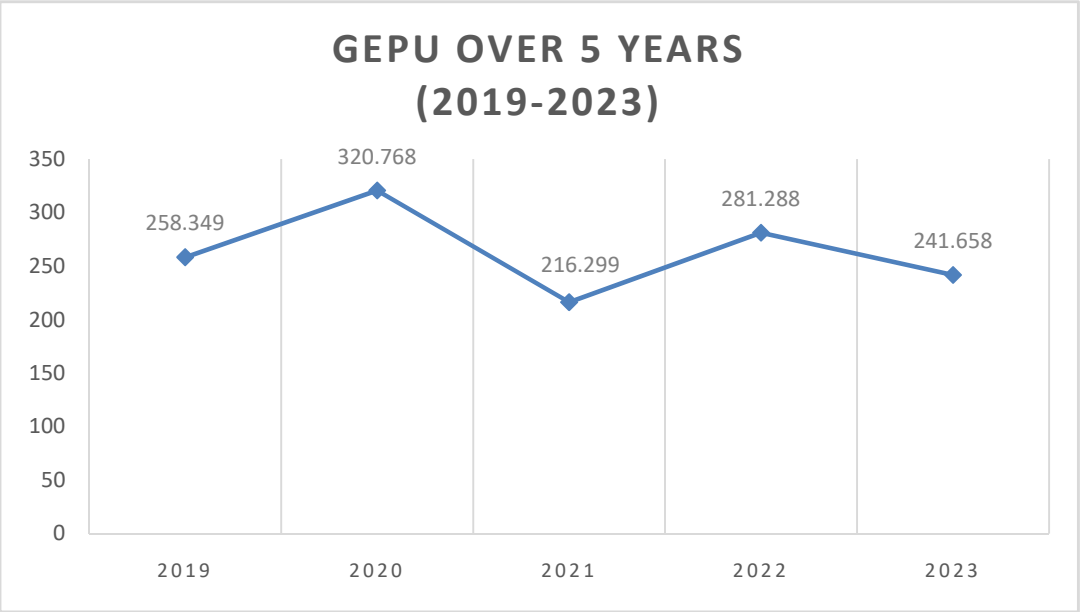
negotiations and tariffs that have been impacted by the trade tensions between the United States and China. Additionally, Brexit happened at the same time, causing disturbances in the U.K. over its decision to leave the EU and increasing the unpredictability of global policy.

Figure 1: Global EPU index over 5 year-period (2019-2023)



Source: Authors' calculations using Davis (2016)'s monthly global EPU indexes

In 2020, the GEPU peaked at about 320.768 as the global COVID-19 pandemic created extreme uncertain economic policies because of lockdowns, stimulus plans, and unpredictable government responses. Furthermore, the oil price fall as a result of the oil price war between Saudi Arabia and Russia increased volatility. The tensions and uncertainties surrounding the U.S. presidential election might be cited as another major factor.

The GEPU fell to around 216.299 in 2021, which was also the lowest GEPU in five years. Compared to 2020, this might be the year that the COVID-19 pandemic was effectively controlled because of vaccine campaigns and economic recoveries. In addition, the transition to Biden Administration in the United States brought relative stability compared to the chaotic 2020 period.

However, in 2022, the GEPU sharply increased to 281.288. There are a number of reasons for this. The first is the Russia-Ukraine war, which increased uncertainty about energy markets, international commerce, and defense strategies. The second is the ongoing COVID-19 pandemic, which disrupted supply chains and put further strain on international trade. Simultaneously, the Fed and many other central banks started raising interest rates aggressively, which led to a spike in global inflation and had a significant impact on the financial markets and the world economy as a whole.

In 2023, the GEPU decreased slightly to around 241.658 as the global inflation has been controlled in this year. While central banks kept raising interest rates, market prices started experiencing a slowdown or

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change of direction. In addition, the post-COVID reopening in China raised optimism for demand worldwide. However, concerns about financial instability have been raised in this year because of some regional bank collapses in the U.S., especially Silicon Valley Bank.

4.2. Descriptive statistics

Table 3: Descriptive Statistics

	N	Mean	Median	Min	Max	SD
RISK1	1668	0.098	0.046	0.001	4.466	0.323
RISK2	1668	0.109	0.062	0.005	4.310	0.315
GEPU	1668	263.765	258.349	216.299	320.768	35.631
SIZE	1668	28.496	28.246	25.456	34.135	1.460
LEV	1668	0.200	0.174	0	0.689	0.164
LIQ	1668	2.733	1.614	0.097	73.754	4.591
ROA	1668	0.059	0.046	-0.483	0.654	0.077
SALES	1668	0.085	0.030	-0.867	2.490	0.464
STATE	1668	0.157	0.000	0	0.968	0.252

Table 3 illustrates descriptive statistics of all variables.

Two proxies, RISK1 and RISK2, measure corporate risk-taking in which RISK1 exhibits a mean of 0.098 and a standard deviation of 0.323, indicating a relatively low average with a high degree of variability. This suggests that most firms have low levels of risk-taking, while a few firms take much higher risks. The large difference (4.368) between the mean (0.098) and max (4.466) also suggests the presence of some firms with high-risk behaviors. For RISK2, the values of mean, max, and standard deviation are 0.109, 4.310, and 0.315, respectively. They also indicate that while the majority of firms exhibit low risk-taking levels, a minority engages in significantly higher risk-taking behaviors.

The main independent variable-GEPU has a mean of 263.765, indicating a significant degree of global economic policy uncertainty within the sample period. The minimum value of 216.299 and maximum value of 320.768 show moderate variation during the observed period. This reflects the range of global economic uncertainty from 2019 to 2023, aligned with significant global events such asthe COVID-19 pandemic and geopolitical tensions.

For the moderating factor, the mean value of the STATE variable is 0.157, with value range from 0 to 0.968. The difference between the minimum and maximum value indicates a wide range, suggesting varying degrees of state ownership across firms. The median is 0, showing that over 50% of the observationsare non-state-owned firms.

4.3. Correlation coefficients

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Table 4: Pairwise correlations among variables

Variables	RISK1	RISK2	GEPU	SIZE	LEV	LIQ	ROA	SALES	STATE
RISK1	1.000								
RISK2	0.996***	1.000							
GEPU	-0.006	-0.006	1.000						
SIZE	0.028	0.024	-0.025	1.000					
LEV	0.003	0.004	-0.004	0.240***	1.000				
LIQ	-0.047*	-0.045*	-0.030	-0.229***	-0.318***	1.000			
ROA	-0.232***	-0.227***	0.005	-0.099***	-0.347***	0.154***	1.000		
SALES	0.041*	0.043*	-0.005	0.056**	0.049**	0.000	0.113***	1.000	
STATE	0.000	-0.002	0.003	0.051**	-0.181***	-0.022	0.154***	-0.028	1.000

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 4 presents the correlation analysis of variables in the research models. Generally, the analysis focuses on the interrelationships between the two proxies of corporate risk-taking— RISK1, RISK2 — and other variables. At first glance, it is clear that the correlation coefficient between RISK1 and RISK2 is positive (0.996) and statistically significant. For RISK1, it has a positive and statistically significant correlationwith SALES, whereas the correlation between RISK1 and LIQ or ROA is negative and statistically significant. However, the correlations between RISK1 and the remaining variables are not statistically significant. Similarly, the correlations observed for RISK2 are primarily consistent. These relationships are meaningful in identifying how different factors interact with RISK1 and RISK2, providing insights for further regression analysis.

Specifically, RISK1 and RISK2 have an extremely high positive correlation of 0.996, with a significance level of 1%. It is reasonable that these two metrics are almost perfectly positively correlatedas both of them are used to measure corporate risk-taking and can be used interchangeably. This also explains why the correlation coefficients between RISK2 and other variables are similar to thoseof RISK1.

Focusing on RISK1, the correlation between RISK1 and GEPU is negative (-0.006). The negative relationship between Global EPU and corporate risk-taking is consistent with our expectation that firms take less risks when facing more uncertain economic policies. However, this correlation is not statistically significant.

The correlation coefficient between RISK1 and LIQ has a negative value of -0.047, which is statistically significant at the 10% level. This weak negative correlation suggests that more liquid firms tend to take slightly less risk. This goes against the expectation that firms with higher liquidity may take on riskier projects (Abbas et al., 2021). However, the correlation is not strong, suggesting a potentially meaningful but not dominant influence of liquidity on RISK1.

The relationship between RISK1 and ROA is negative (-0.232) and statistically significant at the 1% level.

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The moderate negative correlation indicates an inverse relationship between these two variables, suggesting that more profitable firms typically engage in less risky projects. However, the finding is inconsistent with the expectation that firms with high profitability have high risk-taking behaviors (Herwadkar, 2017). One possible explanation is that high-performing firms may adopt more conservative strategies to protect their stable earnings, therefore engaging in less risky investments (Faccio et al., 2016). Some studies in the literature also show a negative correlation between risk-taking and firm profitability. Companies with low profits could be more likely to select riskier investment opportunities in order to enhance their financial position (Tsai & Fang, 2023). Similarly, Khaw et al. (2016) argue that the better the firm's performance, the lower the risk-taking. Moreover, a study by Do et al. (2022) finds that businesses with poor temporary performance take more risks than those with better temporary performance.

In terms of SALES, the correlation between RISK1 and SALES is 0.041, with a significance level of 10%. This weak positive correlation indicates that as SALES increases, the value of RISK1 tends to increase as well, which means that a higher sales-growth firm takes on riskier investments. This result aligns with the findings of Faccio et al. (2011), which indicate that firms with high growth options are more likely to engage in risky projects.

The correlations between RISK1 and remaining variables (SIZE, LEV, and STATE) are positive but statistically insignificant. Likewise, the patterns observed for RISK2 arealmost similar to RISK1, except that RISK2 is negatively correlated with STATE. However, this correlation is also statistically insignificant.

Finally, the absolute values of the correlations for each pair of explanatory variables are below 0.7.Hence, multicollinearity is not a problem in the regression models.

4.4. Regression results

4.4.1. The effect of GEPU on corporate risk-taking

Table 5 shows that FEM is the best regression for Model 1 since the null hypothesis H_0 is rejected under all three tests: the F-test, LM test, and Hausman test (please see Table 2 in Section 3.2.3 for the guidelines). Therefore, the results are analyzed using the FEM.

As the FEM results present, the coefficients on the main independent variable—GEPU for both RISK1 and RISK2 are -0.0001. The coefficient is in line with the conclusion of Vural-Yavaş (2020), Gulen & Ion (2015), and Wang et al. (2014), which state that heightened GEPUleads to a reduction in corporate investments and corporate risk-taking, but it does not provide statistically significant results and cannot support Hypothesis 1 due to lack of statistical significance. There are several reasons for this result. Primarily, many Vietnamese companies might have a fairly low exposure to world markets and international trade, therefore being less sensitive to changes in global economic policy uncertainty. Furthermore, corporate risk-taking in Vietnam could be more strongly influenced by domestic economic policies, regulatory environment, or local market conditions than by global uncertainties recorded by GEPU.

Focusing on RISK1 and control variables, firstly, regarding the SIZE variable, the coefficient on SIZE is negative (-0.049) and statistically significant at the 5% level. This result goes against the expectations on the positive link between size and corporate risk-taking in which larger firms often have more diversified

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operations and access to capital markets, enabling them to undertake riskier projects with potentially higher returns(Shuetrim et al., 1993; Adams et al., 2005). However, the negativerelationship between firm size and risk-taking behavior might be explained by the fact that large firms may experience diminishing growth opportunities, while smaller firms have more growth potential and tend to take more risks to expand and gain long-term profits (Faccio et al., 2011; Bhagat et al., 2015).

Table 5: Regression result for Model 1

Variables	Pooled OLS		FEM		REM	
	RISK1	RISK2	RISK1	RISK2	RISK1	RISK2
Constant	**0.170**	**0.229**	**1.598****	**1.416****	**0.286**	**0.280**
	(0.415)	(0.403)	(0.636)	(0.628)	(0.270)	(0.264)
GEPU	**-0.0005**	**-0.001**	**-0.0001**	**-0.0001**	**-0.0001**	**-0.0001**
	(0.001)	(0.001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
SIZE	**0.005**	**0.005**	**-0.049****	**-0.043***	**-0.003**	**-0.003**
	(0.006)	(0.006)	(0.022)	(0.022)	(0.009)	(0.009)
LEV	**-0.251*****	**-0.239*****	**-0.167****	**-0.143***	**-0.189*****	**-0.166*****
	(0.055)	(0.054)	(0.077)	(0.076)	(0.062)	(0.061)
LIQ	**-0.003***	**-0.003***	**-0.0001**	**-0.0002**	**-0.001**	**-0.001**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
ROA	**-1.179*****	**-1.116*****	**-0.702*****	**-0.607*****	**-0.810*****	**-0.729*****
	(0.111)	(0.108)	(0.110)	(0.108)	(0.101)	(0.099)
SALES	**0.054*****	**0.054*****	**0.020***	**0.020***	**0.025****	**0.025****
	(0.017)	(0.017)	(0.011)	(0.011)	(0.011)	(0.010)
Industry FE	Yes	Yes	No	No	No	No
Firm FE	No	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	No	No
Firm RE	No	No	No	No	Yes	Yes
Year RE	No	No	No	No	Yes	Yes
Adj R-squared	0.068	0.074				
F-statistic	7.77	8.41				
(p-value)	0.000	0.000				
LM Test						
Chi-squared					1392.78	1356.44
(p-value)					0.000	0.000
Hausman test						
Chi-squared			17.17	17.02		
(p-value)			0.004	0.005		
Number of obs.	1668		1668		1668	

****, **, and * indicate statistical significance at the 0.01, 0.05, and 0.10 (2-tailed) levels, respectively. Winsorizing at the 1st and 99th percentiles is used for continuous variables. The parentheses surround the standard errors.*

Secondly, FEM results show that the leverage level negatively affects firm risk-taking with the coefficient of -0.167 and significant at the 5% level. The negative correlation between LEV and RISK1 is also contrary to the findings of some prior studies (Huang&Wang, 2015; Gande&Kalpathy,2017; George & Hwang, 2010;

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Berg & Heider, 2022) in which firms with greater debt levels may engage in riskier projects to produce sufficient profits to pay debt obligations. One possible reason for the negative correlation between LEV and RISK1 is that more leverage comes with an increased possibility of financial distress, thereby decreasing the risk-taking capacity of businesses (Liu et al., 2023; Kim et al., 2017). Moreover, excessive leverage can cause debt overhang, in which the burden of existing debt disincentives future investment because of the higher bankruptcy risk(Smith et al., 2017).

Thirdly, in terms of ROA, the coefficientis -0.702 and is statistically significant at the 1% level. This outcome contradicts the expected correlation between profitability and corporate risk-taking, in which higher profitability is associated with increased risk-taking behavior (Martynova et al., 2015; Herwadkar, 2017; Alam et al., 2023). This finding may suggest that highly profitable companies could be less willing to assume more risk given the possibility of more financial instability (Khaw et al., 2016). Furthermore, high-performing firms may use more conservative tactics to maintain their consistent profitability, hence participating in less risky investments (Faccio et al., 2016). Besides, a study by Tsai & Fang (2023) also finds that firms with diminished profitability may be more inclined to pursue riskier investments to improve their financial performance.

Finally, the FEM regression findings indicate that for the sales growth, the SALES variable positively influences the RISK1 variable with a coefficient of 0.020 and statistically significant at the 10% level. This suggests that a higher sales growth leads to a higher firm risk-taking behavior. The result validates the expectation about the impact of sales growth on corporate risk-taking. Companieswith robust sales growth usually have more cash flow and financial stability, which provide them with the necessary resources to undertake riskier investment opportunities. Moreover,firms with higher sales growth exhibit greater risk-taking behavior, as their rising revenue lets them investigate new markets, fund research and development, and broaden product lines. This result coincides with the findings of Faccio et al.(2011), Covin&Slevin(1998), and Ye et al.(2020).

The only control variable that does not significantly affects RISK1 and RISK2 is liquidity; the coefficient on LIQ is very small (-0.0001 and -0.0002, respectively) and statistically insignificant. This finding does not align with prior studies (Hsu et al., 2018; Abbas et al., 2021) which posit that high liquidity provides financial flexibility and allows firms to take more risks.

For RISK2, the regression results using Fixed-Effect Model (FEM) to analyze the relationship between RISK2 and other control variables are quite similar with those found for RISK1.

First, regarding the SIZE variable, the coefficient is negative at -0.043 and statistically significant at the 10% level. This negative relationship between firm size and risk-taking behavior contradicts the common expectation that larger firms tend to take more risks to pursue higher returns (Shuetrim et al., 1993; Adams et al., 2005). However, this result may be explained by the fact that larger firms often face diminishing growth opportunities, while smaller firms possess greater growth potential and thus engage in more risk-taking behaviors to expand and achieve long-term profitability (Faccio et al., 2011; Bhagat et al., 2015).

Second, the LEV variable has a negative coefficient of -0.143, significant at the 10% level. This finding aligns

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with the negative association found for RISK1 and contrasts with some previous studies which suggest that firms with higher leverage tend to undertake riskier projects to generate sufficient returns to meet debt obligations (Huang and Wang, 2015; Gande and Kalpathy, 2017; George & Hwang, 2010; Berg & Heider, 2022). A possible explanation for our finding is that higher leverage increases the risk of financial distress, which in turn reduces firms' capacity or willingness to engage in additional risk-taking (Liu et al., 2023; Kim et al., 2017; Smith et al., 2017).

Third, the ROA variable has a coefficient of -0.607 and statistically significant at the 1%level. This negative relationship between profitability and risk-taking contradicts the expectation that more profitable firms pursue higher risks to expand their growth opportunities (Martynova et al., 2015; Herwadkar, 2017; Alam et al., 2023). The result suggests that highly profitable firms prefer to adopt more conservative strategies to maintain stable performance and avoid financial instability (Khaw et al., 2016). Moreover, high-performing firms are likely to reduce risky investments in order to protect their profits (Faccio et al., 2016; Tsai & Fang, 2023).

Finally, the SALES variable has a positive coefficient of 0.020 and is statistically significant at the 10% level, which is identical to the result for RISK1. This indicates that firms with strong sales growth typically have more stable cash flows and financial resources, enabling them to pursue riskier investment opportunities. This finding is consistent with prior research by Faccio et al. (2011), Covin&Slevin (1998), and Ye et al. (2020).

4.4.2. The moderating role of state ownership on the effect of GEPU on corporate risk-taking

Similar to Model 1, the F test, LM test, and Hausman test are employed to identify which regression approach is the most appropriate for Model 2. As presented in Table 6, the null hypothesis is rejected in all three tests. Therefore, FEM is best regression model for analyzing themoderating effect of State ownership on the impact of the Global EPU index on Vietnamese corporate risk-taking.

The interaction term between GEPU and STATE (GEPU*STATE) carries a negative coefficient of -0.001 and is statistically significant at the 5% level for both proxies of risk-taking, RISK1 and RISK2. This finding indicates that state ownership significantly moderates the impact of global economic policy uncertainty on firm risk-taking behavior. Specifically, the negative and statistically significant coefficient for the interaction supports Hypothesis 2.1, which states thatfirms with a higher level of state ownership tend to exhibit a much less risk-taking behavior when faced with increased global uncertainty. This indicates that state-owned firms adopt a more cautious or conservative approach in uncertain global environments.One key reason can be explained for this behavior is thatstate-ownedenterprises (SOEs) often operate under tighter oversight and stricter governance frameworks imposed by government authorities, which can limit managerial discretion and discourage excessive risk-taking (Boubakri et al., 2013; He et al., 2024). Furthermore, the strategic objectives of state-owned firms frequently emphasize economic stability and long-term sustainable development rather than short-term profit maximization. Such priorities naturally incline these firms toward risk-averse strategies, especially when external uncertainties are heightened (Phuong & Vu, 2020; Wang& Huang, 2014; Zhang et al., 2021).

