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Analyzing the Effectiveness of Microsoft Power Business Intelligence (BI) on Strategic Management in Insurance Industries: A Case Study of Lusaka District

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Abstract

This study aims to examine the effectiveness of Microsoft Power BI in enhancing the strategic decision-making process within Insurance Companies in Lusaka and its broader implications for the Zambian insurance industry. Specifically; (1) it seeks to evaluate Power BI's role in enhancing operational efficiency and competitive advantage, (2) assess its effectiveness in predicting market trends and consumer behavior; and (3) identify key challenges and critical success factors in its adoption and utilization within the sector. Furthermore, A mixed-methods research design were employed, the quantitative component involved surveys administered to 50 from three diverse insurance firms in Lusaka, Zambia. Respondents were selected via

stratified random sampling, ensuring representation across firm types and relevant positions/departments. Quantitative data was analyzed using statistical tools (SPSS/R). The qualitative aspect comprised in-depth, semi-structured interviews with approximately 20 senior executives, Triangulation was used to enhance validity. The research was expected to provide valuable insights into how Microsoft Power BI influences strategic decision-making, contributes to operational efficiency and competitive advantage, and aids in predicting market trends within the Zambian insurance sector. Findings identified critical challenges and success factors.

Keywords: Business Intelligence, Insurance, Lusaka

1. Introduction

1.1 Background

In recent years, the insurance industry has faced a rapidly evolving landscape marked by technological innovations, regulatory changes, and shifting customer expectations. Business Intelligence (BI) has emerged as a critical tool for insurers to navigate these changes by transforming raw data into actionable insights, enabling more informed decision-making across various levels of strategic management. Globally, the adoption of BI tools has grown significantly, with the BI and analytics market expected to reach \$29.48 billion by 2025 (Gartner, 2020). In the insurance industry, BI is essential for strategic management, enabling firms to analyze large volumes of data, enhance customer experiences, optimize operations, and predict future trends. For instance, global companies like Allstate and Progressive have leveraged BI to improve claims processing and underwriting accuracy (PwC, 2018).

In Zambia, BI adoption has been gradual but promising. The Insurance Regulatory Authority of Zambia (IRA, 2021) reports that BI tools have helped firms achieve a 15% improvement in operational efficiency and a 10% increase in customer retention. Despite these advancements, challenges such as data quality issues, high implementation costs, and a need for skilled personnel persist. Strategic management involves formulating and implementing major goals and initiatives. For insurance companies in Lusaka, this includes adapting to regulatory changes from the Pensions and Insurance Authority (PIA) and managing risks associated with Zambia's fluctuating economy. BI integration provides real-time data and predictive analytics, allowing insurers to anticipate market trends and customer needs more accurately (Mwansa *et al.*, 2021).

BI significantly impacts risk management. Companies in Lusaka leverage BI tools to improve underwriting accuracy and claims management by analyzing historical data to predict future risks (Mulenga & Mubanga, 2022). BI also enhances operational efficiency by streamlining processes and reducing costs through automated data processing (Banda & Phiri, 2020). In conclusion, the strategic integration of BI provides a competitive edge in Lusaka's insurance sector, driving growth and ensuring long-term sustainability.

1.2 Statement of the Problem

Many insurance firms struggle with fully integrating Business Intelligence (BI) into their strategic management processes. Current statistics from the Insurance Regulatory Authority indicate that only 45% of local insurance companies have effectively adopted BI tools, and among those, only 60% report a significant impact on their strategic decision-making capabilities (IRA, 2023).

The gap between the potential and actual use of BI in strategic management suggests that many firms are not reaping the full benefits of these tools. This underutilization can lead to suboptimal decision-making, inefficiencies, and missed opportunities for competitive advantage. Furthermore, empirical studies highlight a lack of comprehensive frameworks guiding the effective implementation of BI in strategic management within the insurance sector (Smith & Johnson, 2022). Therefore, this study aims to address this gap by investigating the impact of BI on strategic management in the insurance industry, providing insights that could help firm's better harness the power of BI.

1.3 General Objective

To examine the effectiveness of Microsoft Power BI in enhancing the strategic decision-making process within Madison General Insurance Company and its implications for the broader Zambian insurance industry.