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Table 6: Regression result for Model 2

Variables	Pooled OLS		FEM		REM	
	RISK1	RISK2	RISK1	RISK2	RISK1	RISK2
Constant	**0.142**	**0.206**	**1.473****	**1.298****	**0.226**	**0.220**
	(0.417)	(0.405)	(0.639)	(0.631)	(0.272)	(0.266)
GEPU	**-0.0003**	**-0.001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**
	(0.001)	(0.001)	(0.0002)	(0.0002)	(0.0002)	(0.0001)
GEPU*STATE	**-0.001**	**-0.001**	**-0.001****	**-0.001****	**-0.001****	**-0.001****
	(0.001)	(0.001)	(0.0005)	(0.0005)	(0.0005)	(0.0005)
STATE	**0.342**	**0.339**	**0.232**	**0.191**	**0.306**	**0.290****
	(0.227)	(0.221)	(0.239)	(0.236)	(0.145)	(0.143)
SIZE	**0.004**	**0.003**	**-0.046****	**-0.040***	**-0.003**	**-0.002**
	(0.006)	(0.006)	(0.022)	(0.022)	(0.009)	(0.009)
LEV	**-0.230*****	**-0.216*****	**-0.172****	**-0.148***	**-0.189*****	**-0.166*****
	(0.057)	(0.055)	(0.077)	(0.076)	(0.062)	(0.061)
LIQ	**-0.003**	**-0.003***	**-0.00001**	**-0.0001**	**-0.001**	**-0.001**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
ROA	**-1.188*****	**-1.127*****	**-0.705*****	**-0.611*****	**-0.813*****	**-0.731*****
	(0.111)	(0.108)	(0.110)	(0.108)	(0.101)	(0.099)
SALES	**0.055*****	**0.055*****	**0.019***	**0.020***	**0.024****	**0.024****
	(0.017)	(0.017)	(0.011)	(0.011)	(0.011)	(0.010)
Industry FE	Yes	Yes	No	No	No	No
Firm FE	No	No	Yes	Yes	No	No
Year FE	Yes	Yes	Yes	Yes	No	No
Firm RE	No	No	No	No	Yes	Yes
Year RE	No	No	No	No	Yes	Yes
Adj R-squared	0.069	0.076				
F-statistic	7.20	7.83				
(p-value)	0.000	0.000				
LM Test						
Chi-squared					1394.61	1358.17
(p-value)					0.000	0.000
Hausman test						
Chi-squared			17.20	17.22		
(p-value)			0.009	0.009		
Number of obs.	1668		1668		1668	

****, **, and * indicate statistical significance at the 0.01, 0.05, and 0.10 (2-tailed) levels, respectively. Winsorizing at the 1st and 99th percentiles is used for continuous variables. The parentheses surround the standard errors.*

In contrast, the direct effect of STATE itself on corporate risk-taking is positive but statistically insignificant, implying that state ownership alone does not significantly drive risk-taking behaviors but acts primarily as a moderator within the context of rising global economic uncertainty.

Similar to Model 1, GEPU does not have a statistically significant impact on corporate risk-taking when it is measured by both RISK1 and RISK2. Control variables included in the model also exhibit similar relationships with firm risk-taking as in Model 1. The SIZE variable shows a negative and statistically significant coefficient (-0.046 for RISK1 and -0.040 for RISK2), reinforcing the idea that larger firms tend to engage in less risky behaviors. This may be because larger firms generally have more diversified operations and greater stability, reducing the need for high-risk investments (Faccio et al., 2011; Bhagat et al., 2015). Similarly, LEV has a negative and significant coefficient which is -0.172 and -0.148 for RISK1 and RISK2, respectively, suggesting that firms with greater debt burdens tend to be more risk-averse, likely due to the pressure to meet debt obligations and the threat of financial distress(Liu et al., 2023; Kim et al., 2017; Smith et al., 2017). The profitability measure, ROA, presents a strong negative and statistically significant relationship with corporate risk-taking (the coefficient on ROA is -0.705 for RISK1 and -0.611 for RISK2). Although this result is inconsistent with the finding of Herwadkar (2017), it is in line with the findings of Khaw et al. (2016) andFaccio et al. (2016) stating thatmore profitable firms prefer to maintain steady earnings through more conservative investments. Lastly, sales growth positively influences corporate risk-taking with the coefficient of 0.019 for RISK1 and 0.020 for RISK2, supporting the view that firms with increasing revenues are better positioned financially to undertake riskier initiatives. This finding is consistent with prior research by Faccio et al. (2011), Covin&Slevin (1998), and Ye et al. (2020).The remaining variable - Liquidity (LIQ)- does not have any statistically significant effect on corporate risk-taking.

5. Conclusion

This study investigates the effect of Global Economic Policy Uncertainty (GEPU) on business risk-taking behaviors in Vietnam, with a special reference to the moderating role of state ownership,using a panel dataset of 347 non-financial listed firms on the Ho Chi Minh Stock Exchange (HoSE) between 2019 and 2023. The empirical findings show that GEPU is not proven to have a statistically significant direct effect on corporate risk-taking behaviors. When examining the moderating effect of state ownership, the results document thatstate ownership strengthens the negative effect of GEPU on corporate risk-taking. That is, firms with a higher level of state ownership take less risk in global policy uncertainty although the direct influence of state ownership per se on corporate risk-taking remains statistically insignificant.

Among the control variables, liquidity does not have a significant effect on risk-taking behaviors, whereas size, leverage, and profitability are each negatively correlated with risk-taking, suggesting that large, levered, and profitable firms are most likely to adopt more prudent financial policies and risk-adverse behaviors. Sales growth, on the other hand, is positively correlated with risk-taking behaviors, suggesting that firms with sound

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revenue increases are more likely to engage in riskier investments. These findings are in line with previous research and validate the significance of firm-level financial conditions in shaping risk-taking decisions.

This study contributes to the existing literature in several ways. First, it offers empirical proof for a vast literature on the effect of policy uncertainty on corporate decisions, especially in the context of emerging economies like Vietnam. Second, it extends upon previous research by incorporating the aspect of state ownership as a moderating variable, a feature most relevant to the economies where the state still plays a large role in controlling corporate activities. Third, it offers policy insights for policymakers and business managers on how various structures of ownership might impact firm actions during global uncertainty. By delineating how SOEs and non-SOEs respond differently to GEPU, the study also invites discussions into state-owned firms' efficiency and flexibility when faced with global economic volatilities.

Despite its contributions, this research still has some drawbacks. Firstly, the sample is restricted to non-financial companies listed on the Ho Chi Minh Stock Exchange (HoSE), which might not reflect all corporations in Vietnam. Secondly, the five-year period from 2019 to 2023 may also fall short of fully reflecting the long-term influence of global policy uncertainty or the structural changes in corporate behaviors. Thirdly, audited annual reports which provide hand-collected state ownership datamay still be impacted by reporting discrepancies even though some techniques have been employed to improve the accuracy of collected data. Finally, the research concentrates only on Vietnam, which could restrict the generalizability of results to other developing countries with varied institutional settings.

Future research might extend this study in many ways. Researchers might first increase the sample size by adding companies from other stock exchanges in Vietnam, such the Hanoi Stock Exchange (HNX). Moreover, a longer time frame would help evaluate the long-term impact of policy uncertainty and incorporate trends in business and economic cycles. Besides, future studies could use different policy uncertainty measurements—such as country-specific EPU or GPR(Geopolitical Risk) indices—or different risk-taking proxies for robustness tests. Finally, comparative research across several developing countries could offer more general understandings of how various governance structures and institutional settings influence company reactions to worldwide uncertainty.

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THE EFFECT OF PROFITABILITY, LEVERAGE, MANAGERIAL OWNERSHIP, DIVIDEND PAYOUT RATIO AND COMPANY SIZE ON INCOME SMOOTHING

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Abstract:

Conflicts of interest between investors who demand earnings consistency and management, who must meet these expectations, give rise to the practice of income smoothing. The purpose of this study is to ascertain how profit smoothing is affected by profitability, leverage, management ownership, dividend payout ratio, and firm size in real estate and property sector companies listed on the IDX for the 2019–2023 timeframe. A low Eckel index indicates a high level of profit smoothing for the company. Hypothesis testing uses multiple regression. The findings indicate that size, DER, and ROA have no bearing on income smoothing, that managerial ownership has a negative impact on it, and that dividend payout ratio has a favorable impact.

Keywords: *Income Smoothing, Managerial Ownership, Dividend Payout Ratio.*

1. Introduction

Financial reports are intended to provide data related to the financial condition of an entity, the results of an entity's financial activities and information on an entity's cash flow reports which are useful for parties who use financial reports to make economic decisions. (Standar Akuntansi Keuangan No. 12, 2015:3). In order to serve as material for the company's responsibility to interested parties, the financial report that has been prepared represents the accomplishment of the results of the operational performance of the business. Investors and creditors utilize the financial report's profit statistics as their primary source of information when making investment decisions. (Angreini & Nurhayati, 2022 : 124).

Investors and other stakeholders tend to choose companies that can generate maximum profits and keep their profits stable because they are looking for low risk in investing their capital. (Suwaldiman & Lubis, 2023 : 74). Similarly, because it may be employed as a long-term investment, the property and real estate sector industry is particularly appealing to investors. In this industry, economic development is considered very profitable because many people need property while land capacity is fixed which causes property prices to continue to increase.(Juliantika & Dewi S, 2016 : 4171). Nonetheless, this industry's quick growth will affect how vulnerable businesses in the macro industry are, especially in terms of interest rate stability and rupiah inflation, which will greatly affect people's purchasing power for property, thereby causing a decrease in profits generated by the company.(Juliantika & Dewi S, 2016 : 4171). Company management must think of ways to survive in this critical period. This strong market pressure sometimes causes managers to engage

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in dysfunctional behavior to achieve their goals by manipulating financial reports using income smoothing techniques. (Budiasih, 2019).

According to Belkaoui (2007) income smoothing management to reduce abnormal and drastically fluctuating profits. In actuality, income smoothing is a type of income management, specifically the method by which management of the organization controls the amount of profit made in a certain time frame. (Widyantoro et al., 2023). Viewed from the fraudulent perspective, income smoothing is said to be a deliberate effort to produce normal and stable income in order to achieve the desired income

level. In other words, income smoothing is an activity of deliberately normalizing profits in order to achieve a certain level. (Belkaoui, 2007 : 56). Managers carry out income smoothing by manipulating financial reports by reducing profits when the company's profits are high and shifting them to years when profits are low. (Ozili, 2019).

Many factors influence income smoothing practices, including profitability, leverage, managerial ownership, dividend payout ratio and company size. The amount of income compared to the company's capital is measured by profitability. The greater the profitability ratio, the more investors will prefer the company because it shows that it has achieved its profit targets. Businesses with consistent revenues will draw in creditors, hence the more profitable a business is, more likely it is that it will use income smoothing techniques. (Suwaldiman & Lubis, 2023 : 74). The amount of a company's assets financed by debt is reflected in its leverage. Considering a company's high debt will increase the likelihood of default, which is undesirable to creditors and investors, businesses with high debt levels typically smooth earnings to stabilize their financial situation and draw in creditors and investors. (Lee, 2022).

Managerial ownership is another element. Managerial ownership is reflected in the number of shares held by the company's management. The manager will perform better in carrying out the business's operational activities if the managerial ownership percentage is larger since management will be affected as a shareholder. (Wati & Gultom, 2022). Accordingly, businesses with a high level of managerial ownership are less likely to use revenue smoothing techniques.

The amount of dividends distributed to investors from retained earnings is described by the dividend payout ratio.(Suwaldiman & Lubis, 2023 : 75). Large profit distributions are preferred by investors since they will improve shareholder welfare. If the aforementioned requirements are satisfied, investors will keep funding the business. (Suwaldiman & Lubis, 2023 : 75). Because the size of the profit will determine the size of the dividend and influence shareholders' decisions to purchase shares, businesses frequently utilize income smoothing techniques to boost their profits.(Suwaldiman & Lubis, 2023 : 75). The number of assets a corporation possesses indicates its size. Investors will be more inclined to put their money into huge enterprises because of their low risk. (Dira & Astika, 2014 : 68).

Studies have been conducted Sumani et al. (2021) stated that profitability has no discernible impact on income smoothing measures. In contrast, research by Angreini & Nurhayati (2022 : 133) and also Gunawati & Susanto (2019) revealed that profitability positively influences income smoothing. The study that was carried out Lee (2022) and Suwaldiman & Lubis (2023 : 79) demonstrates the beneficial impact of leverage on income smoothing, which runs counter to Kimouche & Charchafa (2024) study where it is revealed that

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leverage is negatively related to income smoothing.

Research conducted Suwaldiman & Lubis (2023 : 79) demonstrates how the managerial ownership variable affects income smoothing negatively. The research conducted Martins et al., (2022) and Li & Chen, (2020) both claimed that there is a positive correlation between the dividend payout ratio and the incidence of income smoothing measures. The results presented Ditiya & Sunarto (2019 : 59) shows that company size positively influences the occurrence of income smoothing. These results are also consistent with the research conductedRakhmawati & Chunni'mah (2020).

Based on this outcome is also consistent with the study that was done of studies that are still quite numerous regarding factors that can influence income smoothing practices, further research is needed to determine whether there is an influence of profitability, leverage, managerial ownership, dividend payout ratio and company size on income smoothing practices in companies in the property and real estate sector.

2. Literature Review

Analyzing conflicts of interest between managers acting as agents and investors acting as principals is a suitable application of agency theory (Jensen & Meckling, 1976). Interrelated interests make agents and principals strive to achieve their respective goals, namely to obtain the maximum level of prosperity. (Ditiya & Sunarto, 2019).

Agency Theory describes the existence of a separate relationship between control (managers as agents) and ownership (investors as principals) when both are bound in a business contract. Investors wantlarge and stable profits from the company and management will try to get stable company profits to fulfill the investor's desires. This will encourage a manager as a financial report maker to carry out dysfunctional behavior by manipulating financial reports using income smoothing practices.(Budiasih, 2019).

Signaling Theory explains how business entities report financial report information to their users to show that the company is worthy of investment. (Ross, 1997). Here, the signal denotes information that is crucial for businesspeople and shareholders. News reports on the company's financial situation, whether successful or not, can provide information that will be utilized to inform investment decisions (Susilowati & Turyanto, 2011 : 21).The signal reported by the company to investors is announced in the form of financial reports that have been created by the management of the business. The financial report contains various accounting information, in the shape of business's achievements in realizing its goals or other information that can give the impression that the company's operations are superior to other companies, in order for investors to express interest in funding the business (Kurniawan & Suryaningsih, 2019 : 166).

Profitability ratios are used in accounting to measure and show how much income is obtained from the use of assets (Widyantoro et al., 2023). In this study, return on assets (ROA) is used as a variable that represents the level of company profitability. High profitability indicates the success of management performance in implementing its business strategy (Ditiya & Sunarto, 2019 : 54). The stability of the company's profits indicates good operational performance which is of interest to investors, so that the greater the opportunity to implement measures for income smoothing (Suwaldiman & Lubis, 2023 : 74). The results of research conducted Angreini & Nurhayati (2022 :133) and Gunawati & Susanto (2019) show the profitability of

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income smoothing is positively correlated.. H1: Income smoothing is positively impacted by profitability.

Leverage or debt to equity ratio describes the percentage of debt a company has in its capital. According to Kasmir (2019 : 153) he calculation of the leverage ratio will show the company's ability to pay its debts. Companies that utilize large amounts of debt will make the company bear a large burden from installment payments and interest payments on the debt, so that it will have an impact on investors who will ask for a larger share of the profits from their investment because they will face high risks. This is the reason why managers smooth out profits to explain why investors think the company is a smart investment. (Lee, 2022). Consistent with Lee (2022) research, leverage exhibits a positive correlation with smoothing. H2: Leverage has a positive effect on income smoothing.

Managerial ownership is a condition Management takes an active role in making decisions for the organization but also owns shares in the company (Christiawan & Tarigan, 2007). Because management would be affected as a shareholder, The more management share ownership there is, the more effectively the manager conducts the day-to-day operations of the company (Wati & Gultom, 2022). The likelihood of management smoothing earnings will be diminished by the large degree of managerial ownership. This comprehension aligns with the findings of the studies that were carried out Suwaldiman & Lubis (2023 : 74). H3: Managerial ownership has a negative effect on income smoothing.

Dividend Payout Ratiois a calculation carried out to measure the company's net profit paid through profit sharing or returns distributed by the company as cash dividends paid out from retained profits to investors (Suwaldiman & Lubis, 2023 : 75). he amount of dividends distributed will have an impact on shareholders' decision making in buying shares (Suwaldiman & Lubis, 2023 : 75). Companies with small profits will tend to smooth profits (Monalisa, 2015). This explanation is consistent with the findings of studies carried out Martins et al. (2022) and Li & Chen (2020). H4: Income smoothing is positively impacted by the dividend payout ratio.

According to Yusrilandari et al. (2016 : 3162) company size is reflected through the quantity of assets that the business owns. Company size can be obtained by calculating the natural logarithm (Ln) of the number of assets owned by the company. Dira & Astika (2014 : 75)stated that businesses of a larger scale typically generate higher returns. Because of that, investors are more inclined to put their money into large corporations. Driven by these things, management tries to produce large asset values in its financial reports. The findings of studies carried out Ditiya & Sunarto (2019 : 59) and Rakhmawati &Chunni'mah (2020). H5: Income smoothing is positively impacted by the size of the company.

3. Research Method

This study is under the quantitative category that gathers information from secondary sources, such as the financial reports of real estate and property firms that were listed on the IDX between 2019 and 2023. The purposive sampling technique is used to take samples from the population with the provisions of companies engaged in real estate and property development that are listed on the IDX between 2019 and 2023, businesses that release thorough financial reports annually, financial reports that include information relevant to the variables under research, and businesses that do not experience ongoing losses throughout the

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study period. The results of the sampling found eight companies that met the criteria. Using the index Eckel, income smoothing is measured as follows:

Index Eckel = $\frac{\text{CV}\Delta I}{\text{CV}\Delta S}$

CVΔI = $\sqrt{\frac{\sum(\Delta I-\overline{\Delta I})^2}{\text{n}-1}} \div \overline{\Delta I}$

CVΔS = $\sqrt{\frac{\sum(\Delta S-\overline{\Delta S})^2)}{\text{n}-1}} \div \overline{\Delta S}$

CVΔI : Coefficient of change in profit
CVΔS : Coefficient of change in sales (revenue)
ΔI/ΔS : Change in profit/p between year n and n-1
$\overline{\Delta I}$ / $\overline{\Delta S}$: Average change in profit / sales (revenue)
n : Observation period

The calculation result if the value of CVΔI < CVΔS indicates that the company is considered to smooth profits. However, if the calculation result shows the opposite, namely CVΔI ≥ CVΔS, then the company does not smooth profits. Indications of companies that smooth profits can also be seen from the outcomes of the Eckel index computation, if the eckel index value< 1 the company is considered to smooth profits, while companies that do not smooth profits have an eckel index value ≥ 1(Suwaldiman & Lubis, 2023)

Return on Assets (ROA) is a metric used to quantify profitability, obtained by dividing profit after tax by the company's total assets. Leverage is obtained by dividing total debt by total capital. Managerial Ownership is obtained by comparing the number of managerial shares with the total shares outstanding. DPR can be found by dividing dividend per share by earnings per share. The natural logarithm (Ln) formula of the total assets of the company is used to determine its size.

Multiple regression analysis is used as an analytical technique for hypothesis testing because it can help to make predictions from the values of the independent and dependent variables obtained. The proposed multiple regression model is:

$$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

y : Index Eckel
α : Constants
β : Regression Coefficient
X_1 : Profitability
X_2 : Leverage
X_3 : Managerial Ownership
X_4 : Dividend Payout Ratio
X_5 : Firm Size
e : Interfering Factors

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4. Explanation of results

The analysis used descriptive statistics and classical assumptions. Drawing conclusions using partial testing (t-test) and simultaneous (F-test). Explanation of resultsAnalyzing data using descriptive statistics is done with the aim of displaying a picture or description of the data. The descriptive statistical analysis in this study is shown in Table 1.

Table1. Descriptive Statistical Results

Keterangan	Minimum	Maksimum	Mean	Std. Deviation
ROA	0,00303	0,12415	0,0561986	0,02801694
LEV	0,08566	1,74305	0,5875904	0,42732278
KM	0,00022	0,17635	0,0235647	0,03551960
DPR	0,00012	1.30493	0,2143146	0,25230284
SIZE	23,98502	31,41783	28,9898384	2,19528599
Indeks Eckel	-1,76690	3,26372	0,4764373	1,12608535

Source: data processed in 2024

It can be seen in the table that there is a closeness the difference between the mean and the standard deviation, indicating that the data has a small data variance and it can be said that there is no gap in the data distribution. Due to the Eckel index's average value being less than 1(0.4764373 <1), businesses in the property and real estate industry during the 2019–2023 period often adopt income smoothing.

Data is said to be normal if the sig result of the Non-Parametric Kolmogorov-Smirnov test is greater than 0.05(Ghozali, 2018 : 166). Table 2 displays the findings of this study's normalcy test.

Table2. Kolmogorov-Smirnov Test Results

Description	Value
Asymp. Sig. (2-tailed)	0,138

Source: data processed in 2024

The regression model is declared good if it does not produce a perfect or near-perfect correlation(Purnomo, 2017 : 116). Multicollinearity symptoms do not exist if the VIF value is less than 10.00 and the tolerance is more than 0.100(Ghozali, 2018 : 107). Table 3 displays the multicollinearity test findings.

Table 3. Multicollinearity Test Results

Description	Tolerance	VIF
ROA	0,582	1,718
LEV	0,532	1,880
KM	0,257	3,887
DPR	0,204	4,910
SIZE	0,589	1,697

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Source: data processed in 2024

The Heteroscedasticity test is intended to determine the variation in variance between an observation's residual and other observations in the employed regression model (Ghozali, 2018 : 137). the regression model is declared valid if there is no heteroscedasticity if the sig value is > 0.05.

Table 4. Glejser Test Results

Description	Significance
	0,929
	0,856
	0,057
	0,748
	0,547
	0,400

Source: data processed in 2024

The regression model is said to be good if it does not find any autocorrelation symptoms(Ghozali, 2018 : 111). Autocorrelation testing uses the Durbin-Watson Test. Table 5 displays the findings of the autorelation test.

Table 5. Durbin-Watson Test Results

Description	Durbin Watson Value
Predictors: (*Constant*), SIZE, KM, ROA, LEV, DPR	1,908

Source: data processed in 2024

The DW value is then compared with the numbers in the table (DU) where (n) = 40 and (k) = 5 using a significance of 5% (0.05). The DU value obtained is 1.7859 and the DL value is 1.2305, so that the 4-DU result is 4 - 1.7859 which is the same as 2.2141. The conclusion obtained is DU <DW <4-DU or 1.2305 <1.908 <2.2141 so that the decision to accept is obtained. Thus, no positive nor negative autocorrelation signs are present.

Multiple regression analysis is intended as an analysis technique for hypothesis testing. The coefficient value of each independent variable is the result of the regression analysis obtained with the Beta value.

y = 3,099 + 7,947 + 0,298 + 27,113 – 3,473 – 0,108

Based on the regression results, it is concluded that the Eckel Index has a positive value of 3.099, which means that income smoothing decreases by -3.099. Profitability increases by one unit, which will cause the Eckel Index to increase by 7.947, which means that income smoothing decreases by -7.947, assuming that other variables remain constant. Leverage increases by one unit, which will cause the Eckel Index to increase by 0.298, which means that income smoothing decreases by -0.298, assuming that other variables remain constant. Managerial Ownership increases by one unit, which will cause the Eckel Index to increase by 27.113, which means that income smoothing decreases by -27.113, assuming that other variables remain constant. DPR increases by one unit, which will cause the Eckel Index to decrease by -3.473, which means that income smoothing increases by 3.473, assuming that other variables remain constant. The company size

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increases by one unit will cause a decrease in the eckel index by -0.108 which means that income smoothing increases by 0.108 assuming that other variables remain constant.The results of the t-test and F-test to help draw conclusions can be seen in:

Table 6. t-Test Results

Description	t	Significance
(*Constant*)	1,165	0,252
ROA	1,070	0,292
LEV	0,586	0,562
KM	3,076	0,004
DPR	-2,490	0,018

Source: data processed in 2024

Table7. F-Test Results

Description	F	Significance
Regression	3,202	0,017

Source: data processed in 2024

The calculation of nilai in the distribution table t is done using the signfican 0,05: 2 = 0,025 and the derajat kebebasan (df) = n – k-1, or 40 – 5- 1 = 34. The result obtained from titik (0,025;34) is approximately 2,03224. The nilai pencarian in the distribution table F is carried out with a significance level of 0.05 and a derajat kebebasan (df)1 = 5; (df)2 = 34. In other words, the F table at titik (5;34) is 2,49

5. Discussion

Partial testing that has been conducted results in profitability not related to income smoothing practices, so that management's income smoothing actions are not influenced by the level of profitability. The number of long-term projects in property and real estate companies makes income and expenses recognized based on certain methods, such as the percentage of completion, which can provide flexibility in managing income recognition and does not depend entirely on the level of profitability. Another reason is that investors look more at the company's cash flow than at reported profits to assess performance, so investors tend to ignore ROA (Setyaningsih et al., 2021 : 43). The high level of company profitability will make many investors have the goal of investing their capital, so that companies with high levels of profitability no longer need to smooth profits to influence investor interest (Ditiya & Sunarto, 2019 : 54). The outcomes of this choice are consistent with studies carried out Setyaningsih et al. (2021) and Sumani et al. (2021) which show that profitability does not have a significant effect on income smoothing actions. However, The findings of this choice go counter to studies Suwaldiman & Lubis (2023) and Kimouche & Charchafa (2024)which claimed that income smoothing is positively impacted by profitability.

The leverage variable in this study is calculated using the Dept to Equity Ratio (DER) measurement scale by dividing the debt ratio by capital (Suwaldiman & Lubis, 2023). The tests that have been carried out have

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shown that leverage is not related to income smoothing, which means that management in income smoothing is not influenced by the level of leverage. Long-term funding is commonly used by property and real estate companies for their projects, so creditors understand that high leverage does not always reflect financial risk. Therefore, companies do not need to use income smoothing to alleviate creditor concerns regarding leverage. Large fixed assets in companies in this sector can also be used as collateral for debt which can increase investor confidence without practicing income smoothing.

The decision's outcomes in this study corroborate the findings of the study carried out Angreini & Nurhayati (2022), Setyaningsih et al. (2021), and also Suhartono & Hendraswari (2020) which concluded that the leverage variable has no effect on income smoothing. However, this study contradicts Suwaldiman & Lubis (2023) who stated that profitability is favorably correlated with income smoothing.

According to the study's findings, income smoothing has a negative relationship with management ownership, meaning that if the managerial ownership of a company is high, management tends not to smooth income. In cases where managers possess a larger percentage of the company's shares, they do better when it comes to running the business because management will feel the impact itself as a shareholder (Wati & Gultom, 2022). The preliminary results of this investigation are identical to those of the study carried out Suwaldiman & Lubis (2023) specifically that income smoothing has a negative relationship with management ownership. However, this study differs from that of Gunawati & Susanto (2019) who found no relationship between management ownership and the degree of income smoothing methods.

The fourth hypothesis decision is that the dividend payout ratio is positively related to income smoothing, meaning that the higher the dividend payout ratio, the greater the possibility of management to smooth profits. The amount of dividends distributed will influence investors in making decisions to

buy shares (Suwaldiman & Lubis, 2023). The high level of dividend payments from a company will put greater pressure on management to be able to consistently maintain its dividend payments to investors. Shareholders tend to prefer stable and sustainable dividend distributions and consider the company's performance to be poor if dividend payments decrease and are unstable.

The results of this paper are consistent with those of Suwaldiman & Lubis (2023) and Budiasih (2019) who found that the dividend payout ratio significantly influences the prevalence of favorable income smoothing strategies. The findings of this study, however, go counter to those of Gunawati & Susanto (2019) investigation, which found no connection between income smoothing techniques and the dividend payout ratio.

The t-test shows that income smoothing tactics and company size are unrelated, indicating that the size of the company has no bearing on the degree of management used to smooth income. The large size of a company indicates that the company has great access to financial resources and technology that can be used to help manage profit fluctuations naturally without smoothing profits. Meanwhile, companies with small sizes tend to avoid manipulation because they have limited resources and the risk of being detected is greater. Investors in making their investments tend to look at the stability of the company's profits compared to looking at the size of the company.

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Research that is in line with this decision is research conducted Angreini & Nurhayati (2022) and Gunawati & Susanto (2019), both of which revealed that company size is related to income smoothing practices. However, these results are not in accordance with research conducted with Kimouche & Charchafa (2024) which asserted that income smoothing is positively impacted by the size of the company.

The independent variables employed simultaneously add to the influence of the dependent variable, according to the sig. value in the F test. Additionally, the computed F value > F table; 3.202 > 2.49 supports this conclusion

6. Conclusion Or Managerial Implications

The results of a series of tests resulted in decisions on profitability, leverage, and company size having no effect on income smoothing, managerial ownership having a negative effect while dividend payout ratio having a positive effect. Companies with high levels of profitability no longer need to smooth income to influence investor interest. However, companies are advised to supervise management by adjusting company policies and strategies to improve transparency and the quality of financial reports. In addition, there needs to be education for investors to focus on fundamental company indicators other than profitability such as operational cash flow or return on capital.

The size of a company's leverage level will not affect management to smooth profits because there is ease of debt repayment with facilities provided by the capital market, namely PT. Kliring and Penjaminan Efek Indonesia which is under the auspices of Bapepam. However, creditors may be concerned about financial stability when leverage is high, for that managers must provide education that calms creditors about debt management without having to engineer profit reports. In addition, companies need to supervise management in terms of maintaining optimal and transparent debt management in their financial reporting, so as to minimize the risk of actions that are detrimental to the company. For investors, it is necessary to pay attention to long-term financing policies and interest costs to ensure that debt can be managed properly by the company without increasing financial risk.

When managers have a direct interest in the company through share ownership, they tend to be more responsible and oriented towards transparency of financial reporting. Therefore, companies can consider providing incentives in the form of share ownership for managers to encourage alignment between management and shareholder interests and improve the quality of financial reporting. Investors are advised to choose companies with significant managerial ownership to reduce the potential risk of earnings manipulation.

Companies that implement a high dividend distribution policy need to be more careful about the potential for income smoothing to meet shareholder expectations. Therefore, companies can apply tighter supervision to their reporting processes and consider a more flexible dividend policy to reduce pressure on profit stability. Companies also need to implement an incentive system based on net profit

growth or long-term investment returns that does not encourage managers to prioritize short-term profits. Investors are advised to pay attention to dividend payments, if the payment is high even though profits are

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declining, it is likely to indicate pressure to maintain the image of profit stability..

The large size of a implies that the industries has excellent accessto financial resources and technology that can be used to help manage natural profit fluctuations without smoothing profits. Meanwhile, companies with small sizes tend to avoid manipulation because they have limited resources and the risk of being detected is greater. Although in terms of size of the business has no bearing on income smoothing practices, managers should focus on achieving financial performance and not rely on the company's scale by developing business strategies based on real results such as sustainable and quality long-term growth. In assessing investment potential, investors must understand that the company's added value is more important than its size and consider the company's innovation and adaptability as indicators of competitiveness.

This study is limited to a sample of companies consisting only of property and real estate companies, perhaps the study will produce different results if using different industrial sectors. This study only uses five independent variables including profitability, leverage, managerial ownership, dividend payout ratio and company size. Meanwhile, there are still other variables that have the potential to affect the results, so further research is needed using different variables. Referring to this limitation, it is necessary to add or change independent variables that can predict factors that have an influence on income smoothing practices such as accounting conservatism, cash holding, bonus plans, institutional ownership, company value, audit quality, corporate governance, public ownership, and company growth.

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IMPLEMENTATION OF GOOD CORPORATE GOVERNANCE PRINCIPLES IN THE MANAGEMENT OF VILLAGE FUNDS IN THE SURAJAYA VILLAGE GOVERNMENT, PEMALANG DISTRICT, PEMALANG REGENCY

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Abstract:

The village government is obliged to manage the money it receives as efficiently as possible. Many people do not know information about village funds due to a lack of transparency and knowledge. The aim of this applied research using a qualitative descriptive case study methodology is to find out how the government of Surajaya Village, Pemalang District, Pemalang Regency applies the principles of good corporate governance in managing village money. Interviews, documentation and observations were used to collect data. Data analysis was carried out by comparing the implementation of village fund management with research markers regarding the principles of healthy corporate governance (transparency, accountability, accountability, independence and fairness).The findings show that Surajaya Village has succeeded in implementing the principles of good corporate governance in managing village funds; However, the principle of transparency has certain weaknesses that must be corrected. Although openness meets only two of the four research indicators, the ideals of accountability, responsibility, independence, and justice fulfill all four indicators.

Keywords: *Good Corporate Governance, Village Fund, Village Government.*

1. Introduction

The village government is crucial to the growth of the village and controls many facets of daily life in an effort to enhance the welfare of the community (Sakti, 2018:3320). The central government has allocated village funds since 2015 with the aim that each village improves community welfare, follows up on physical and non-physical development, and develops the village economy. The government allocated 68 trillion rupiah of village funds to 74,961 villages in 434 districts/cities throughout Indonesia (Kristuti et al., 2023:62). With internal improvements in the way power is controlled, good governance supports a number of development objectives (Adhinata et al., 2020:336). The values of openness, responsibility, involvement, autonomy, and fairness are essential to good management. It is anticipated that effective governance in the political system will stop the misappropriation of village revenues and enhance their administration for the good of all stakeholders.

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Surajaya Village is located in Pemalang Sub-district, Pemalang Regency. Surajaya Village is approximately 6 km from the center of Pemalang Regency. The village funds obtained by Surajaya Village are classified as a large amount so that they must be managed optimally by the village government for the welfare of the community. According to siskeudes data for 2022-2024, Surajaya Village received village funds from the APBN as follows:

Table 1. 1Surajaya Village Fund Data

Year	**Total Village Fund**
2022	Rp. 1.704.093.000
2023	Rp. 1.652.379.000
2024	Rp. 1.678.057.000

Source: Surajaya Village Secondary Data, 2024

The efficient operation and growth of the village for the benefit of its residents depend heavily on the efficient administration of community funds. In the Pemalang Subdistrict, a number of villages have not, however, made the most of their village finances to repair their roads and other facilities. This condition can be seen from the people who complain that there are still damaged roads in several villages in Pemalang Sub-district. According to the Surajaya Village Government's website, reports on the distribution of village money and information about village funds are now unavailable. The lack of information on the Surajaya Village website makes it difficult for people who want to access information related to village fund management.This demonstrates that the Surajaya Village Government has not fully embraced the values of accountability and openness.

2. Literature Review

The contractual arrangement between principals and agents is explained by agency theory, which was first proposed by Jensen Meckling in 1976 and Alchian and Demsetz in 1972. The governmentin this case, the village chief and other village officials acts as agents in public sector organizations, while the people themselves serve as principals (Gwijangge et al., 2021:1552). The fundamental idea of good corporate governance is that a business should manage its operations to meet expectations so that it can be accountable to stakeholders (Adiva et al., 2023:41). Implementing the concept of good corporate governance can help businesses generate high corporate value and performance while reducing managers' opportunistic behavior (Calen et al., 2024:1874). Governments experiencing multicrisis (economic, legal, political and social) are required to create good governance.

According to Manossoh (2016: 23) Good Corporate Governance has 5 principles. The five principles are explained as follows:

1. Transparency

Based on the principle of openness, the government is obliged to convey information clearly and relevantly

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so that it is easy for the wider community to understand and obtain.

2. Accountability

The principle of accountability means that the government has a responsibility for its performance openly and fairly. The implementation of good accountability can minimize conflict and create optimal government performance.

3. Responsiveness

The principle of responsibility means that the government must comply with the rules that have been set and be responsible for its performance to the community.

4. Independence

The principle of independence means that the government must be professional and independent in running its government without any intervention from any party to avoid mutual domination of one party so that everything in making decisions can be carried out objectively.

5. Justice

According to the concept of justice, government operations must fairly and equally serve the rights and interests of the people.

The Village Fund is a policy set by the government in order to carry out regional development according to the priorities of each region. The central government provides authority in financial management as needed through the village fund allocation program. The goal of the program is to empower villages to oversee their own development. The central government regulates the use of village funds through legislation based on national priorities. Details regarding the priority use of village funds along with operational guidelines are stipulated through regulations of the authorized minister after coordinating with relevant ministries no later than before the start of the new fiscal year.

3. Research Method

This study uses a qualitative research design with an analytical descriptive approach to describe the subject based on the actual situation(Salamah, 2020:534).The case study methodology was applied in Surajaya Village, Pemalang District, Pemalang Regency. A case study is a type of research that explores a phenomenon or case and collects information thoroughly using various techniques over a period of time(Wahyuningsih, 2013:3). The results of the research only apply to the case on the object and cannot be used in cases on other objects. If there are similarities between the case study and other cases, then the research findings can be applied to those cases as well(Sugiyono, 2019:287).

The main source of information used is the results of interviews with community members and village officials regarding the management of village funds in accordance with good corporate governance standards. All documents related to the management of village funds, including financial data and utilization of funds for 2022–2024, are considered secondary data.Data collection is done through 3 methods, as follows:

1. Interview

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An interview is a conversation between two parties, namely between the interviewer and the interviewee to obtain certain information or information(Moleong & Lexy J, 2018:135).Interviews in this study were conducted with the village head, village secretary, finance head, 10 RW heads, 2 community leaders. The interviews were conducted in November.

2. Observation

Observation is an activity of observing the object of research directly to collect data(Sudaryono, 2016:87).Researchers observed the activities of managing village funds in Surajaya Village, observed the forms of transparency used by the village fund TPK, sought information and recorded information about the forms of accountability used in managing village funds

3. Documentation

Documentation is needed to complement the use of interview and observation techniques(Sudaryono, 2016:90). In this study, the required documentation is related to the management of village funds and other supporting data such as general description data of the village, photos of village deliberation activities and the use of village funds that can support the completeness of information on the object under study.

AccordingSugiyono (2019:321)the stages in analyzing data are as follows:

1. Data Reduction

Data reduction is an analysis by sharpening, focusing and sorting data so that the final results can be described and validated(Yusuf, 2016:255).

2. Data Presentation

Data presentation is done by presenting data in various forms such as tables, graphs, networks, brief descriptions, charts, flowcharts and the like (Sugiyono, 2019:325).

3. Inference

Drawing conclusions is the process of determining the core findings of the data that has been collected by finding linkages, similarities and differences (Sampulawa & Nindiasari, 2023:530)

4. Result and Discussion

4.1 The process of managing village funds by the Surajaya Village government

The process of managing village funds by the Surajaya Village government has five stages. The five stages are explained as follows:

1. Planning

The village government carries out the planning process together with the community in the implementation of village development programs. The planning stages are described as follows:

a. Hamlet deliberation

This deliberation aims to discuss and determine the needs in the hamlet.

b. Village Meeting

Village meetings are held to discuss the needs of each hamlet that have previously been discussed during

c. Village Development Plan Meeting

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Musrenbangdes is a forum organized by the village government to discuss and select programs or activities per year that are then determined in the RKP. The village government coordinates these programs to be compiled in the annual APBD. Then activities are selected that will be included in the village fund. When the village funds have been disbursed, the village government carries out activities in accordance with the Plan for the Use of Funds (RPD).

2. Implementation

The existence of national policies in the current year has an impact on the determination of policies for the allocation and use of village funds, which are directed to be more flexible. Villagefundactivitiesarecarriedoutby a TPKappointedand formed by the villagehead with the involvement of several communities.

3. Administration

Administrationistheactivityofrecordingeverytransactioninthemanagementofvillagefunds, both revenue and expenditure, which is the task of the finance head.

4. Reporting

Village governments have an obligation to report on the implementation of their duties, authorities, rights and responsibilities. The TPK will submit activity accountability reports to the Village Secretary. The report will be verified and rechecked to ensure that the village government carried out the activities in accordance with the regulations.