1.3.1 Specific Objectives

1. To Access the effectiveness of Microsoft Power BI's implementation in enhancing operational efficiency among leading insurance firms in Zambia.
2. To examine the effectiveness of Microsoft Power BI in predicting market trends and consumer behavior.
3. To determine the limitations of adapting the Microsoft Power BI within the Zambian insurance sector.

1.4 Research Questions

1. How does Microsoft Power BI influence strategic decision-making processes in Insurance Company, and what are the implications for the broader Zambian insurance industry?
2. How does Business Intelligence contribute to operational efficiency among leading insurance firms?
3. How effective is Microsoft Power BI in predicting market trends and consumer behavior within the Zambian insurance sector?

1.5 Theoretical/Conceptual Framework

This study is grounded in three key theoretical foundations: Simon's Decision-Making Theory (1960), the Technology Acceptance Model (TAM) by Davis (1989), and the Business Intelligence & Analytics (BI&A) Framework by Chen *et al.* (2012). Simon's theory outlines the stages of

strategic decision-making intelligence, design, and choice and highlights how tools like Microsoft Power BI enhance each stage through improved data access, visualization, and real-time analytics. TAM helps explain the adoption of Power BI within Insurance Companies by focusing on perceived usefulness and ease of use, which are critical to understanding how employees accept and utilize the platform. The BI&A framework situates Power BI within the evolution of business intelligence tools that help organizations transform structured and semi-structured data into strategic insights.

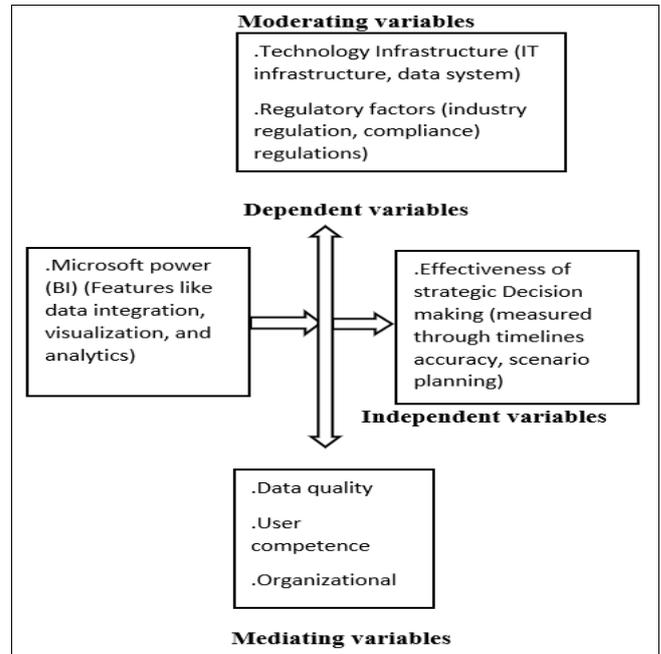


Fig 1: Conceptual framework

Conceptually, the study views Power BI as an independent variable influencing the effectiveness of strategic decision-making measured through timeliness, accuracy, and scenario planning with data quality, user competence, and organizational support acting as mediating variables.

2. literature Review

2.1 Accessing the effectiveness of Microsoft Power BI's implementation in enhancing operational efficiency among leading insurance firms in Zambia

The implementation of Microsoft Power BI in Zambia's leading insurance firms is likely to yield significant benefits in operational efficiency. By leveraging Power BI's data analytics capabilities, insurers can streamline claims management, track claims in real-time, identify bottlenecks, and visualize payout trends, enabling faster resolutions and improved customer satisfaction (Johnson & Patel, 2021). Power BI's predictive analytics can also help insurers detect potential fraud, identify trends, and optimize business strategies (Provost & Fawcett, 2013). The platform's interactive dashboards and workforce insights facilitate data-driven decision-making, enabling insurers to respond quickly to changing market conditions and customer needs (Chen & Brown, 2019). By adopting Power BI, leading insurance firms in Zambia can gain a competitive edge, improve customer experience, and drive business growth. With its ability to provide real-time insights, Power BI can help insurers in Zambia make informed decisions, optimize

operations, and stay ahead in the market (Davenport, 2018). Overall, the effective implementation of Power BI can transform the insurance industry in Zambia, enabling firms to operate more efficiently, reduce costs, and enhance customer satisfaction (Marr, 2020).