5. Accountability

The Head of Finance will collect the activity reports that have been submitted and verified, to be compiled into an accountability report in the form of SPJ.

4.2 Implementation of Transparency Principles in Village Fund Management in Surajaya Village

The minimumresearch indicators in the application of the principle of transparency are described in Table 4.1 below.

Tabel 4.1 MinimumResearchIndicators

MinimumResearch Indicators	**Implementationof*GCG*PrinciplesinVillage Fund Management in Surajaya Village**
Disclosureofinformationonvillagefund management documents and processes	1. APBD*banners*havenotbeeninstalledineach hamlet. 2. The village *website* has not been updated and managed optimally. 3. Installation of activity boards and inscription stones.
Deliberationsinvolvingthecommunity	ImplementationofMusdesandMusrenbangdes attended by community representatives.

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Availability of information and easy access to village fund management process	1. Information related to village funds is not yet available on the village's official *website* and other information is minimal. 2. Information related to village funds is only conveyed during village meetings.
Increased community participation in regional development	1. Village meetings are attended by community representatives. 2. Thecommunityparticipatesinworkprograms funded by village funds through community service, gotong royong and as workers.

Source: (Sedarmayanti, 2012:17), (Septiana & Hermanto, 2021:8)

The application of the principle of transparency in the management of village funds in Surajaya Village is shown by the deliberations attended by community representatives. Furthermore, the formationoftheTPK,whosemembersareappointedbythevillagehead,consistsofseveralvillage officialsandthecommunity.TheTPKisresponsibleforfinalizingandimplementingvillagefund managementactivities.Afterthat,thevillagegovernmenttogetherwiththeTPKwillsocializethe projects that will be built in each dusun. Based on the interview with the RW head, development activities also involve the participation of the local community to work, gotong royong or communityservice.Intheimplementationstage,thevillagegovernmentwillinstallactivityboards or information on projects to be builtfromvillagefundsin places wherethe projectactivitieswill be carried out. These boards contain information including the type of activity, the time of implementation,theproject,thesourceoffunds andthe budgetused.Basedontheinterviewwith the RWhead, before a development programis implemented, a socialization is usually conducted to discuss the implementation of development in the area or dusun. However, this socialization is usually only attended by the dusun head, RT head, RW head, and community leaders in the neighborhood.Furthermore,itisexpectedthateachRT/RWheadcanconveyittothecommunity.

The accountability stage was conveyed during the village meeting and the APBD banner was installedinfrontofthevillagehall,buttheinstallationdidnotlastlongbecauseitwasreplacedby anotherbanner.BasedontheconditionoftheSurajayaVillagearea,whichisdividedinto4dusun and is quite far from the village hall, the installation of this banner is not optimal in providing information to the community. In addition, the limited information media used by the village government means that many people are unaware of the accountability of village fund management.Socialmediaisoneofthemediatoaccessinformationeasily,sothatthecommunity can find out and access related village fund management quickly and easily through the village *website*. However, the Surajaya Village Government has not updated and managed the website optimally, so the information uploaded is still relatively minimal. This is due to the concentration ofworkcarriedoutbyeachvillageofficial.Theprovisionofinformationrelatedtothemanagement of village funds is only done through socialization during village meetings.

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4.3 Implementation of the Accountability Principle in Village Fund Management in Surajaya Village

The minimumresearch indicators tomeasure theapplicationofthe principle ofaccountabilityare described in Table 4.2 below.

Tabel 4.2 MinimumResearchIndicators

MinimumResearch Indicators	**Implementation of *GCG* Principles in VillageFundManagementinSurajaya Village**
There is clarity of functions and duties of each position.	1. Thedivisionoftasksisinaccordancewith the main tasks and functions and instructions from the village head as the person in charge. 2. Thereare PKPKD, PTPKD and TPK.
There is conformity between implementation and applicable procedures	1. The implementation of village fund activities is in accordance with the RKP. 2. The management of village funds is in accordance with the technicalities and regulations of the central government.
There is anorganizational structure	ThereisavillagegovernmentSOTKinthe management of village funds.
Reduced cases of collusion, corruption and nepotism	1. There has never been a case of collusion, corruption and nepotism in Surajaya Village. 2. AccountabilityreportingintheformofSPJ andLRAeverymonthoraftereachactivity is completed. 3. Supervisionormonitoringfromauthorized authorities such as the BPD, Village Facilitators, Dispermades and the District Inspectorate to the Village Government.

Source: (Sedarmayanti, 2012:17), (Septiana & Hermanto, 2021:8)

The laws and regulations in the management of village funds are a guideline for the Surajaya Village Government to carry out activities in the village and are required to be accountable by workingproperlyinaregulatoryandadministrativemanner.Thevillagegovernmentshowsclarity offunctionanddivisionoftaskscarriedoutinaccordancewiththeinstructionsofthevillagehead whichareadjustedtotheSTOK.TheSurajayavillagegovernmenthastargetsandstandardstobe achieved in managing village funds. The goal of the village government's target is to create a sustainablecommunitywitheffortstoimprovevariousaspectsofvillagelifewith100%absorption of village funds. The distribution ofvillage funds is divided into two stages, the first stage is 60% and 40% for the second stage. When the activity program has been implemented, the Surajaya Villagegovernment makesperiodicreportseverymonthwhichwillbereportedtotheBPDasthe communityrepresentativeandSPJtothesub-districthead.Submissionofreportstothecommunity is carried out

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when there are activities such as village meetings. Accountability reports are also reportedthroughtheVillageFinancialSystem(Siskeudes)applicationasamediumforthevillage governmenttoreportitsperformancetothecentralgovernment.Activityprogramsthatusevillage fundsmustbereportedontheprogressandimplementationofactivitiesthathavebeencarriedout or are ongoing.

This accountability report was prepared by the village secretary and the village finance chief, in accordance with applicable regulations. The village secretary as verifier will coordinate the implementation of activities by the TPK. The SPJ will then be further verified by the village facilitatorinthekecamatanandforwardedtotheupper-levelgovernmentperiodically.Supervision of the implementation of the village fund activity programis carried out by the community, BPD, village facilitators, officials from the Pemalang Dispermades, and the Pemalang Regency Inspectorate. The existence of monitoring from the competent authorities is one of the efforts to prevent the practice of corruption, collusion and nepotism.

4.4 Implementation of the Responsibility Principle in Village Fund Management in Surajaya Village

The minimum indicators of research on the application of the principle of responsibility are described in Table 4.3 below.

Table4.3 MinimumResearchIndicators

MinimumResearch Indicators	**Implementationof*GCG*PrinciplesinVillage Fund Management in Surajaya Village**
Governmentsensitivityinknowingand meeting the needs of the community	1. Thevillagegovernmenthasa*databaseofthe* needs of eachdusun. 2. ThereisaMusdustodiscussproposalsfrom the community prior to the Musyawarah Desa and Musrenbangdes.
Taskaccountability report	1. The existence of LKPPD, LPPD, SPJ and LRA. 2. Accountabilityreportsarereportedregularly to the kecamatan and kabupaten in a timely manner.
Development implementation activities are carried out in accordance with applicable rules and policies	1. Village fund management activities are carried out in accordance with the RKP. 2. village funds have been realized. Physical activities such as paving village roads, building taluds, building macadam farming roads, rebating concrete, building drainage and so on. Non-physical activities such as community organization development training,appropriatetechnologytraining.

Source: (Sedarmayanti, 2012:17), (Septiana & Hermanto, 2021:8)

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Theaccountabilityofthevillagegovernmentinmanagingvillagefundsisrealizedbycarryingout activities in accordance with the RKP. Then at the end of the year, it reports the LKPPD to the BPD. In addition, the village government reports the Accountability Letter (SPJ), Budget Realization Report (LRA) at the end of each activity and LPPD at the end of the year to be submitted to the sub-district and district. The LKPPD and LPPD are reported at the end of each year a maximum of 3 months after the end of the fiscal year, while the SPJ and LRA are reported every month and every activity program has been completed. The Surajaya village government tries to always be on time in carrying out these reports. The sub-district government monitors the preparationofaccountabilityreportsinthevillageandprovidesregulationsregardingthedeadline for submitting accountability reports. Accountability reports that have not been reported by the deadlinetothekecamatanandkabupatenarenotallowedtodisbursefundsforthenextfiscalyear.

ThemanagementofvillagefundsinSurajayaVillagewascarriedoutinaccordancewithapplicable laws and regulations at all stages. At each stage, the village government always receives supervision and monitoring from the competent authority and the community. In addition, it is necessarytoincludesupportingevidenceineveryactivityprocess,especiallywhenspending village funds and reporting accountability. The village government's skills and sensitivity are needed to determine the priority scale and all forms of urgency that occur in the community. The village government's ability to be sensitive or skillful in solving problems and needs in the community is shown by the existence of a database related to community needs in each dusun.

4.5 Implementation of the Independence Principle in Village Fund Management in Surajaya Village

Theminimumresearchindicatorsontheapplicationoftheprincipleofindependencearedescribed in Table 4.4 below.

Table4.4 MinimumResearchIndicators

MinimumResearch Indicators	**Implementationof*GCG*PrinciplesinVillage Fund Management in Surajaya Village**
Tasksarecarriedoutinaprofessional manner	Maintasksandfunctionsarecarriedoutin accordance with applicable regulations.
Decision-making and government policies are carried out by the village head by taking into account suggestions and input from the community.	1. Jointdecisionsthroughdeliberationtoreach consensusbyconsideringproposalsfromthe community at the Village Consultative Meeting in accordance with applicable regulations. 2. TheSurajayaVillageGovernmentdoesnot acceptproposalsforpersonalinterestsinthe management of village funds.

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Thereisnointerventionfromotherparties and or superiors of the village government	1. Village meetings are only represented by representatives of the Surajaya Village community. 2. There has never been any intervention from outside the village.

Source: (Sedarmayanti, 2012:17), (Septiana & Hermanto, 2021:8)

The implementation of the principle of independence in the management of village funds in SurajayaVillageisrealizedbytheimplementationofdutiesandauthoritiesinaccordancewiththe dutiesandfunctionswithoutanyinfluencefromotherparties.Villagedeliberationsaimtoprovide a forum for the community to express opinions and proposals so that decision-making is carried out by consensus. Village deliberations involve all parties representing the community. So far, there has been no intervention from other parties in the management of village funds in Surajaya Village. Government regulations and applicable laws serve as protection from unauthorized and interested parties in the management of village funds.

4.6 Application of the Principle of Justice in the Management of Village Funds in Surajaya Village

The minimum research indicators on the application of the principle of justice are described in Table 4.5 below.

Table4.5 Minimum Research Indicators

MinimumResearch Indicators	**Implementationof*GCG*PrinciplesinVillage Fund Management in Surajaya Village**
Improvedgenderequality	Decision-makingatthevillagemeetingwas attended by PKK and Posyandu cadres.
Reducedcases of discrimination	1. There has never been acase ofdiscrimination in Surajaya Village. 2. The implementation of activities was carried out in a *rolling manner* in each hamlet in Surajaya Village. 3. Prioritization in determining the activities to be implemented.
Increased filling of positions in accordance with provisions on gender equality	1. Therearewomen intheTPK. 2. TheHeadofFinanceinSurajayaVillage Government is female. 3. There are 2 female-gendered dusun heads in Surajaya Village. 4. Oneofthe BPDmembers is female
Equalopportunityandrighttoexpress opinions	All participants in the village deliberation have the same opportunity and right to express their

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MinimumResearch Indicators	ImplementationofGCGPrinciplesinVillage Fund Management in Surajaya Village
	opinions or make suggestions.

Source:(Sedarmayanti, 2012:17), (Septiana & Hermanto, 2021:8)

The village government acts fairly by carrying out development activities in rotation or rolling in eachdusuninSurajayaVillage.Developmentactivitiessourcedfromvillagefundsarecarriedout bydeterminingtheprioityscale,aspectsorareasthatrequiredevelopmentandimprovement.The utilization of village funds is also used for non-physical activities such as handling stunting, providing additional food (PMT) and so on. Based on interviews with RW heads and community leaders, it was explained that the decisions made by the village deliberation had involved the community without discrimination and all communities had the same opportunity to express their opinions. During the village deliberation, there were representatives from the PKK and posyandu cadres. In addition, the presence of women in the TPK, a female member of the BPD, a female head of finance and two female dusun heads in Surajaya Village indicate that there is gender equalityintheprocessofmanagingvillagefunds.Thevillagegovernmentseekstoopenaccessto thecommunityinaccommodatingallformsofsuggestionsandcriticismfromthecommunity,with the aim of creating justice for the people of Surajaya Village.

5. Conclusion Or Managerial Implications

Based on the results of the analysis and discussion using the minimum research indicators, it can be concluded that the application of the principles of *good corporate governance* in the management of village funds in Surajaya Village has been well implemented, but there are shortcomings in the principle of transparency that need to be improved. The principles of accountability, responsibility, independence and fairness fulfill all research indicators while transparency out of 4 research indicators only 2 are fulfilled. This is because the openness and availabilityofinformationonvillagefundmanagementcannotbeaccessedquicklyandeasily.The SurajayaVillageGovernmentonlyinstalledtheAPBDbannerinthevillagehallandtheinstallation didnotlastlong.Thisbannerinstallationisnotoptimalinprovidinginformationtothecommunity. In addition, information related to the management of village funds is not yet available on the village's official *website*. Therefore, it is recommended that the Surajaya Village Government increasethenumberofbanners installedduringthefiscalyear.Thevillage *website*shouldalsobe reactivatedandmanagedsothatinformationcanbeaccessedquicklyandmoreeasily.Inaddition, itisnecessarytoconductsocializationregardingprogramsthatareallowedtousevillagefundsto RT heads, RW heads and dusun heads at least once before the implementation of the musrenbangdes.

6. Limitations and Future Research

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Somelimitationsinthisstudyareasfollows:

1. Thisresearchwaslimitedtointerviewswiththe villagehead,villagesecretary,financechief, 10 rw heads and 2 community leaders.
2. Thedataobtainedinthisstudyisapproximatelywithinaperiodof1.5months,soithaslimited time in conducting research.

The results and limitations of the study can be used as a source of reference for the next research agenda, namely:

1. Adding interview sources such as the BPD, PKK representatives, youth organization representativesandrecipientsofDirectCashAssistance(BLT)sothattheinformationanddata obtained can cover various elements of the community.
2. Increase the research period so that the data obtained is more optimal in expanding related sources.

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CROSS-BORDER PAYMENTS AND SANCTIONS COMPLIANCE: NAVIGATING THE COMPLEXITIES OF INTERNATIONAL TRADE BY ZIMBABWE FINANCIAL INSTITUTIONS

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ABSTRACT: Cross-border payments are a fundamental aspect of international trade, enabling financial transactions between parties across different countries. However, Zimbabwean financial institutions face significant challenges in navigating the complex landscape of cross-border payments, especially in the context of international sanctions. These sanctions, imposed by various global actors such as the United States, the European Union, and the United Nations, have far-reaching implications for Zimbabwe's trade relations, the ability of financial institutions to engage in international transactions, and the overall economy. This paper explores the intricacies of cross-border payments and sanctions compliance, examining the impact of sanctions on Zimbabwe's financial institutions, the mechanisms in place for compliance, and the strategies that institutions adopt to ensure smooth operations in international trade. The study will also analyze the role of alternative payment systems, financial technology (fintech), and regional integration mechanisms, such as the Southern African Development Community (SADC), in mitigating the challenges posed by sanctions. The paper concludes with recommendations for Zimbabwean financial institutions on enhancing their compliance frameworks, strengthening partnerships, and navigating the changing global financial environment.

Key Words: *Cross Border Payments: Compliance Sanctions*

1.0 INTRODUCTION

Cross-border payments play a crucial role in facilitating international trade, investment, and remittances. Financial institutions, particularly banks, are essential players in processing these payments, ensuring that transactions comply with both domestic and international financial regulations. Zimbabwe, like many countries facing economic sanctions, encounters unique challenges when dealing with cross-border payments. These sanctionsimposed by the United States, the European Union, and other global entitiesrestrict Zimbabwean financial institutions' access to international payment systems, affecting trade relations, investment flows, and remittances. The complexities of ensuring sanctions compliance while facilitating international transactions require financial institutions to adopt robust frameworks to manage these challenges.The primary goal of this paper is to assess the challenges Zimbabwean financial institutions face in cross-border payments, focusing on the impact of sanctions. Specifically, it will explore the legal and regulatory landscape of cross-border payments for Zimbabwean institutions.The mechanisms in place for

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sanctions compliance and the impact of such compliance on international trade. It also looks at the role of alternative payment systems and fintech solutions in overcoming sanctions-related challenges. The paper then proffers policy recommendations to enhance the effectiveness of Zimbabwean financial institutions in navigating international trade complexities.

2.0LITERATURE REVIEW

2.1.1 Cross-Border Payments and Financial Regulations

Cross-border payments refer to any transactions where the payer and the payee are located in different countries. These payments are subject to various financial regulations, which include anti-money laundering (AML), counter-terrorism financing (CTF), and sanctions compliance measures. For Zimbabwean financial institutions, these regulations have become increasingly complex due to the presence of sanctions targeting the country's financial sector. Several studies have shown how international sanctions can restrict the use of global payment systems like SWIFT, making it difficult for countries like Zimbabwe to participate in global trade.

2.1.2 Sanctions and their Impact on Financial Institutions

Economic sanctions, particularly those imposed by the United States and the European Union, are designed to target a country's financial institutions, government entities, and specific individuals or businesses. These sanctions often prevent Zimbabwean financial institutions from using global payment systems such as SWIFT or restrict access to foreign currency exchanges. In addition, global financial institutions may avoid transacting with Zimbabwean entities for fear of facing secondary sanctions. This, in turn, affects Zimbabwe's ability to trade effectively with other countries and hampers foreign investment.

2.1.3 Sanctions Compliance Frameworks

Financial institutions must have robust compliance frameworks in place to ensure adherence to both domestic and international sanctions. These frameworks typically include monitoring and screening systems for transactions, reporting suspicious activities, and conducting thorough due diligence on cross-border transactions. However, the complexity of sanctions laws and the dynamic nature of international trade mean that institutions must continuously update their compliance strategies. Zimbabwean financial institutions face significant challenges in adhering to these standards while also attempting to maintain global trade connections.

2.1.3 Alternative Payment Systems and Fintech Solutions

In response to the challenges posed by sanctions, Zimbabwean financial institutions are increasingly turning to alternative payment systems and fintech solutions. These may include using regional platforms for transactions, engaging in barter trade agreements, and leveraging cryptocurrency technologies for cross-border payments. Blockchain technology, for example, offers a potential avenue for bypassing traditional financial intermediaries, enabling direct peer-to-peer transactions. Several studies highlight the growing importance of fintech solutions in circumventing the limitations imposed by international sanctions.

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2.1.4 Regional Integration and Trade Facilitation

Regional integration mechanisms, such as the Southern African Development Community (SADC), have the potential to alleviate some of the pressures faced by Zimbabwean financial institutions. By promoting intra-regional trade, improving payment systems, and enhancing cooperation among member states, SADC can help mitigate the challenges imposed by global sanctions. The establishment of regional payment platforms, such as the Pan African Payment and Settlement System (PAPSS), could offer Zimbabwean financial institutions more flexibility in facilitating cross-border trade within the region.