However BI tools have been shown to improve fraud detection rates, pricing accuracy, and risk management. For instance, Kumar & Reddy (2020) found that BI tools led to a 27% increase in fraud detection rates, while Park *et al.* (2019) discovered that real-time analytics improved customer service response times by 38. Ndlovu *et al.* (2021) showed that BI tools improved consumer behavior prediction accuracy and optimized marketing campaigns to stay competitive, improve operational efficiency, and enhance customer satisfaction.

2.2 To Examine the effectiveness of Microsoft power Bi in predicting market trends and consumer behavior

Studies on Business Intelligence (BI) tools in the insurance industry have shown significant benefits, including improved operational efficiency, enhanced customer satisfaction, and increased competitiveness. Johnson and Lee (2021) found that BI-driven predictive analytics led to a 40% improvement in market trend forecasting accuracy, enabling insurers to optimize pricing strategies and stay competitive. Smith *et al.* (2020) discovered that BI-driven sentiment analysis improved consumer behavior prediction accuracy by 35%, allowing insurers to tailor offerings and enhance customer engagement. Brown and Wilson (2019) found that AI-based BI solutions improved customer segmentation accuracy by 45%, enabling targeted marketing and increased conversion rates. Anderson *et al.* (2022) reported a 50% reduction in response time to market changes with cloud-based BI solutions, enhancing operational efficiency and competitiveness. These studies highlight the importance of adopting BI tools in the insurance industry to stay competitive, improve customer satisfaction, and drive business growth. By leveraging predictive analytics, machine learning, and real-time data access, insurers can make data-driven decisions, anticipate market changes, and respond quickly to customer needs.

Studies on Business Intelligence (BI) tools in the insurance industry have demonstrated significant benefits, including improved forecasting accuracy, enhanced customer satisfaction, and increased competitiveness. Wang *et al.* (2021) found that BI-driven big data analytics led to a 38% improvement in forecasting accuracy among insurance firms in China, enabling them to better analyze vast amounts of data, identify emerging trends, and make informed decisions. Similarly, Kumar & Reddy (2020) reported a 28% improvement in customer lifetime value prediction accuracy using predictive analytics, allowing insurers to develop personalized insurance offerings and enhance customer engagement. Ndlovu *et al.* (2021) found that Microsoft Power BI tools significantly enhanced consumer behavior prediction accuracy, with a 30% improvement in forecasting precision, enabling insurers to design targeted marketing campaigns and improve customer retention rates.

2.3 To determine the limitations of adapting the Microsoft power Business intelligence (Bi) within the Zambian insurance sector

Implementing Power BI in Zambia's insurance sector faces several challenges, including technical limitations,

infrastructural and connectivity challenges, human capital and skills gap, and organizational culture and employee readiness. According to Chilufya and Mwiinga (2021), the difficulty in integrating Power BI with legacy IT infrastructures, which are often fragmented and outdated, is a significant technical limitation. Additionally, poor data quality, inconsistent data formats, and lack of standardized governance protocols hinder Power BI's ability to deliver actionable insights. Tembo *et al.* (2020) highlighted infrastructural and connectivity challenges, including limited access to high-speed internet, particularly in rural areas, which restricts real-time data updates and collaborative functionalities. The ICT Association of Zambia (2021) reported a significant mismatch between the growing demand for data-driven decision-making and the supply of skilled professionals capable of managing, interpreting, and leveraging BI tools, citing gaps in SQL proficiency, DAX, data modeling, and dashboard development as key obstacles. By addressing these challenges, insurance companies in Zambia can unlock the full potential of Power BI and improve their decision-making capabilities, operational efficiency, and customer satisfaction.