3.0 FINDINGS AND DISCUSSION

- **Sanctions Compliance and Its Impact on Zimbabwe's Trade**:The imposition of sanctions on Zimbabwe has significantly hampered its ability to engage in cross-border payments through traditional global financial systems. Zimbabwean financial institutions are often unable to use SWIFT for international transfers, leading to delays, higher transaction costs, and, in some cases, the inability to settle transactions. The lack of access to international payment platforms creates a barrier to trade with other countries and reduces Zimbabwe's economic competitiveness on the global stage.
- **Alternative Payment Systems and Regional Solutions**:To overcome the challenges posed by sanctions, Zimbabwean financial institutions have increasingly relied on alternative payment systems, such as the use of cryptocurrencies, bartering mechanisms, and regional trade platforms. Additionally, the growing adoption of mobile money services within Africa has provided a cost-effective means for conducting cross-border payments. The implementation of the Pan African Payment and Settlement System (PAPSS) by the African Continental Free Trade Area (AfCFTA) offers a potential solution to reduce reliance on Western-controlled payment systems and ease trade within the African region.
- **Role of Fintech in Sanctions Evasion**:Financial technology has emerged as a critical tool in facilitating cross-border payments in Zimbabwe, particularly in circumventing the restrictions imposed by sanctions. Technologies such as blockchain and cryptocurrencies provide an alternative to traditional banking systems, offering Zimbabwean traders the ability to transact across borders with greater speed, lower fees, and fewer regulatory constraints. However, these alternatives are not without risks, as they can face regulatory scrutiny, and their use may be limited by the technological capacity of Zimbabwe's financial institutions.
- **Challenges of Regional Integration and Trade**:Regional integration efforts, particularly those within SADC, have provided some relief to Zimbabwe by facilitating regional trade and payments. However, much more needs to be done to develop an integrated regional payments system that can bypass the constraints imposed by global sanctions. PAPSS offers significant promise in enabling African countries, including Zimbabwe, to conduct transactions in African currencies and through African financial networks, thus minimizing reliance on Western-controlled systems.

4.0 POLICY RECOMMENDATIONS

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(i)Zimbabwean financial institutions should invest in advanced technology systems to strengthen their sanctions compliance frameworks. These systems should be able to monitor international trade activities, identify transactions that may violate sanctions, and provide real-time reporting to authorities.

(ii)Zimbabwe should actively participate in the development and expansion of regional payment systems, such as PAPSS, to facilitate smoother cross-border transactions within Africa. This will reduce the reliance on Western financial systems and create more trade opportunities within the continent.

(iii)The government and financial institutions should promote the use of financial technologies, including blockchain and cryptocurrency, to circumvent sanctions and reduce transaction costs. Partnerships with fintech companies could provide the necessary infrastructure to enable secure, efficient cross-border payments.

5.0 CONCLUSION

Zimbabwean financial institutions face significant challenges in conducting cross-border payments due to international sanctions. While these sanctions restrict access to global payment systems, alternative payment mechanisms, including fintech solutions and regional integration initiatives like PAPSS, offer promising solutions. To enhance their ability to navigate the complexities of international trade, Zimbabwe's financial institutions need to invest in compliance technologies, collaborate with regional payment platforms, and foster financial innovation to bypass traditional systems and reduce their reliance on Western financial networks.

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ENCOURAGING EMPLOYEE MORALE: ESSENTIAL IN LEADING TO PROGRESSION OF ORGANIZATIONS

Dr. Radhika Kapur

Abstract

The main objective of this research paper is to understand that in all types of organizations, encouraging employee morale is regarded to be of utmost significance. Human resources are regarded as the assets of all types of organizations. They are required to make use of their educational qualifications, skills and abilities in carrying out the overall functioning of the organizations in an adequate manner. The individuals in leadership positions are required to put into operation all the factors, which are essential in encouraging employee morale. It is necessary to lead to up-gradation of motivation and concentration levels among employees. As a consequence of leading to their up-gradation, the employees will render an important contribution in doing well in all types of job duties and generating desired outcomes. Furthermore, they will contribute in meeting the expectations of individuals in leadership positions. The up-gradation of knowledge and competencies among employees is facilitating in enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Hence, emphasis needs to be put on encouraging employee morale throughout the jobs of leaders. Therefore, it is understood on a comprehensive basis that encouraging employee morale is essential in leading to progression of organizations. The main concepts that are taken into account in this research paper are, understanding the meaning and significance of encouraging employee morale, measures to be put into operation in encouraging employee morale and advantages of encouraging employee morale.

Keywords: *Abilities, Effective, Employee Morale, Encouraging, Job Duties, Methodologies, Organizations, Skills*

Introduction

The organizations are of different types, i.e. educational institutions, training centres, production and manufacturing organizations, services organizations, financial institutions, non-government organizations, agencies, and so forth. In all types of organizations, human resources are regarded as the assets. They are required to make use of their educational qualifications, skills and abilities in an effective manner. The individuals in leadership positions need to be well-informed in terms of measures, which are facilitating in encouraging employee morale. The morale is referred to honing of determination, optimism, confidence and self-esteem among employees (Enhancing Employability, 2007). Throughout the implementation of various types of job duties and responsibilities, individuals are required to augment information in terms of organizational goals and objectives. Furthermore, communication processes are required to take place in an effective manner. These are facilitating in augmenting information in terms of various subjects and concepts; exchanging different types of ideas and viewpoints; obtaining answers to all types of questions and

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clarifying doubts in terms of various subjects and concepts. Therefore, implementing communication processes in an effective manner among employers and employees is facilitating in encouraging employee morale.

The employees are to be imparted information in terms of their job duties and responsibilities. These are manageable and complicated, these are implemented in less amount of time or can be more time-consuming and these are carried out on one's own or through working in collaboration and integration with other members. Throughout the implementation of various types of job duties and responsibilities, individuals need to possess adequate information in terms of these. Furthermore, individuals need to be well-informed in terms of techniques, which are facilitating in carrying these out in an appropriate manner (Employee-Centred Leadership Style, 2018). The individuals in leadership positions are required to augment information in terms of these among employees. Furthermore, employees are required to inculcate the traits of morality, ethics, diligence and conscientiousness. These are considered as vital in doing well in all types of job duties and responsibilities and generating desired outcomes. As a consequence, one will be well-prepared in terms of ways of meeting the expectations of individuals in leadership positions. Therefore, in encouraging employee morale, information needs to be generated in terms of different types of job duties and responsibilities.

Understanding the Meaning and Significance of Encouraging Employee Morale

In order to carry out all types of job duties and responsibilities in an adequate manner, individuals need to augment information in terms of various types of methodologies and procedures. These are referred to the ways of doing well in all types of job duties and responsibilities. Furthermore, one will be well-prepared in terms of ways of meeting the expectations of individuals in leadership positions. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an adequate manner. In addition, individuals will hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. This is considered vital in carrying out all types of job duties and responsibilities in an appropriate manner.

The individuals in leadership positions are required to augment information in terms of these among employees. Furthermore, employees are required to inculcate the traits of morality, ethics, diligence and conscientiousness. These are considered vital in doing well in all types of job duties and responsibilities and generating desired outcomes. As a consequence, one will be well-prepared in terms of ways of enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Hence, throughout the implementation of job duties and responsibilities, it is necessary to augment information in terms of various types of methodologies and procedures. Therefore, individuals are able to acquire an efficient understanding of the meaning and significance of encouraging employee morale, when they are augmenting information regarding various types of methodologies and procedures.

With advancements taking place and with the advent of modernization and globalization, individuals are required to augment information in terms of various types of modern, scientific and innovative methods and materials. The different types of these methods and materials are, utilization of various types of tools, devices, apparatus, equipment, machinery, and technologies. In all types of organizations, individuals,

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belonging to all job positions in the hierarchy need to make use of these methods and materials in a satisfactory manner. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an adequate manner. In addition, individuals will hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. This is considered vital in carrying out all types of job duties and responsibilities in an appropriate manner.

The individuals in leadership positions are required to augment information in terms of these among employees. Furthermore, employees are required to inculcate the traits of effectiveness, integrities, meticulousness and assiduousness. The job duties and responsibilities are put into operation in an effective manner as a consequence of utilizing these methods and materials. These are considered vital in doing well in all types of job duties and responsibilities and generating desired outcomes in a satisfactory manner. As a consequence, one will be well-prepared in terms of ways of enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Hence, throughout the implementation of job duties and responsibilities, it is necessary to augment information in terms of various types of these methods and materials. Therefore, one is able to acquire an understanding of the meaning and significance of encouraging employee morale, when they are utilizing various types of modern, scientific and innovative methods and materials.

It is understood on a comprehensive basis that within the course of putting into operation all types of job duties and responsibilities, the individuals, belonging to all job positions in the hierarchy experience various types of problems. The different factors in terms of which these take place are, job duties, responsibilities, methodologies, procedures, techniques, approaches, work pressure, unawareness in terms of various factors, lack of implementation of time-management skills, lack of analytical and critical-thinking skills, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities and so forth. The influence of various types of problems is experienced in a major or minor form. The individuals are required to provide solutions to these in an effective manner. Furthermore, these are prevented from giving rise to impediments within the course of generation of desired outcomes.

In encouraging employee morale, the individuals in leadership positions are required to impart information in terms of meaning and significance of problem-solving skills. These are the skills, which are facilitating in identifying the causes of problems. After the causes have been identified, one needs to provide solutions to these in an effective manner. Furthermore, these are prevented from giving rise to impediments within the course of doing well in all types of job duties and responsibilities and generating desired outcomes. As a consequence of providing solutions to various types of problems, individuals will contribute in an effective manner in encouraging employee morale. Therefore, an understanding of the meaning and significance of encouraging employee morale is acquired, when different types of problems are solved in an effective manner.

Measures to be put into operation in Encouraging Employee Morale

In all types of organizations, human resources, belonging to all job positions are required to put into operation various types of job duties and responsibilities. These are required to be implemented in a well-organized and satisfactory manner. One of the important aspects that needs to be taken into account is,

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these need to be favourable in enhancing organizational culture. Furthermore, overall structure of the organizations will be up-graded. The individuals in leadership positions need to put emphasis on encouraging employee morale. The employees need to be well-prepared in terms of factors, which are facilitating in augmenting their competencies and abilities. Furthermore, traits of morality, ethics, diligence and conscientiousness are to be implemented in an adequate manner (Enhancing Employability Report prepared for the G20, 2016).

Throughout the implementation of job duties and responsibilities, the leaders are required to augment information in terms of measures to be put into operation in encouraging employee morale. Furthermore, positivity needs to be reinforced in all types of measures. All types of measures are to be implemented in a well-organized and satisfactory manner. One of the important aspects that needs to be taken into account is, all types of measures need to be approving in putting into operation all types of tasks and activities in accordance to expectations of leaders. Therefore, measures to be put into operation in encouraging employee morale are stated as follows:

Implementing Effective Communication Processes

Throughout the implementation of various types of job duties and responsibilities, individuals are required to augment information in terms of organizational goals and objectives. Furthermore, communication processes are required to take place in an effective manner among all members, irrespective of their job positions in the hierarchy. These are facilitating in augmenting information in terms of various subjects and concepts; exchanging different types of ideas and viewpoints; obtaining answers to all types of questions and clarifying doubts in terms of various subjects and concepts. Furthermore, individuals are required to be well-informed in terms of communication ethics, i.e. making use of polite language and decent words; treating others with respect and courtesy; making provision of factual information; reinforcing the traits of efficiency, honesty and truthfulness; depicting the traits of helpfulness and co-operation and possessing an approachable nature and an amiable attitude.

As a consequence of acknowledging and implementing communication ethics, individuals will contribute in an appropriate manner in encouraging employee morale. Hence, implementing communication processes in a satisfactory manner among employers and employees is facilitating in encouraging employee morale. One of the important aspects that needs to be taken into account in this case is, all the members, irrespective of their job positions in the hierarchy will contribute in forming cordial and amiable terms and relationships with each other. Furthermore, support will be acquired in doing well in all types of job duties and generating desired outcomes. Therefore, implementing effective communication processes is regarded as one of the indispensable measures to be put into operation in encouraging employee morale.

Imparting Information regarding Job Duties and Responsibilities

The employees are to be imparted information in terms of their job duties and responsibilities. These are manageable and complicated, these are implemented in less amount of time or can be more time-consuming and these are carried out on one's own or through working in collaboration and integration with other members. Throughout the implementation of various types of job duties and responsibilities, individuals need to possess adequate information in terms of these. Furthermore, individuals need to be well-informed in terms of techniques, which are facilitating in carrying these out in a satisfactory manner. Furthermore,

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development of mutual understanding is facilitating in obtaining help and support in carrying these out in an efficacious manner.

The individuals in leadership positions are required to augment information in terms of these among employees. Furthermore, employees are required to inculcate the traits of morality, ethics, diligence and conscientiousness. These are considered vital in doing well in all types of job duties and responsibilities and generating desired outcomes. As a consequence, one will be well-prepared in terms of ways of meeting the expectations of individuals in leadership positions. Hence, in encouraging employee morale, information needs to be generated in terms of different types of job duties and responsibilities. The individuals need to augment information in terms of traits of efficiency, honesty and truthfulness. Therefore, imparting information regarding job duties and responsibilities is one of the significant measures to be put into operation in encouraging employee morale.

Generating Information regarding Methodologies and Procedures

In order to carry out all types of job duties and responsibilities in an adequate manner, individuals need to augment information in terms of various types of methodologies and procedures. These are referred to the ways of doing well in all types of job duties and responsibilities. Furthermore, one will be well-prepared in terms of ways of meeting the expectations of individuals in leadership positions. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in an adequate manner. In addition, individuals will hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. This is considered vital in carrying out all types of job duties and responsibilities in a satisfactory manner.

The individuals in leadership positions are required to augment information in terms of these among employees. Furthermore, employees are required to inculcate the traits of goodness, integrities, meticulousness and industriousness. These are considered essential in doing well in all types of job duties and responsibilities and generating desired outcomes. As a consequence, one will be well-prepared in terms of ways of enhancing organizational culture and promoting enrichment of overall structure of the organizations. Hence, throughout the implementation of job duties and responsibilities, it is necessary to augment information in terms of various types of methodologies and procedures. Therefore, generating information regarding methodologies and procedures is an eminent measure to be put into operation in encouraging employee morale.

Augmenting Knowledge regarding Pioneering Methods and Materials

With the advent of technologies, individuals are required to augment information in terms of various types of pioneering methods and materials. The different types of these methods and materials are, utilization of various types of tools, devices, apparatus, equipment, machinery and technologies. In all types of organizations, individuals, belonging to all job positions in the hierarchy need to make use of these methods and materials in an adequate manner. The individuals need to acquire an efficient understanding of the concepts. Furthermore, they need to get engaged in regular practice. The regular practice is facilitating in augmenting information and understanding in a suitable manner. In addition, individuals will hone confidence levels and overcome the feelings of apprehensiveness and vulnerability. This is considered vital

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in carrying out all types of job duties and responsibilities in an appropriate manner.

The individuals in leadership positions are required to augment information in terms of these among employees. Furthermore, employees are required to inculcate the traits of efficiency, reliabilities, precision and sedulousness. The job duties and responsibilities are put into operation in an effective manner as a consequence of utilizing these methods and materials. These are considered crucial in doing well in all types of job duties and responsibilities and generating desired outcomes in a satisfactory manner. As a consequence, one will be well-prepared in terms of ways of enhancing organizational culture and leading to up-gradation of overall structure of the organizations. Hence, throughout the implementation of job duties and responsibilities, it is necessary to augment information in terms of various types of these methods and materials. Therefore, augmenting knowledge regarding pioneering methods and materialsis an expedient measure to be put into operation in encouraging employee morale.

Providing Solutions to various Problems

Within the course of putting into operation all types of job duties and responsibilities, the individuals, belonging to all job positions in the hierarchy experience various types of problems. The different factors in terms of which these take place are, job duties, responsibilities, methodologies, procedures, techniques, approaches, work pressure, unawareness in terms of various factors, lack of implementation of time-management skills, lack of analytical and critical-thinking skills, scarcity of financial, human, technical, material and information resources, lack of infrastructure, amenities and facilities, peer issues, health problems, illnesses and so forth. The influence of various types of problems is experienced in a major or minor form. The individuals are required to provide solutions to these in an effective manner. Furthermore, these are prevented from giving rise to impediments within the course of generation of desired outcomes.

In encouraging employee morale, the individuals in leadership positions are required to impart information in terms of meaning and significance of problem-solving skills. These are the skills, which are facilitating in identifying the causes of problems. After the causes have been identified, one needs to provide solutions to these in an appropriate manner. Furthermore, these are prevented from giving rise to impediments within the course of doing well in all types of job duties and responsibilities and generating desired outcomes. As a consequence of providing solutions to various types of problems, individuals will contribute in an effective manner in encouraging employee morale. Therefore, providing solutions to various problems is a renowned measure to be put into operation in encouraging employee morale.

Augmenting Skills and Abilities

In all types of organizations, individuals, belonging to all job positions need to put emphasis on augmenting skills and abilities. The different types of skills that need to be honed are, communication skills, time-management skills, analytical skills, critical-thinking skills, problem-solving skills, technical skills, creative skills, leadership skills, negotiation skills, personal skills, professional skills, presentation skills, public-speaking skills, artistic skills and academic skills. On the other hand, abilities, which need to be honed are, convincing, persuasion, planning, organizing, directing, leading, controlling, co-ordinating, emotional intelligence, systems thinking, possessing the abilities to work under stress, putting in efforts to one's best abilities, coping with various types of dilemmas and challenging situations and carrying out all types of tasks and activities in an adequate manner. The individuals are required to provide solutions to these

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in a well-ordered and satisfactory manner. Furthermore, these are prevented from giving rise to impediments within the course of doing well in one's job duties and generation of desired outcomes.

In encouraging employee morale, the individuals in leadership positions need to put emphasis on leading to up-gradation of different types of skills and abilities. These are required to be put into operation in a well-organized and regimented manner. As a consequence of leading to up-gradation of various types of skills and abilities, individuals will contribute in an effective manner in encouraging employee morale. One of the important aspects is, individuals will render an important contribution in meeting the expectations of individuals in leadership positions. Therefore, augmenting skills and abilities is an essential measure to be put into operation in encouraging employee morale.

Inculcating the Traits of Morality and Ethics

In all types of organizations, individuals, belonging to all job positions need to put emphasis on inculcating the traits of morality and ethics. These are the traits, which are facilitating in differentiating between various types of appropriate and inappropriate factors; reinforcing a constructive approach; forming positive viewpoints in terms of various factors and individuals; promoting a normal mind-set; coping with psychological problems of anger, stress, anxiety, frustration and depression; augmenting various types of skills and abilities; leading to up-gradation of motivation and concentration levels; putting in efforts to one's best abilities; possessing the abilities to work under stress and carrying out different types of tasks and activities in an adequate manner. Throughout the implementation of various types of job duties and responsibilities, all members, belonging to all job positions need to acknowledge and implement these traits.

In encouraging employee morale, the individuals in leadership positions need to put emphasis on strengthening these traits. These are required to be put into operation in a well-ordered and disciplined manner. As a consequence of acknowledging the meaning and significance of these traits, individuals will contribute in an effective manner in encouraging employee morale. One of the important aspects is, individuals will render an important contribution in doing well in their job duties, achieving desired goals and meeting the expectations of individuals in leadership positions. Hence, these traits need to be honed on regular basis by all members. Therefore, inculcating the traits of morality and ethicsis a prominent measure to be put into operation in encouraging employee morale.

Implementing the Traits of Diligence, Resourcefulness and Conscientiousness

Implementing the traits of diligence, resourcefulness and conscientiousness is regarded to be of utmost significance by individuals, belonging to all job positions in the hierarchy. As a consequence of acknowledging and implementing these traits, individuals will put into operation certain factors, i.e. honing analytical, critical-thinking and problem-solving skills; making wise and productive decisions; being well-informed in terms of job duties and responsibilities; being well-equipped in terms of methodologies and procedures; utilizing various types of modern, scientific and innovative methods and materials; augmenting various types of skills and abilities; leading to up-gradation of motivation and concentration levels; putting in efforts to one's best abilities; possessing the abilities to work under stress; providing solutions to various types of problems and carrying out different types of tasks and activities in an adequate manner.Throughout the implementation of various types of job duties and responsibilities, all members, belonging to all job positions need to acknowledge and implement these traits.

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In encouraging employee morale, the individuals in leadership positions need to put emphasis on strengthening these traits. These are required to be put into operation in a well-organized and regimented manner. As a consequence of acknowledging the meaning and significance of these traits, individuals will contribute in a satisfactory manner in encouraging employee morale. One of the important aspects is, individuals will render an important contribution in doing well in their job duties, generating desired outcomes and meeting the expectations of individuals in leadership positions. Hence, it is understood on a comprehensive basis, acknowledgement and implementation of these traits is considered to be meaningful. Therefore,implementing the traits of diligence, resourcefulness and conscientiousness is a favourable measure to be put into operation in encouraging employee morale.