The adoption of Business Intelligence (BI) tools, such as Microsoft Power BI, in Zambia's insurance sector is hindered by several challenges. According to Phiri and Banda (2020), many mid-level managers lack the analytical mindset required to translate raw data into strategic insights, and decision-making often relies on intuition or outdated reporting practices. To address this, they recommended targeted change management strategies and inclusive digital literacy programs to support a cultural shift toward evidence-based decision-making. Zulu (2019) found that the cost-related barriers to adopting BI systems are significant, with high costs associated with infrastructure upgrades, user training, data migration, and change management initiatives. To overcome these challenges, Zulu recommended a multi-pronged approach, including phased BI implementation strategies, tax incentives or subsidies for digital investment, and industry-wide BI resource-sharing platforms. Lungu and Chanda (2022) highlighted regulatory and data privacy challenges, including uncertainty regarding the legal acceptability of storing customer data on foreign servers and the need for clear policy direction. They recommended the development of detailed regulatory guidance and sector-specific compliance frameworks to clarify permissible use cases for cloud-based services. Collaboration. By addressing these challenges, insurance companies in Zambia can unlock the full potential of Power BI and improve their decision-making capabilities, operational efficiency, and customer satisfaction.

2.4 literature Gap

The existing body of literature reveals several interconnected gaps that hinder the effective adoption and utilization of Business Intelligence (BI) tools such as Microsoft Power BI within Zambia's insurance sector. These gaps are deeply intertwined, spanning technical, skills-related, organizational, and regulatory/financial dimensions. Technical Gaps include legacy IT infrastructures include poor data quality, inconsistent data formats and limited that were not designed to accommodate modern BI systems.

3. Research Methodology

3.1 Overview

The methodology section of this study outlines the approach taken to explore the role of Business Intelligence (BI) specifically Microsoft power in enhancing operational efficiency within the insurance industry.

3.2 Research Design

This study adopted a mixed-methods research design, combining qualitative and quantitative approaches to provide a comprehensive understanding of Business Intelligence (BI) tools' effectiveness in the insurance sector. Specifically, a case study design was employed to facilitate the acquisition of detailed information from research participants, allowing for an extensive and thorough understanding of the issues from a broader perspective with data from various sources. The quantitative component involved surveys to gather measurable data from insurance firms, while the qualitative aspect includes in-depth interviews to explore managerial perspectives and experiences with BI adoption.

3.3 Target Population

A specific group of people that a researcher or organization wants to study, reach, or serve is referred to as the target population. The target population for this study consisted of insurance firms operating in Lusaka, specifically focusing on managers and decision-makers within these firms who are directly involved in the adoption and utilization of Business Intelligence (BI) tools. The group was chosen due to their strategic role in implementing BI solutions and driving organizational decisions. The target population is defined as a specific group of people that a researcher wants to study or serve, characterized by specific traits pertinent to the study's goals (Creswell & Creswell, 2018). The study focused on 3 insurance firms operating in Lusaka, drawing from the expertise of managers and decision-makers within these organizations.

3.4 Sampling Design

The process of choosing a group of people from a population in order to estimate characteristics of the entire population is known as sampling design. This study employed a sampling design to select a representative group of participants from the target population. Specifically, a mixed sampling approach was used utilized. For the quantitative survey component, a stratified random sampling method selected participants from 3 insurance firms in Lusaka, ensuring representation of various sizes and geographic locations. This approach allows for a diverse and representative sample, enabling the estimation of characteristics of the entire population (Shah, 2011). For the qualitative interviews, purposive sampling was employed to target key executives and decision-makers who are most knowledgeable about Business Intelligence (BI) implementation and its impacts on their organizations. This non-probability sampling technique involves deliberately selecting participants based on predetermined characteristics that helped address the study questions (Palinkas *et al.*, 2015). By combining these sampling methods, the study aimed to gather comprehensive insights into the adoption and utilization of BI tools in the insurance sector.

3.5 Sample Size Determination

A total of 50 respondents were targeted for quantitative survey, drawn from three insurance companies representing small, medium and large firms in Lusaka. This sample size was determined using a systematic sampling approach, selecting every 18th policyholder from a combined population of approximately 900 policyholders across the three companies. The sample was proportionally allocated across the companies based on their population sizes, with 11 respondents from the small firm (200 policyholders), 11 respondents from the medium firm (200 policyholders) and 28 respondents from the large firm (500 policyholders). For the qualitative component, 20 senior executives with practical experience using business intelligence (BI) tools were selected to provide in-depth insights into BI adoption and implementation within the Zambian insurance sector.