Managing Resources

In all types of organizations, management of resources is regarded to be of utmost significance. The various types of resources that need to be managed are, financial, human, technical, material and information. The financial resources are monetary resources. These are utilized in order to make purchases of various items, acquire services of service providers, and fulfil different types of needs and requirements. Human resources are assets. They are required to make use of their educational qualifications, skills and abilities in an effective manner. Technical resources are various types of technologies, i.e. computers, lap-tops, I pads, scanners, printers, photo-copiers, audio-visual aids, projectors and so forth. Material resources are various types of tools, devices, apparatus, machinery, equipment and gear. Information resources are books, articles, reports, projects, newspapers, magazines, other reading materials and internet. The individuals, belonging to all job positions need to be well-informed in terms of methods that are facilitating in managing resources in an adequate manner (Environmental Trends, 2013).

In encouraging employee morale, the individuals in leadership positions need to put emphasis on managing all types of resources in an adequate manner. These are required to be utilized in a well-ordered and efficient manner. As a consequence of acknowledging the meaning and significance of management of all types of resources, individuals will contribute in a satisfactory manner in encouraging employee morale. One of the important aspects is, individuals will render an important contribution in doing well in their job duties, generating desired outcomes and meeting the expectations of individuals in leadership positions. Hence, it is understood to a major extent, these will be managed in an effective manner, when individuals inculcate the traits of morality, ethics, diligence and conscientiousness. Therefore, managing resources is an advantageous measure to be put into operation in encouraging employee morale.

Providing Infrastructure, Amenities and Facilities

In all types of organizations, providing infrastructure, amenities and facilities is regarded to be of utmost significance. These are referred to power supplies, water supplies, clean drinking water, heating and cooling equipment in accordance to the weather conditions, communication networks, transportation facilities, internet, ramps, elevators, furniture, buildings, parks, play-grounds and overall environmental conditions. As a consequence of making these available, the mind-sets of the individuals get stimulated. Furthermore, they will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. In addition, individuals will contribute in an effective manner in meeting the expectations of individuals in leadership positions.

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In encouraging employee morale, the individuals in leadership positions need to put emphasis on making provision of infrastructure, amenities and facilities in an appropriate manner. These are required to be utilized in a well-ordered and efficient manner. Furthermore, wastage needs to be prevented. As a consequence of making provision of different types of infrastructure, amenities and facilities, individuals will contribute in a satisfactory manner in encouraging employee morale. One of the important aspects is, individuals will render an important contribution in carrying out their job duties in a well-ordered manner, generating desired outcomes and meeting the expectations of individuals in leadership positions. As a consequence, individuals feel comfortable and lead to up-gradation of enthusiasm levels towards putting into operation job duties and responsibilities. Therefore, providing infrastructure, amenities and facilities is a useful measure to be put into operation in encouraging employee morale.

Advantages of Encouraging Employee Morale

In all types of organizations, human resources are regarded as the assets. They are required to make use of their educational qualifications, skills and abilities in an adequate manner. The implementation of different types of job duties and responsibilities and overall functioning of the organizations takes place, when human resources will make use of their competencies in a well-ordered and satisfactory manner. Furthermore, they are required to put emphasis on generating information in terms of traits of meticulousness, ingenuity and conscientiousness. The individuals in leadership positions need to be well-informed in terms of various types of measures, which are facilitating in encouraging employee morale.Throughout the implementation of various types of job duties and responsibilities, individuals are required to augment information in terms of organizational goals and objectives. Furthermore, communication processes are required to take place in an effective manner. These are facilitating in augmenting information in terms of various subjects and concepts (Enhancing Employability through Vocational Training, 2015).

The individuals in leadership positions are required to put into operation the methods and approaches in a manner, which are facilitating in creating an amiable and pleasant environment within workplace. As a consequence, the mind-sets of the individuals get stimulated. Furthermore, they will lead to up-gradation of motivation and concentration levels towards putting into operation various types of job duties and responsibilities. In addition, individuals will contribute in an effective manner in augmenting information regarding various types of approaches. Furthermore, they will contribute in an efficacious manner in meeting the expectations of individuals in leadership positions. Hence, it is understood on a comprehensive basis that encouraging employee morale is considered to be advantageous. Therefore, advantages of encouraging employee morale are stated as follows:

1. Reinforcing a constructive approach.
2. Forming positive viewpoints in terms of various factors of the organizations.
3. Employees lead to up-gradation of motivation and concentration levels.
4. Putting in efforts to one’s best abilities.
5. Possessing the abilities to work under stress.
6. Providing solutions to various types of dilemmas and challenging situations.
7. Taking out sufficient amount of time for all tasks and activities.
8. Meeting expectations of individuals in leadership positions.

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9. Promoting enhancement of one's career prospects.
10. Augmenting information regarding job duties and responsibilities.
11. Generating information regarding methodologies and procedures.
12. Utilizing various types of pioneering methods and materials.
13. Inculcating the traits of morality and ethics.
14. Implementing the traits of diligence, resourcefulness and conscientiousness.
15. Reinforcing the traits of efficiency, honesty and truthfulness.
16. Carrying out all types of job duties and responsibilities in a well-ordered manner.
17. Promoting community well-being.
18. Leading to up-gradation of overall personality traits.
19. Leading to up-gradation of organizational culture.
20. Promoting enhancement of overall structure of the organizations.

Conclusion

The morale is augmenting determination, optimism, confidence and self-esteem among employees. Measures to be put into operation in encouraging employee morale are, implementing effective communication processes, imparting information regarding job duties and responsibilities, generating information regarding methodologies and procedures, augmenting knowledge regarding pioneering methods and materials, providing solutions to various problems, augmenting skills and abilities, inculcating the traits of morality and ethics, implementing the traits of diligence, resourcefulness and conscientiousness, managing resources and providing infrastructure, amenities and facilities. Encouraging employee morale is advantageous to the human resources and organizations. Finally, it can be stated, encouraging employee morale is facilitating in leading to up-gradation of organizations.

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GREEN ACCOUNTING, FINANCIAL PERFORMANCE AND CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE

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Abstract

The increasing emphasis on sustainability and corporate social responsibility (CSR) has led to a growing interest in green accounting as a tool for enhancing financial transparency and accountability. Green accounting integrates environmental costs into financial reporting, allowing firms to better understand their environmental impact and make informed decisions regarding sustainable development. In an emerging country, Vietnam, the adoption of green accounting remains relatively low despite regulatory efforts promoting sustainability practices. The study attempts to design a conceptual framework for investigating how green accounting influences financial reporting transparency, CSR disclosure, and financial performance in Vietnam, while also exploring regulatory and industry-specific barriers to its adoption. Using a quantitative approach, the study will analyze financial statements, CSR reports, and regulatory policies of listed firms. The study findings is expected to contribute to an understanding of green accounting's benefits, challenges, and opportunities for its broader implementation in Vietnam.

Keywords: Corporate Social Responsibility Disclosure, Financial Performance, Green Accounting.

1. Introduction

1.1 Research Background

In recent years, businesses worldwide have increasingly recognized the significance of environmental sustainability, leading to the adoption of green accounting practices. Green accounting, a practice that embeds environmental costs within financial reporting, has been widely recognized for its role in enhancing corporate accountability and fostering sustainable development (Schaltegger & Burritt, 2010). Many developed economies have successfully adopted green accounting frameworks, aligning with international sustainability standards to improve financial transparency and stakeholder trust (Bebbington & Larrinaga, 2014). However, in emerging economies such as Vietnam, green accounting adoption remains inconsistent, largely due to regulatory gaps, industry-specific limitations, and resistance to change (Nguyen & Slaper, 2021).

Vietnamese enterprises face significant challenges in fully integrating environmental costs into financial reporting. The absence of a standardized green accounting framework, weak enforcement of sustainability regulations, and industry-specific constraints hinder widespread adoption (Hoang & Phung, 2022). While the Vietnamese government has introduced sustainability initiatives and corporate responsibility policies,

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there remains a lack of empirical research assessing the actual impact of green accounting on financial transparency, CSR disclosure, and corporate financial performance (Pham, 2022). This study aims to address these gaps by evaluating how green accounting adoption influences financial reporting accuracy, enhances CSR activities, and contributes to corporate profitability in Vietnam. Additionally, the research aims to identify regulatory and industry-specific factors that moderate these effects, providing valuable insights for policymakers, corporate leaders, and stakeholders to facilitate the broader adoption of sustainability accounting practices.

1.2 Problem Statement

Despite Vietnam's increasing regulatory efforts and the global shift towards sustainability reporting, the country's adoption of green accounting remains inconsistent and underdeveloped. Many firms struggle to integrate environmental costs into financial reporting due to weak regulatory enforcement, a lack of standardized accounting frameworks, and limited awareness of how green accounting can contribute to financial and operational success (Le, 2024). While international standards such as the Global Reporting Initiative (GRI) and the IFRS Sustainability Disclosure Standards provide comprehensive guidelines, Vietnamese enterprises often lack the technical expertise and incentives needed to comply with these frameworks (Pham, 2022). Additionally, financial institutions and investors in Vietnam have yet to fully embrace sustainability-linked financial decision-making, further limiting corporate motivation to adopt green accounting practices.

One of the critical research gaps in this area is the lack of empirical evidence on the financial implications of green accounting adoption. While existing studies explore sustainability reporting and CSR disclosure, few have directly linked green accounting practices to measurable financial performance indicators such as return on assets (ROA), return on equity (ROE), and stock market performance (Pham, 2022). Furthermore, the role of regulatory frameworks and industry-specific barriers in shaping green accounting adoption has not been thoroughly analyzed. Without a clear understanding of these moderating factors, businesses may struggle to implement effective green accounting strategies that align with both corporate profitability and environmental responsibility.

This study’s main purpose is to fill these gaps by systematically investigating how green accounting adoption impacts financial reporting transparency, CSR disclosure, and corporate financial performance in Vietnamese enterprises. The study will also examine how regulatory and industry-specific barriers influence these relationships, offering a comprehensive perspective on the challenges and opportunities for green accounting implementation in Vietnam. By providing empirical insights and policy recommendations, the studywill support businesses, policymakers, and investors in fostering a more sustainable corporate ecosystem.

1.3 Research Objectives

The present study attempts to provide a comprehensive analysis of how green accounting adoption influences financial transparency, corporate social responsibility (CSR) disclosure, and financial performance in Vietnamese enterprises. Specifically, it seeks to evaluate the extent to which green accounting practices enhance financial reporting accuracy, ensuring greater transparency and compliance

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with sustainability standards.

Additionally, the study examines the relationship between green accounting and CSR disclosure, assessing whether firms that integrate environmental costs into financial reports also engage in more transparent and responsible corporate practices. By investigating key financial indicators such as return on assets (ROA), return on equity (ROE), and stock market valuation, this study aims to determine whether green accounting adoption contributes to financial performance improvements.

Furthermore, the study seeks to identify the regulatory and industry-specific barriers that hinder the widespread implementation of green accounting in Vietnam. It will explore the role of governmental policies, enforcement mechanisms, and industry practices in shaping corporate sustainability efforts. By addressing these objectives, the study aims to provide valuable insights for policymakers, business leaders, and investors, contributing to the broader discourse on sustainable financial practices in emerging economies.

1.5 Significance of the Study

This study is expected to contribute to the theoreticaland empirical domains of green accounting and sustainability reporting.

From a theoretical perspective, this study extends the application of Stakeholder Theory, Legitimacy Theory, and the Triple Bottom Line Model in the context of an emerging economy. These theories are well-documented in developed markets but have not been extensively studied within Vietnam's corporate environment (Freeman, 1984; Elkington, 1997; Suchman, 1995). By empirically testing how green accounting influences financial transparency and CSR disclosure, this study validates and extends these theoretical frameworks. Additionally, by incorporating Institutional Theory and Contingency Theory, this research examines how external pressures, regulatory changes, and organizational factors shape corporate green accounting adoption (DiMaggio & Powell, 1983; Donaldson, 2001). This multifaceted theoretical approach contributes to a deeper understanding of sustainability accounting practices in transitional economies.

From a practical standpoint, the study addresses a critical gap in green accounting literature by linking financial transparency, CSR disclosure, and corporate performance (Nguyen & Slaper, 2021). Unlike previous qualitative studies, this research employs quantitative analysis to measure the financial impact of green accounting adoption, offering policymakers, corporate executives, and investors data-driven insights (Hoang & Phung, 2022). By analyzing corporate financial statements and sustainability disclosures, this study provides tangible evidence of the business benefits associated with green accounting practices.

The study also fills a significant research gap by providing robust statistical evidence on the direct and indirect effects of green accounting adoption in Vietnam. While previous studies have largely relied on conceptual frameworks or case studies, this research employs empirical data analysis to quantify how green accounting influences financial performance and CSR engagement. By applying regression modeling and comparative financial analysis, this study provides measurable insights into how firms that adopt green accounting perform relative to those that do not. The empirical findings will serve as a foundation for future research in green accounting, sustainability finance, and corporate governance in Vietnam and other emerging markets.

Additionally, this study offers industry-specific recommendations by identifying key regulatory challenges

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preventing firms from fully implementing green accounting. The findings will help Vietnamese regulators refine sustainability policies and financial reporting standards, thereby promoting greater compliance with international sustainability frameworks such as IFRS Sustainability Disclosure Standards and GRI Standards (IFRS, 2023; GRI, 2022). This research also aims to assist businesses in understanding the strategic advantages of integrating environmental costs into financial decision-making, thereby improving their long-term financial resilience and stakeholder trust.

2. Literature Review

2.1 Review of Related Theories

Green accounting is rooted in several key theoretical frameworks that explain corporate behavior regarding sustainability and financial transparency.

Stakeholder Theory (Freeman, 1984) suggests that businesses have a responsibility to various stakeholders, including investors, regulators, employees, and the public, to report on their environmental impact. This theory underscores the importance of corporate accountability in sustainability practices.

Legitimacy Theory (Suchman, 1995) posits that organizations seek legitimacy by aligning their operations with societal values and expectations. Green accounting serves as a mechanism through which firms can demonstrate their commitment to sustainability, thereby enhancing their social acceptance.

Triple Bottom Line Model (Elkington, 1997) advocates that businesses should measure success not only by financial performance but also by their social and environmental impact. This model provides a holistic framework for assessing the benefits of green accounting adoption.

Institutional Theory (DiMaggio & Powell, 1983) highlights how external pressures, such as regulatory policies and industry norms, influence corporate sustainability practices. The adoption of green accounting in Vietnam is shaped by regulatory requirements, market expectations, and international sustainability frameworks.

Contingency Theory (Donaldson, 2001) emphasizes that the effectiveness of accounting practices depends on the specific context in which they are applied. Factors such as industry type, company size, and regulatory environment play a crucial role in determining how firms adopt and benefit from green accounting.

2.2 Review of Previous Studies

Several studies have explored the relationship between green accounting, financial performance, and CSR disclosure. Nguyen and Slaper (2021) conducted a systematic review of corporate social responsibility in Vietnam, highlighting the need for standardized sustainability reporting. Their study found that firms engaging in transparent sustainability practices tend to gain investor trust and achieve long-term financial stability.

Bebbington and Larrinaga (2014) analyzed the role of accounting in sustainable development and concluded that integrating environmental costs into financial reporting improves regulatory compliance and enhances corporate decision-making. Similarly, Schaltegger and Burritt (2010) emphasized that sustainability accounting facilitates more accurate assessments of long-term business risks and opportunities.

Hoang and Phung (2022) investigated the relationship between CSR disclosure and financial performance among Vietnamese firms. Their findings suggest that companies with higher levels of sustainability

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reporting experience increased profitability and stakeholder confidence. Pham (2022) examined environmental management accounting in manufacturing enterprises and found that firms that adopt green accounting practices report better regulatory compliance and cost efficiencies.

Despite these findings, there is still a lack of empirical research specifically linking green accounting adoption to financial transparency, CSR disclosure, and financial performance in Vietnam. Furthermore, existing literature has not fully explored the moderating effects of regulatory frameworks and industry-specific factors on green accounting adoption. This study aims to fill these gaps by providing a comprehensive analysis of the financial and regulatory implications of green accounting in Vietnamese enterprises.

Although prior studies have examined sustainability reporting and CSR in Vietnam, few have provided empirical evidence on the direct financial impact of green accounting adoption. The lack of standardized reporting frameworks and regulatory enforcement has made it difficult for researchers to assess the effectiveness of green accounting practices across different industries. Additionally, while sustainability reporting has been increasingly emphasized in Vietnam, there remains an absence of comprehensive studies that link green accounting with measurable financial performance indicators such as return on assets (ROA), return on equity (ROE), and market valuation.

Another critical research gap is the limited exploration of how external regulatory pressures and industry-specific factors moderate the relationship between green accounting adoption and corporate performance. Existing literature focuses primarily on corporate social responsibility (CSR) disclosures without addressing how companies navigate the regulatory landscape and the challenges they face in adopting green accounting principles.

2. 3. Hypothesis Development and Conceptual Framework

This study develops a conceptual model that explores the relationship between green accounting adoption, financial performance, CSR disclosure, and the moderating effects of regulatory and industry-specific factors. The model is structured to identify the direct and indirect impacts of green accounting on corporate transparency and profitability while considering external regulatory constraints and industry dynamics.

2.3.1. Hypothesis Development

This section presents the hypotheses developed based on conceptual frameworks and previous empirical findings. Each hypothesis is linked to a specific theory to provide a strong conceptual foundation.

H1: Green accounting adoption improves financial reporting transparency.

Theoretical base: This hypothesis is grounded in Legitimacy Theory (Suchman, 1995), which argues that organizations engage in sustainability practices, such as green accounting, to maintain legitimacy and align with societal and regulatory expectations. Firms adopting green accounting are likely to enhance their financial disclosures to meet stakeholder expectations and improve transparency.

H2: Companies adopting green accounting exhibit higher CSR disclosure levels.

Theoretical base: Stakeholder Theory (Freeman, 1984) suggests that firms must address the needs of multiple stakeholders, including investors, regulatory bodies, and society at large. Companies with strong green accounting adoption are more likely to engage in transparent CSR reporting to satisfy stakeholder demands and enhance their corporate reputation.

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H3: Green accounting adoption positively affects financial performance.
Theoretical base: Triple Bottom Line Theory (Elkington, 1997) supports this hypothesis by emphasizing the economic benefits of sustainable business practices. Green accounting helps firms identify cost-saving opportunities, manage environmental risks, and attract socially responsible investors, thereby improving financial performance.
H4: Regulatory frameworks moderate the relationship between green accounting and financial performance.
Theoretical base: Institutional Theory (DiMaggio & Powell, 1983) explains how regulatory pressures shape corporate behavior. The effectiveness of green accounting in improving financial outcomes depends on the strength of regulatory policies and enforcement mechanisms that mandate sustainability disclosures.
H5: Industry-specific factors moderate the relationship between green accounting and CSR disclosure.
Theoretical base: Contingency Theory (Donaldson, 2001) posits that the effectiveness of management practices depends on external conditions. The impact of green accounting on CSR disclosure varies across industries due to differences in environmental impact, stakeholder expectations, and compliance requirements.

2.3.2. Conceptual Framework

To test the preceding hypotheses, the following regression models will be employed:

1. **Relationship between Green Accounting and Financial Performance:**

$$FP_i=\beta_0+\beta_1 GA_i+\beta_2 CSR_i+\beta_3 X_i+\varepsilon_i$$

Wooldridge (2016), Gujarati & Porter (2009)

Where:

- FP_i = Financial performance (measured by ROA, ROE, or market valuation) of firm i.
- GA_i = Green accounting adoption.
- CSR_i = CSR disclosure level.
- X_i = Control variables such as firm size, leverage, and industry type.
- ε_i = Error term.