3.6 Data Collection Methods

This study used purposive sampling to select respondents, as they could be easily identified based on their roles and expertise in Business Intelligence (BI) adoption within insurance firms. A mixed-methods approach combined both primary and secondary data sources. Primary data was collected through surveys and semi-structured interviews. Surveys were distributed electronically to gather quantitative data on BI adoption rates, operational improvements, and performance metrics. Semi-structured interviews provided qualitative insights into decision-making processes, challenges faced, and perceived benefits of BI tools. Secondary data from insurance industry reports and existing literature was also used to support the findings.

3.7 Data Analysis

The quantitative data from the surveys were analyzed using statistical analysis tools such as SPSS or R. Descriptive statistics, correlation analysis, and regression analysis were employed to examine the relationships between Business intelligence (BI) Adoption Rates and operational efficiency metrics, including process cycle time and cost reduction. The qualitative data from interviews were analyzed through thematic analysis where transcripts were coded and categorized to identify recurring themes and patterns; this process revealed insights into the strategic impact of BI tools on insurance operations, such as enhanced decision making and improved risk management.

3.8 Triangulation

To enhance the validity and reliability of the study, triangulation was employed. This involved comparing and contrasting data from diverse sources including survey results, interview findings, and secondary data. By cross-referencing multiple data sources and methods, the research yielded a more robust and comprehensive view of the topic.

3.9 Limitations of the Study

This study was subjected to several limitations. Sampling bias was a potential concern, as a sample that lacked sufficient diversity may not have accurately represent the broader population of insurance firms, potentially limiting the generalizability of the findings.

3.10 Ethical Considerations

This study prioritized ethical considerations to ensure the well-being and privacy of its participants. Informed consent was obtained from all participants, who were fully informed about the study's purpose and voluntary nature of their participation. Confidentiality was maintained by anonymizing data and protecting personal or sensitive information from disclosure. The principle of non-maleficence was guide throughout the research, avoiding harm to participants and ensuring responsible use of findings. Transparency was upheld, with clear explanations of the research process, data collection, and analysis methods, enabling participants to understand how their contributions will be utilized.

4. Research Results/Finding

4.1 Background characteristics of the respondent

4.1.1 Position /roles of respondents

The pie chart indicated the distribution of position/roles, out of 50 participants majority respondents (42%) were customer service roles followed by IT Data analysts and marketing officers were tied at (18% each). Risk managers accounted for (12%), while business analysts formed the smallest group at 10%.

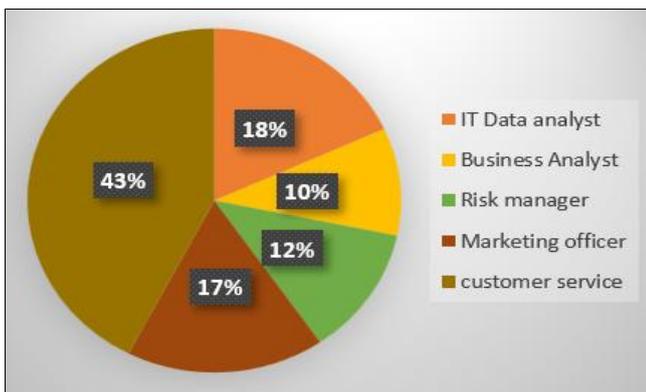


Fig 1: Presentation of position/roles

4.1.2 Years of work experience presented varying practices within participants. The data suggests that the Majority of participants (40%) have 1-3years years of work experience. Indicating a relatively young workforce. A significance portion (38%) had 4-6 years of experience showing a substantial middle group. The smaller segments represented more experience (8% with 7-10 years and another 8% with more than 10 years) and less experience (6% with less than a year) employees. This distribution implies a career professionals and some room for growth and succession planning for longer tenured staff.

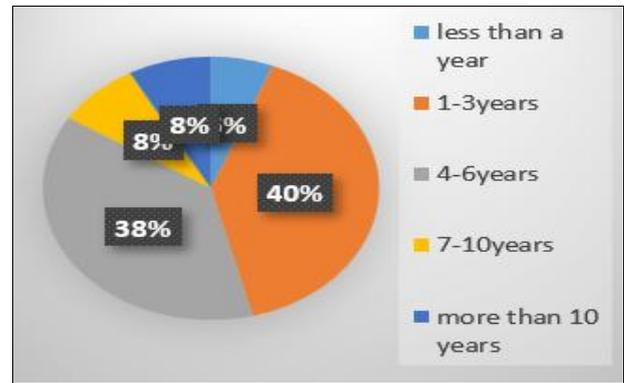


Fig 2: Work experience

4.1.3 The diagram below shows the distribution of years of using Microsoft power. The majority (72%) had 1-3years of experience while (26%) had 4-6 years and lastly a small (2%) had 7-10years.while most fell in 1-3years, findings suggested that the majority of participants, (72%) have 1-3 years of experience using Microsoft power BI indicating a predominantly junior or relatively new user base.

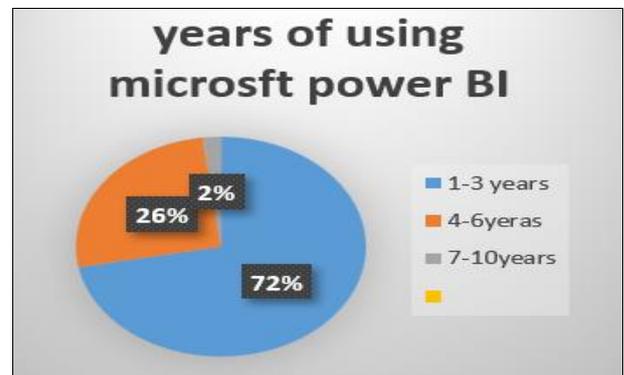


Fig 3: Years of using Microsoft power BI

4.1.4 The effectiveness of Microsoft power BI's implementation in enhancing efficiency among leading insurance firms in Zambia

A deeper dive into the data showed to what extent had Microsoft power BI improved the speed and efficiency of strategic decision making the results shows that according to chart Microsoft power BI had improved the speed and efficiency of strategic decision-making. The breakdown of the responses was as follows 55% of participants (27) reported a moderate improvement, while 31 % (15) reported a high improvement and lastly 14% (7) reported a very high improvement from the overall total of participants. This suggested that Microsoft power BI has had a positive impact on strategic decision making among leading insurance firms in Zambia.

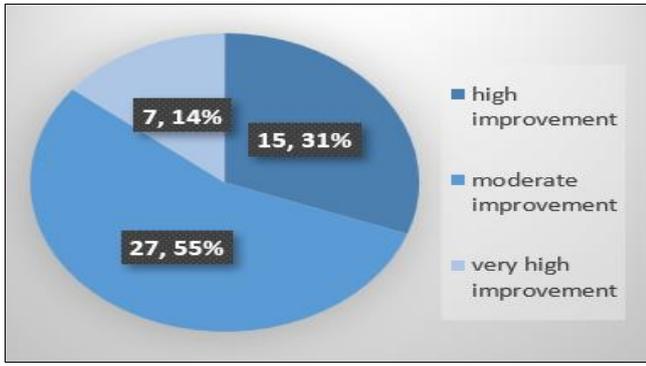


Fig 4: Impact of BI in strategic decision making

4.1.5 Further exploration demonstrated the significance of implementing Microsoft power BI, a clear majority of participants believed that implementing this business intelligence tool is highly important. The data revealed a strong consensus among all respondents, as 67% of them indicated the implementation is significant suggesting its popularity as a business tool, while the remaining 33% considered it to be very significant. There were no responses indicating a lower level of significance such as moderate or low, suggesting a unanimous view on the high value of implementing Microsoft Power BI.