2. **Relationship between Green Accounting and CSR Disclosure:**

$$CSR_i=\alpha_0+\alpha_1 GA_i+\alpha_2 X_i+\eta_i$$

Schaltegger & Burritt (2010), Bebbington et al. (2014)

Where:

- CSR_i = CSR disclosure levels.
- GA_i = Green accounting adoption.
- X_i = Control variables.
- η_i = Error term.

3. **Moderating Effects of Regulatory and Industry-Specific Factors:**

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$$FPi=\gamma 0+\gamma 1GAi+\gamma 2CSRi+\gamma 3REGi+\gamma 4INDi+\gamma 5(GAi\times REGi)+\gamma 6(GAi\times INDi)+Xi+\nu i$$

Wooldridge (2016), Schaltegger & Burritt (2010)

Where:

- REGi = Strength of regulatory framework.
- INDi = Industry-specific factors.
- (GAi×REGi) and (GAi×INDi)(GA_i \times IND_i)(GAi×INDi) = Interaction terms capturing moderating effects.
- νi = Error term.

These models will be estimated using **Ordinary Least Squares (OLS)** regression and panel data analysis to determine the significance and magnitude of green accounting's effects on financial performance and CSR disclosure.

3. Research Methodology

3.1 Research Design

This study adopts a quantitative research approach to systematically examine the relationship between green accounting adoption, financial performance, and CSR disclosure in Vietnamese enterprises. A deductive research approach is employed, wherein existing theoretical frameworks such as Stakeholder Theory, Legitimacy Theory, and the Triple Bottom Line Model serve as the foundation for hypothesis development. These hypotheses will be tested using statistical methods to determine the significance and strength of relationships among the study variables.

A cross-sectional research design has been chosen to capture data from multiple firms over a defined period. This design is appropriate for this study as it allows for the examination of relationships between variables at a single point in time, making it useful for identifying trends and associations without requiring long-term tracking. Given the nature of corporate financial disclosures and sustainability reports, cross-sectional analysis provides a practical and reliable means of assessing how green accounting adoption influences financial transparency, CSR disclosure, and financial performance across different firms and industries.

The use of secondary data from corporate financial statements, sustainability reports, and regulatory policies ensures that the study leverages existing, verified financial and sustainability disclosures. This approach is both time-efficient and cost-effective while allowing access to extensive historical and industry-wide data. Furthermore, secondary data from publicly available sources such as stock exchange filings, ESG reports, and financial databases ensures reliability and comparability in analysis.

The chosen methodology aligns with the study's objective of empirically assessing green accounting's impact on corporate sustainability and financial performance in Vietnam. By using quantitative methods and secondary data, this research aims to produce objective, generalizable findings that can inform both academic discussions and corporate policy development.

3.2 Data Collection and Analysis

Given the empirical nature of this study, secondary data sources will be utilized. The use of secondary data is appropriate as it provides comprehensive and standardized information on corporate financial and sustainability performance, allowing for a large-scale analysis of green accounting adoption. The key

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sources of data for this study include:

- Corporate Financial Reports: Annual reports, financial statements, and CSR disclosures from firms listed on the Vietnam Stock Exchange (VNSE). These reports contain essential data on financial performance indicators such as revenue, return on assets (ROA), return on equity (ROE), and capital structure, along with information on sustainability initiatives and environmental accounting practices.
- Regulatory and Policy Documents: Guidelines and regulatory reports from the Vietnam Ministry of Finance, the Global Reporting Initiative (GRI), and IFRS Sustainability Disclosure Standards. These documents provide the regulatory context within which firms operate, helping to assess the extent to which government policies influence green accounting adoption.
- Academic and Industry Studies: Published research on green accounting and sustainability practices in Vietnam and other emerging economies. These studies provide insights into historical trends, theoretical developments, and case studies on corporate environmental reporting and its financial implications.
- ESG Databases: Environmental, Social, and Governance (ESG) ratings and sustainability performance indicators from financial analytics firms such as Bloomberg ESG Data, Refinitiv ESG Scores, and MSCI ESG Ratings. These databases provide firm-level sustainability scores, which will be used to measure the extent of green accounting adoption and its impact on financial performance.

By utilizing these diverse sources, this study ensures that the data collected is reliable, comparable, and relevant to examining the relationship between green accounting adoption, CSR disclosure, and financial performance in Vietnam. Additionally, the study will apply data validation techniques to verify consistency across different sources and ensure robustness in statistical analysis.

The study will employ a combination of content analysis and statistical modeling techniques to evaluate the collected data. Content analysis will be used to systematically examine corporate sustainability reports and financial disclosures. This method allows for the identification of key trends, themes, and patterns in green accounting adoption across different industries. By categorizing and quantifying sustainability-related disclosures, the study will determine how firms integrate environmental costs into financial reporting.

Additionally, regression analysis will be performed to examine the relationship between green accounting adoption and financial performance. This statistical technique will assess how variables such as return on assets (ROA), return on equity (ROE), and stock market performance are influenced by sustainability accounting practices. The analysis will control other financial and operational factors to isolate the impact of green accounting on corporate profitability and investor confidence.

By combining qualitative content analysis with quantitative statistical modeling, this research will hopefully provide a comprehensive understanding of how green accounting contributes to financial performance and corporate transparency. The results will offer valuable insights for businesses, policymakers, and investors interested in promoting sustainable financial practices.

4. Conclusion

This study attempts to build a research model discovering the role of green accounting adoption in

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influencing financial performance, corporate social responsibility (CSR) disclosure, and financial transparency in Vietnamese enterprises. The research highlights the critical importance of green accounting as a tool for improving corporate sustainability practices while aligning financial reporting with environmental responsibility.

The current study is expected to add both theoretical and practical contribution to the field by expanding the application of Stakeholder Theory, Legitimacy Theory, Institutional Theory, and Contingency Theory in the context of green accounting adoption in Vietnam. Empirical evidence will be provided through quantitative analysis, strengthening the understanding of how green accounting implementation impacts corporate decision-making and financial stability.From a managerial perspective, the study provides valuable insights for business leaders and policymakers, emphasizing the need for stronger regulatory frameworks, standardized green accounting guidelines, and increased corporate incentives for sustainability reporting.

By addressing the research gaps in green accounting adoption and its financial implications, this study contributes to the growing body of literature on sustainability accounting and offers practical recommendations for fostering environmentally responsible financial practices in Vietnam's corporate sector.

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ETHICAL DECISION MAKING FROM PROFESSIONAL ACCOUNTANTS' PERSPECTIVE

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Abstract

Ethical accounting decision-making is necessary for financial transparency, protection of stakeholders, and fostering professional integrity. This study examines the relationship of moral recognition, moral judgment, and moral intent and factors that contribute to professional accountants' ethical decision-making. Based on the ethical decision-making theory, the research examines the effect of idealism, relativism, social responsibility, peer group pressure on moral intent, the mediating role of moral recognition and moral judgement. It follows a quantitative approach, using survey data from Vietnamese professional accountants. Partial Least Squares Structural Equation Modeling (PLS-SEM) will be used to process the collected data. The study is expected to contribute to the ethical decision-making literature in the accounting context and provides practical implications for organizations, such as the need for ethical training programs, ethical cultures, and reinforcement of professional ethical standards. This study also identifies gaps for future exploration for more factors that contribute to ethical decision making.

Keywords: *Accounting profession,Ethical decision making, Idealism, Moral intent, Moral judgment, Moral recognition, Peer group pressure,Relativism, Social responsibility.*

Introduction

1.1 Background of the Study

Today, the accounting profession is widely used globally to support the subject of economic management since the Enron and Andersen scandals raised serious concerns about the problem of unethical decision-making among accounting professionals (Dellaportas, 2006; Vladu et al., 2017). Different researchers have emphasized the significance of ethics in the accounting industry. Some research shows that successful ethical models and professional codes decrease financial disclosure and reduce the likelihood of corporate fraud. For example, studies carried out by Bhasin (2016) confirmed that firms using ethical accounting significantly have less financial misstatements. Similarly, the DeFond and Lennox (2017) study reveals that good ethics regulation and ethics training can improve ethical decision making in accounting.

Accountants often face ethical dilemmas between maintaining professional standards and meeting business pressures such as earnings management or financial misstatements, which can compromise the integrity of financial reporting (Healy and Wahlen, 1999). Murphy and Free (2016) research revealed that accountants in maintaining financial target companies were more likely to manipulate earnings. For mitigation

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of these risks, effective leadership and regulations from companies are critical. Moreover, businesses that firmly enhance ethical guidelines and provide continuous ethics training are more financially transparent and responsible (Kaplan et al., 2017).

To uphold ethical professionalism in the accounting profession, professional bodies and regulatory authorities have established ethical standards. Professional associations such as the International Federation of Accountants (IFAC), American Institute of Certified Public Accountants (AICPA), and CPA Australia have established codes of ethics that are used by accountants in making professional ethical judgments. The frameworks emphasize core values such as integrity, objectivity, professional competence, confidentiality, and professional behavior (IFAC, 2020). Compliance with these ethical guidelines is required to support public trust and the validity of financial information. While these ethical standards and codes provide a formal framework for accountants, the real-world effectiveness of these guidelines is heavily influenced by ethical education and the organizational culture that reinforces these values. Sweeney et al. (2010) found that in a study, accountants who received formal ethics education were less inclined to engage in unethical financial reporting. Similarly, research by Bobek et al. (2015) indicates that a strong ethical culture in businesses lowers the probability of accountants committing unethical behavior. Moreover, businesses that firmly enhance ethical guidelines and provide continuous ethics training are more financially transparent and responsible (Kaplan et al., 2017). (Kaplan et al., 2017) also stated that when an organization can create a strong ethical culture and supporting accountants are responsible to professional norms, businesses can minimize ethical risks and maintain the credibility of financial reports.

Ethical accounting decision-making is necessary to maintain the quality, reliability, and transparency of financial reporting. Unethical accounting decisions, such as earnings manipulation and fraudulent reporting, can lead to mistrust among investors and stakeholders (Dechow et al., 1996). Some studies emphasize the influence of ethical awareness on accountants' decisions. Thorne et al. (2003) have confirmed that higher moral recognition in accountants were unlikely to engage in earnings management and committing fraud in financial statements. In addition, Craft (2013) stated that more ethics training for accountants can reduce significantly fraudulent activities. This suggests that a more diversified of factors that affect ethical decision making enhance accountants for making steady, ethical choices in their professional work.

1.2 Problem Statement

Despite growing efforts to promote ethical decision-making in accounting, identifying the key determinants of ethical conduct remains challenging due to variations in firm culture and size (Cohen et al., 2001). Ethical decision making has been impacted by elements such as leadership behavior, firm ethical climate, and external regulatory forces, and their relationship remains complex and not fully understood (Trevino et al., 2006). Large firms may have more structured ethics policies and compliance programs, whereas small firms may be resource-limited in applying ethical guidelines (Weaver et al., 1999). Organizational and industry cultural differences also complicate the development of universal ethical frameworks, leading to inconsistencies in ethical decision-making processes (Hofstede, 2001). In developed countries, ethical cultures within organizations play an important role in encouraging employees to come forward when they witness ethical issues (Kaptein, 2011; Suh and Shim, 2020). Whereas it is uncommon for employees in Vietnamese companies to speak up or respond violently to unproductive actions due to the

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country's large power distance and collectivism (D. T. N. Nguyen et al., 2020).

There are some research gaps in this study. The first one is the lack of studies on moral judgment as a mediator (Andersch et al., 2019) as there are many studies on moral judgment is a dependent variable (Johari et al.,2017; Yang and Wu, 2009), moral judgment as an independent variable (Musbah et al., 2016; Tariq et al., 2019). Moreover, to examine the factors of ethical decision making at different stages, some researchers often use hierarchical regression (Oboh, 2019; Oboh and Omolehinwa, 2022). However, this equation model has many shortcomings due to the lack of specific methods as it cannot analyze the effect of mediating function (Hair et al., 2022). This highlights the need for more research on accounting ethics to expand our understanding of the ethical decision-making procedure properly. Finally, moral recognition, moral judgement, moral intent and moral behavior have not been thoroughly examined because it is difficult to measure behavioral responses in ethical issues that arise in real life (Moores et al., 2018). By exploring these aspects, the study will investigate whether moral judgment acts as a mediator between moral recognition and moral intent by using Smart-PLS software. In addition, this study will use moral recognition and moral judgment to record moral intent in an accounting context. This emphasizes how crucial it is to understand and analyze ethical decision making in many circumstances. Finally, the study also examines how diverse elements like idealism, relativism, social responsibility and peer group pressure affect professional accountants' moral decision-making.

1.3 Research Objectives

The goal of this research is to examine the impact of elements including moral intent, moral recognition, moral judgment, idealism, relativism, peer group pressure, and social responsibility on ethical decision making in the accounting profession. To reach this goal, the research objectives are set up as below.

The study investigates the factors that affect moral intent in ethical decision making in accounting.

This study will also discover how moral recognition mediates the relationship between idealism, relativism, and moral intent.

The study will examine how moral judgment mediates the relationship between social responsibility, peer group pressure, idealism, relativism, and moral intent.

1.4 Significance of the study

This topic is important because, given the many financial scandals that have damaged the trust of the profession globally, accounting ethics is a pressing concern. Accounting professionals have faced harsh criticism for their unethical professional practices and decisions made in collusion with directors and management of businesses to purposefully falsify and manipulate financial statements to deceive unsuspecting stakeholders (SikBakre, 2007; Otusanya, 2010; Griffin, 2015). As a result, there has been a widespread increase in the level of tax evasion, money laundering, and business failures, costing governments and investors billions of dollars globally (Otusanya, 2010; Bakre, 2006, 2007). Although the accounting profession plays an important role in protecting the interests of businesses and promoting openness, there is little research on accounting ethics in Vietnam due to the lack of experience in addressing ethical issues.

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Therefore, to help create professional standards, improve the reputation of the profession, and meet the needs of a competitive business environment, this study aims to identify factors that influence the ethical behavior of accountants based on ethical theory. Additionally, the study intends to investigate how professional accountants' ethical decision-making components are impacted by idealism, relativism, social responsibility, and peer group pressure. In addition to supporting accountants in maintaining their professionalism, this study also enhances the public and consumer trust in professional accountants.

This research has theoretical and practical applications since it provides information on how qualified accountants can consider many aspects to support their ethical decision making. The study adds to the body of knowledge about ethical decision making by outlining the mediating function that moral judgement performs in the interactions between moral intent and moral recognition. Second, using normative ethical theories (deontological ethical theory, utilitarianism ethical theory), the effects of idealism, relativism, social responsibility and peer group pressure are investigated. In practice, this study will provide new perspectives for accountants on ethical decision making, then they can develop new strategies and programs to create ethical decisions in companies. In addition, making more recommendations on raising accountants awareness about the benefits of making ethical decisions. These recommendations will contribute to supporting accountants who want to be more professional in making ethical decisions.

Literature Review

2.1 Definition of key concepts

According to Bowie and Schneider (2011), ethics is the area of moral philosophy that deals with organizing, defending, and endorsing notions of right and wrong behavior. This fundamental grasp of ethics provides a foundation for moral dilemma evaluation, enabling people to make complex choices by making a separation between concepts such as good and evil, right and wrong, virtue and vice, justice, and crime (Shafer-Landau, 2012). Philosophers and psychologists divide ethics theories into three categories: applied ethics, normative ethics, and metaethics (Fieser, 2001). Scholars have been able to better understand the complexities and dimensions of moral philosophies in societies and organizations because of these divisions of ethics theories (Panza & Potthast, 2010).

Metaethics explores nature, origins, and foundations of ethical principles, focusing on the psychological and metaphysical aspects of human morality (Sinhababu, 2015). According to Sinhababu (2015), it focuses on the psychological and metaphysical aspects of human morality. The feasibility of policing moral behavior in society is the focus of normative ethics (Shafer-Landau, 2012). The Golden Rule, which states that "treat others just as you would like to be treated" (Luke 6:31, Contemporary English Version), is a well-known illustration of a normative concept.

Ethical decision-making involves individuals using their moral framework to determine whether an action is right or wrong (Christopoulos et al., 2016; Kish-Gephart et al., 2010; Sturm, 2015). This process is thus characterised by moral issues and agents, both embedded in organisational and societal contexts. A moral issue arises when an individual’s behaviour can either help or damage others. These ethical decision-making processes are particularly critical in the context of accounting, where professionals are often faced with dilemmas that can significantly impact organizational integrity, transparency, and public trust.

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In 1494, the history of accounting ethics began. The International Federation of Accountants (IFAC) established a twelve-point (12) agenda shortly after its founding to guide the actions of its members. The code of ethics was one of the agenda items to which its members might subscribe. Accounting ethics has long existed, researchers did not give them much thought until the middle to late 1980s, when the American Accounting Association (AAA) started holding the annual AAA Ethics Research Symposium, for instance (Bampton & Cowton, 2013). This highlights the necessity for accounting ethics for accountants so that transparency, accountability, and public trust are ensured. Empirical studies have indicated that strict enforcement of ethical standards reduces financial fraud and improves the quality of accounting reporting. For instance, Jones et al. (2017) found that companies strictly abiding by ethical codes had significantly lower rates of accounting failure compared to non-strictly adhering companies.

According to Baker (1999), an accounting professional cannot be sufficiently guided on all ethical issues by a single ethical framework. According to Brady (1985) and Hunt and Vitell (1986), ethical decision making is instead proposed as a synthesis function of the individual's utilitarian and deontological assessments.

When it comes to accounting, ethical behavior is a need for every professional accountant. This conduct raises the normative question of whether accountants' actions are morally right or wrong (Mintz and Morris, 2017), indicating that accountants' actions are morally acceptable. Hunt and Vitell (2006) attempted to investigate moral conduct using normative ethical theories. Several scholars assert that deontological and utilitarian ethical theories serve as the foundation for evaluating ethical action, notwithstanding the existence of several normative ethical theories (Brady, 1985; Hunt and Vitell, 1986).

2.2 Review of Theories

2.2.1. Deontological Ethical Theory

Brady (1985) asserts that deontological ethical theory presents individuals should follow obligations and laws, to determine if an action is right or wrong, they consider both the action's nature and its motivation, not consequences. According to this idea, if a behavior complies with a moral law, principle, or regulation, it is true. On this theory, Brady and Dunn (1995) also stated individuals who follow ethical rules are acceptable, but those who violate them are penalized. Moreover, Mintz and Morris (2017) identify Immanuel Kant as the most influential deontological ethics supporter because he employed logic and critical thinking in decision-making, and he could not prove a wrong action is true. According to Kant, we are inconsistent if we contradict ourselves as we cannot lie to ourselves about untrue things. For example, lying is inherently wrong because if all people lied, there would be no trust in communication, and honest exchange would not be possible.

Deontological ethical theory plays a significant role in guiding accountants towards ethical decision-making through emphasis on duty, respecting professional codes, and integrity. The theory requires accountants to be honest and fair, even in situations where it would be unethical in a financial statement. According to Schwartz (2001), firms with strict ethical codes rooted in deontological theory had fewer cases

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of financial misconduct than firms whose ethical standards were not strict. Moreover, Jones et al. (2017) discovered that firms with strong ethical culture applied from deontological ethical theory had significantly fewer accounting mistakes as well as rule violations. Therefore, some studies support the effectiveness of deontological ethics in preventing misconduct and improving ethical compliance in accounting.

While deontological ethics focuses on the morality of actions based on duty and adherence to rules, utilitarianism takes a different approach by evaluating the rightness of actions based on their outcomes and the greatest good they produce.

2.2.2. Utilitarianism Ethical Theory

The ethical theory of utilitarianism states that an action is considered right if it benefits the greatest number of people and maximizes overall happiness or well-being. (Baker, 1999). According to this idea, an action's morality is determined by its effects to decide whether it is true or false, the theory seeks to maximize benefits; an action is morally right if it results in advantages (Hunt & Vitell, 1986).

Utilitarianism ethical theory provides accountants to make ethical choices by weighing the good against the bad consequences as their action will influence stakeholders like shareholders, employees and their companies. Utilitarianism encourages accountants to provide true and fair information in financial reporting because it will affect investment of shareholders and employers. Jones and Felps (2013) showed that firms focusing on the good of society in financial statements were less doing to earnings manipulation. Moreover, Huang and Zhang (2012) stated that accountants who considered the overall effects of financial decisions on society were likely to act ethically, even under unethical pressure. The theory not only helps accountants to enhance ethical compliance but also gain stakeholder trust in the financial statement of the companies.

While utilitarianism assesses the morality of actions based on their consequences, ethical decision-making theory offers a more structured framework, emphasizing the critical stages of moral recognition, judgment, and intent in the decision-making process.

2.2.3. Ethical Decision-MakingTheory

The ethical decision-making framework described by Rest (1984) has been the subject of numerous investigations. Understanding moral recognition, moral judgment and moral intent has greatly benefited from these studies (Johari et al., 2017; Musbah et al., 2016; Oboh, 2019). Rest's Model (Rest, 1983) makes these four elements most noticeable. This paradigm is the forerunner of models of cognitive moral decision making for accounting education, according to Reiter and Flinn (1997). According to Rest (1984), a human first recognizes moral recognition, then makes a moral judgment, then moves on to moral intent, and last musters the courage to act. These four components are what produce moral activity. The recognition stage is the first part in Rest's model where the ethical predicament is recognized. Next, a stage of moral judgment where the best course of action is determined by weighing the available options. Then, a stage of moral intent in which the decision-maker decides which consequences to accept. Finally, a stage of moral activity where the decision-maker acts based on his or her intent and judgment. This study will adapt 3 elements (moral recognition, moral judgment, moral intent) from the Rest model as moral behavior is hard to measure in real life. Incorporating both deontological and utilitarian perspectives, Rest's ethical decision-making model serves as a comprehensive framework that explains how individuals progress from moral recognition to the actual decision to act ethically. While these theories each offer distinct perspectives on ethical behavior, they

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all emphasize the importance of personal judgment and societal norms in guiding decisions.

2.3 Review of Previous Studies

Moral recognition, which is positively correlated with moral judgment, plays a crucial role in ethical decision-making. Studies by Yang and Wu (2009), Oboh (2019), and Johari et al. (2017) highlight how moral recognition influences both moral judgment and intent, further impacting ethical behavior in the workplace (Treviño et al., 2006; Valentine & Bateman, 2011). Research on the relationship between moral judgment and moral intention consistently demonstrates a positive correlation between the two (Latan et al., 2019; Musbah et al., 2016; Oboh &Omolehinwa, 2022). However, while several empirical investigations have reported findings of the relationship between moral recognition and moral judgment are not straightforward and moral judgments can vary significantly depending on the context, numerous studies have identified strong and positive relationship between moral recognition and moral judgment (e.g., Barnett, 2001; Latan et al., 2019; Moores et al., 2018). The mediating role of moral judgment is crucial for both theoretical and practical implications as it contributes the knowledge in ethical decision making and supporting training programs for accountants. There is a limited study in investigating the mediation role of moral judgment. Therefore, this study will examine if moral judgment has a significantly positive mediating role in the relationship between moral recognition and moral intent.

Understanding the mediating function of moral judgment is essential, but ethical decision-making is also influenced by many personal characteristics that determine how individuals understand and respond to moral conflicts. In addition, Ha (2021) showed that moral recognition is linked to individual characteristics like age, gender, and job experience that are taken into consideration when making ethical decisions. Phuoc et al. (2022) illustrate that factors of characteristic information also affect the professional ethics in decision making of accounting and auditing. Therefore, this study will use data analysis to check if factors of age, gender, work experience are affected by moral intent or not.

Bangun and Asri (2017) used ethical climate, professional ethics, and professional commitment to identify the factors that influence ethical decision making for accountants through contingency theory, decision theory, theory of planned behavior, however there is a lack of relativism, idealism, social responsibility and peer group pressure. Zhang et al. (2023) emphasized that the necessity for other factors of ethical decision makingcontributes to the theoretical framework in an attempt to make accountants' knowledge about making ethical decisions. Therefore, the research will utilize relativism, idealism, social responsibility and peer group pressure to analyze whether they will affect ethical decision making or not.

Dellaportas (2006) investigated the process of trainee accountants making ethical decisions in the workplace and how they prioritize applying ethics in making decisions throughout training time. Some studies had investigated trainee accountants and accountant students, however there is a limitation in professional accountant research (Suryaningrum et al., 2020; Ho et al., 2011). In contrast to students or trainee accountants, professional accountants play a significant role in organization to ensure financial integrity and organization transparency, which can significantly influence ethical decision making (Jones, 2017). Therefore, the study will use accountants to analyze if they are affected to make ethical decisions in organizations.

Despite many studies on moral recognition, moral judgment and moral intent, there are some gaps.

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Firstly, there is limited research on moral judgment acts as a mediator between moral recognition and moral intent. Secondly, while personal characteristics such as age, gender, and work experience have been found to influence ethical decision-making, little studies investigate their influence on moral intent. Third, past research on ethical accounting decision-making has primarily been predicated on theories like contingency theory and the theory of planned behavior, but little studies focus on relativism, idealism, social responsibility, and peer group pressure. Lastly, most of the studies have focused on students and trainees in accounting, with very little research on how accountants, who are more responsible for ensuring financial integrity and transparency, make ethical choices within organizations. Therefore, this study will investigate whether moral judgment acts as a mediator between moral recognition and moral intent. Then, the study will also examine age, gender and work experience affect to moral intent or not. Finally, the study will investigate the effect of relativism, idealism, social responsibility, and peer group pressure to accountants through normative theories to see their ethical choices in enterprises.

2.4 Hypothesis Development and Research Model

2.4.1. Hypothesis Development

Moral Recognition and Moral Judgment

Moral recognition is the ability to identify ethical dilemmas, and it serves as the first step in the moral judgment process. According to Kohlberg (1969) and ethical decision-making theory, individuals must first recognize an ethical issue before they can make a judgment on the right course of action. According to ethical decision-making theory, moral recognition is the first part of moral judgement, as before making a judgement of an action, a person must recognize an event that relates to a moral problem. Moral recognition has a sequential relationship with moral judgment; without recognizing an ethical issue, people cannot continue to make a moral judgment about it (Jordan, 2017; Mencl and May, 2016). Moral judgement is crucial to enhance the profession of accountants and ensure ethical decision making in enterprises (Oboh, 2019). The studies of Johari et al. (2017) and Yang and Wu (2009) examined the processes of moral recognition which are positively related to moral judgement in many moral situations, they interact and influence each other in different ethical situations, when accountants have higher moral recognition, they tend to make higher moral judgment process. Accordingly, we propose the following hypothesis:

H1: Moral recognition positively affects moral judgment.

Moral Judgment and Moral Intent

To build the relationship between moral recognition and moral judgment, it is important to examine how moral judgment influences the process of moral intent. Once a person has made a moral judgment, they are more likely to make an appropriate decision, which is referred to as moral intent (Rest, 1986). Ethical decision-making theory also represents moral intent as a person can solve a problem by ethical action in the right way instead of doing nothing. However, before moral intent can emerge, individuals must first recognize that a situation involves a moral issue, which brings moral recognition into play as a precursor to the decision-making process. Ethical decision-making theory also states that moral judgment motivates moral intent individuals to do ethical actions. Without moral intent, a correct moral judgment may not translate into ethical action, individuals will lose motivation to perform an action (Craft, 2013). Especially in enterprises, an accountant can make a moral judgment of a financial company position, and they do not have a moral intent to

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solve the problems, an enterprise may be affected negatively (Kish-Gephart et al., 2010). In an organization, employees with strong moral intent are more likely to engage in ethical decision-making, avoiding unethical behaviors such as fraud, dishonesty, or corruption (Latan et al., 2019).

Studies have found that moral judgment is positively related to moral intent, as strong moral intent promotes ethical behavior and ensures that moral choices are not just acknowledged, but also implemented in real-world decision-making (Musbah et al., 2016; Oboh and Omolehinwa, 2022; Tariq et al., 2019). Accordingly, we hypothesize that:

H2: Moral judgment positively affects moral intent

Moral Recognition and Moral Intent

After having established a proposed relationship between moral judgment and moral intent, it is essential to explore the relation of moral recognition and moral intent. According to ethical decision-making theory, moral recognition and moral intent are alsoclosely linked together as individuals may not intend to do the right action if they do not first recognize that a situation involves a moral issue. Moral recognition is the initial step in ethical decision-making, while moral intent refers to the commitment to act ethically (Thanh and Trung, 2023). Lilly et al. (2024) studied and made a result that moral recognition and moral intent related positively, as higher moral intent will result in higher moral recognition. Moral intent is important, especially in enterprises' context, directors who can have higher moral recognition to realize they will have higher moral intent to deal with problems and impact their followers to enhance ethical decision making of reporting whistleblowers in the company (Valentine and Godkin, 2019). Accordingly, we propose the following hypothesis:

H3: Moral recognition positively affects moral intent.

Moral Recognition, Moral Intent and Moral Judgment.

Building on the relationship between moral recognition and moral intent, this study further explores the role of moral judgment. Ethical decision-making theory posits that moral judgment acts as a mediator between moral recognition and moral intent, connecting these two stages by allowing individuals to assess the moral aspects of a situation and decide on an appropriate course of action. The impact of moral recognition on moral intent is positively reduced without moral judgment, highlighting the importance of moral judgment (Yang and Wu, 2009). Studies by Musbah et al. (2016) and Oboh and Omolehinwa (2022) show that, without moral judgment, individuals may recognize an ethical dilemma but struggle to determine the best course of ethical action. Musbah et al. (2016); Oboh and Omolehinwa (2022) study shows that without moral judgment, individuals can recognize an ethical dilemma but are unable to determine the best ethical course of action. Similarly, Latan et al. (2019) found that moral judgment was significant in relation to moral intent strength, endorsing the hypothesis that ethical judgment capacity is a necessary process in closing the gap between ethical awareness and ethical action. Accordingly, we hypothesize that:

H4: Moral recognition affects moral intent through the mediating role of moral judgment.

Relativism, Idealism andMoral Recognition

Furthermore, it is essential to explore the relation of relativism and idealism on moral recognition. According to Zaikauskaite et al. (2020), Relativism is the perspective that the rightness of an action depends on situational factors, cultural traditions, or social norms rather than universal moral laws. When moral

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standards vary across cultural, social, or situational contexts, individuals may struggle to identify ethical issues, as what is considered wrong in one scenario may not be wrong in another (Treviño et al., 2014). Relativism makes individuals lose their differentiation in right or wrong behavior, making one less able to see and respond to moral issues (Xiaowei et al., 2019). This is also in line with deontological ethics theory (Brady, 1985) an action is right or wrong depending on its essence, regardless of different consequences or cultural perspectives. In addition, Rai et al. (2013) found that relativism is negatively linked to moral recognition, as individuals might regard ethical challenges as subjective judgments and not as objective problems to be solved. Consequently, Zaikauskaite et al. (2020) claimed that those who strongly embrace relativistic perspectives may be less likely to acknowledge ethical problems, thereby reducing their capacity for moral recognition.

Idealism aligns with utilitarianism (Baker, 1999), as both emphasize the importance of positive outcomes in decision-making. Shukla and Srivastava (2016) asserts that people have their own different ways in evaluating whether an action is true or wrong as they have different beliefs, attitudes and values. The author also pointed out that idealism and relativism are different and frequently used to compare different moral ideologies. According to Shukla and Srivastava (2016), these two aspects of moral philosophy are often used to evaluate different moral situations. According to Oboh (2019) Idealism is the principle that an action is right or wrong depending on the positive results and the result may not affect anyone's benefit.

Additionally, Dunn and Sainty (2019) asserted that an accountant's ethical decision making is influenced by their decision in using idealism or relativism to make ethical decisions. Valentine & Bateman (2011) stated that moral idealism has a positively influence on moral recognition as people with moral idealism believe in absolute right or wrong despite in different contexts, they are likely to recognize an action as ethical issues. There are some studies that have investigated the same findings (Singhapakdi et al.,1999; Ferrell et al.,1989). The impact of idealism and relativism on ethical decision making has been the subject of numerous research. According to Johari et al. (2017), accountants following idealism will benefit from ethical decision making while those with relativism orientation displayed unfavorable ones. Similar findings were also obtained by several empirical investigations (Oboh, 2019; Shukla and Srivastava, 2016). Accordingly, we hypothesize that:

H5: Relativism negatively affects moral recognition.

H6: Idealism positively affects moral recognition.

Social Responsibility andMoral Judgment

Social responsibility refers to the ethical obligation of individuals or organizations to act in ways that benefit society beyond their own interests, an action that affects the community and the environment (Carroll, 1991). Shafer (2008) asserts moral ethical decision making prioritizes social responsibility or serves the public interest by highlighting the ethical duty of accounting professionals to society, social responsibility creates a clear connection with the public interest.

Research has shown that individuals with higher social responsibility are more likely to make moral judgments carefully, as they are committed to benefiting society and minimizing negative impacts on the community (Cooper and Marder, 2023). As it promotes the maximization of benefits for a group of people, its support for making decisions on social responsibility is consistent with utilitarianism ethical theory (Barnett

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and Vaicys, 2000). Ishwara and Mekonnen (2024) discovered a substantial correlation between social responsibility and the moral conduct of auditors and accountants. Both studies showed that in environments where social responsibility is prioritized, individuals are less likely to engage in unethical behavior. Crimston et al. (2016) also found that social responsibility positively predicts moral judgment in ethical contexts. Accordingly, we propose the following hypothesis:

H7: Social responsibility positively affects moral judgment.

Peer Group Pressure andMoral Judgment.

According to Brown et al. (1986), peer group pressure is the social influence that peers exert on an individual to follow certain behaviors, attitudes, or values of the group, which can affect ethical decision making. Eisenberg and Morris (2004) found that peer group pressure plays a crucial role in shaping moral judgment by influencing the moral norms individuals are predisposed to follow. The desire for social acceptance and fear of rejection drive individuals to conform to these norms, which was also presented in utilitarianism ethical theory (Baker, 1999). Consequently, members internalize the norms and redefine their moral judgment to be in line with the group's moral expectations (Kaptein, 2011). Discussing moral situations with peers allows individuals to consider different perspectives, enhancing their ability to make ethical judgments (Hardy & Carlo 2005). Dunn and Sainty (2019) found that peer group pressure influences individuals' experiences and social interactions, helping them develop ethical behavior when making moral judgments. Similarly, because peer group pressure frequently encourages compliance and the acceptance of group norms, Ruiz-Palomino et al. (2019) suggested that it may have an impact on moral growth. Trevino et al. (1998) found that peer group pressure has a positive influence on moral judgment when employees in ethical-climate organizations were more likely to employ ethical judgments and the employees in non-ethical climates had poorer moral reasoning. Accordingly, we hypothesize that:

H8: Peer group pressure positively affects moral judgment.

Given the significant role of peer group pressure in shaping moral judgment, it is essential to explore how it interacts with other factors, such as idealism, relativism, and social responsibility, in influencing ethical decision-making. The following research model examines these relationships and their impact on moral recognition, judgment, and intent.

2.4.2 Research Model

The conceptual model for moral intent in an accounting context is adapted from Ishwara and Mekonnen (2024), Dunn and Sainty (2019), Yang and Wu (2009) to examine the relationship among relativism, idealism, social responsibility, peer group pressure, moral recognition and moral judgment.

Moral recognition (MR)

$$MR = \beta 4RL + \beta 5ID + \varepsilon 1$$

Moral judgement (MJ)

$$MJ = \beta 1MR + \beta 6SR + \beta 7PGP + \varepsilon 2$$

Moral intent (MI)

$$MI = \beta 1MR + \beta 2MJ + \varepsilon 3$$

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In which:

RL = Relativism, ID = Idealism, PGP = Peer group pressure, SR = Social responsibility

3. Research Methodology

3.1. Research Design

The research objective is ethical decision making in the accounting profession. Therefore, the study population consists of Vietnamese accountants. The observation unit consists of accounting personnel involved in the implementation of accounting practices. This study uses primary data collected by distributing questionnaires to respondents in Viet Nam. After collecting the survey data, Smart-PLS will be used to analyze the data and apply quantitative data collection methods.

Conducting a survey using a questionnaire developed from the official scale. In the quantitative research phase, using a convenient sampling method to select research participants, ensuring feasibility and speed in the data collection process. The data will be collected through a survey questionnaire developed based on the scales completed from the previous qualitative research phase. The questionnaire is designed to measure the factors of the research model and is designed with short, easy-to-understand questions to attract and retain the interest of participants. Using an online survey to distribute the questionnaire to a group of accountants in Viet Nam - the main research subject of the topic. Using online survey method not only helps to collect data quickly but also reaches more people in a short time.

3.2. Variable Measurement

A survey questionnaire is used to collect data, and 320 questionnaires will be sent out in order to reach the desired sample size. Questionnaires play an important role in collecting personal opinions, ensuring objectivity. A random sampling technique will be used to select participants, with a minimum sample size of $n \geq 5*32 = 160$, as recommended by Hair et al. (2010), based on the 32 observed variables in this study. According to the justification given above, then 320 samples will be collected roughly in order to improve the study topic's dependability. In addition, the participants will answer the survey's questions, which will serve as the primary data collection tool. In the first section, respondents will be asked to provide some demographic and general information, such as age, gender, years of experience and educational level. Then they will be asked to fill in questions of moral intent, moral judgement, moral recognition, social responsibilities, peer group pressure, idealism, relativism which will be scored on a 5-point Likert scale, which assesses the participants' degree of agreement with each question.

Five points Likert-scale was utilized to measure the variables in the research model, with 1 representing for strongly disagreement to 5 for strongly agreement. Every measurement item was modified from earlier empirical studies and has been widely utilized by numerous academics. (See Table 1 below).

Moral intent (MI), Moral judgement (MJ), Moral recognition (MR) were adapted items from Moores et al. (2018), to assess levels of moral intent, moral recognition and moral judgment among accountants.

Idealism (ID) was incorporated into 4 items from Forsyth (1980), to assess levels of idealism among accountants.

Social responsibility (SR) was adapted 5 items from (Zehavit et al., 2019), to assess levels of social responsibility among accountants.

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Relativism (RL) was used 4 items from Forsyth (1980), to assess levels of social responsibility among accountants.

Peer group pressure (PGP) was selected from 5 items from Hull (1999) and (Yu et al., 2021), to assess levels of peer group pressure among accountants.

3.3 Data Collection and Analysis

The target respondentsare accountants who will be sent questionnaires via a Google form via internet resources such as Email, Facebook, Zalo. A convenience sampling method will be adopted due to its cost-effectiveness and efficiency in data collection. A survey will be distributed to a sample of 320 accountants in Viet Nam with a maximum sample size of 10*32 = 320, as recommended by (Hair et al., 2010).

This study will first use SPSS 20 to analyze Cronbach Alpha factor to see the reliability of measurement items and also information about age, gender, experience of work and educational level. Then, using Smart-PLS 4.0 software, Partial Least Squares Structural Equation Modeling (PLS-SEM) will provide additional analysis on the gathered data in terms of reliability, convergent validity, discriminant validity, path analysis, and testing proposed hypotheses.

The following factors lead to the selection of the Smart-PLS with PLS-SEM approach as the primary analytical instrument. First, PLS-SEM is ideal for intricate models with complicated structures and numerous connections between constructs frequently used in social science research (Joseph F. Hair et al., 2017). Second, PLS-SEM is ideal for research that is focused on predictions and does not require overly large samples (Joseph F. Hair et al., 2019). Next, it has been used in many science research, especially in business, enterprises, organizations (Ali et al.,2018). Finally, this application is appropriate because the current study aims to examine correlations among variables.

4. Conclusion

The study key purpose is to investigate the effect of idealism, relativism, social responsibility, peer group pressure on moral intent.The study will also investigate how moral recognition mediates the relationship between idealism, relativism, and moral intent.The study will examine how moral judgment mediates the relationship between social responsibility, peer group pressure, idealism, relativism, and moral intent.

Practically, this study will provide new perspectives for accountants on ethical decision making, then they can develop new strategies and programs to create ethical decisions in companies. In addition, making more recommendations on raising accountants' awareness about the benefits of making ethical decisions. These recommendations will contribute to supporting accountants who want to be more professional in making ethical decisions.

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