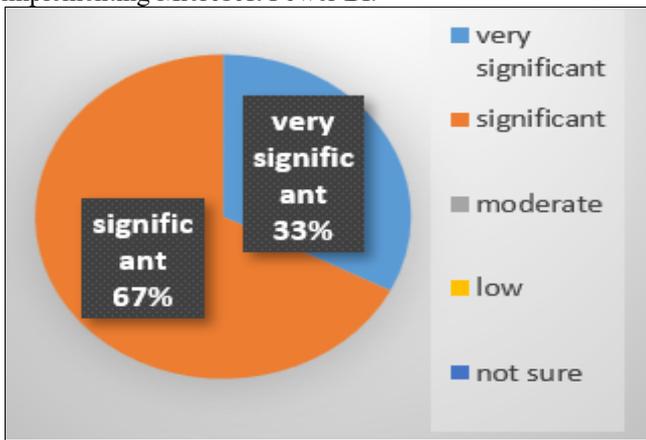


Fig 5: Significance of implementing Microsoft power BI

4.1.6 The researcher further inquired from participants the effectiveness of business intelligence in improving operational efficiency across five key areas BI's effectiveness varies by areas across different departments. A large number of respondents rated BI as effective in areas like Sales and Marketing (27 respondents), Underwriting (24 respondents), and Claims Processing (18 respondents), highlighting its perceived value in those functions. However, the effectiveness was viewed more moderately in Customer Service and Financial Reporting, where a significant portion of participants rated the impact as moderate" (25 and 19 respondents, respectively). This suggested that while BI is seen as a beneficial asset overall, its positive impact is not felt uniformly across all business functions.

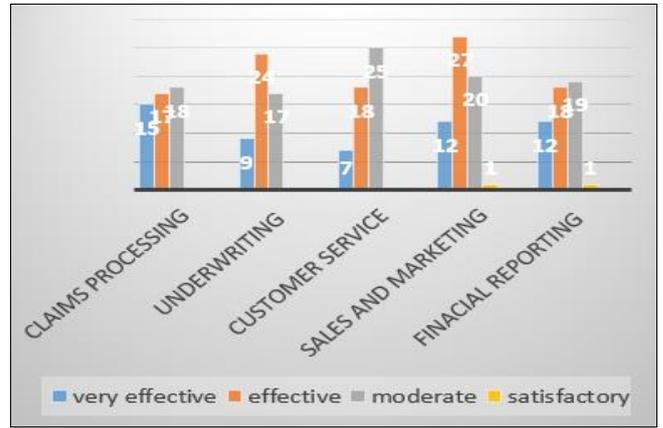


Fig 6: Effectiveness of BI in improving efficiency

4.1.7 The effectiveness of Microsoft power BI in predicting market trends and consumer behavior

A subsequent research revealed the effectiveness of Microsoft power BI in predicting consumer behavior and preferences, the data indicated that Microsoft Power BI was largely considered an effective tool for this specific purpose. The results showed a high level of confidence in the tool's capabilities, with a combined 74% of respondents rating it as either very effective (53%) or effective (21%). While the majority held a positive view, a smaller portion of the participants expressed a more moderate or minimal perception of its impact, with 16% rating it was moderated and 10% as slightly effective, this showed that Microsoft power BI is very effective in predicting market trends and consumer behavior.

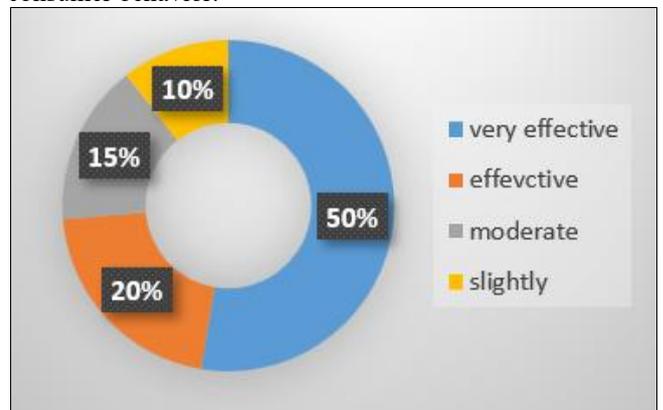


Fig 7: Microsoft power BI's prediction in consumer behavior and preferences

4.1.8 The analysis revealed the type of data sources BI utilizes, Business Intelligence systems primarily drew from internal company data, which constituted the largest portion at 31%. The chart showed a significant reliance on external sources, with external market data making up 21% of the data used. The remaining sources, including social media data, competitor data, and government/regulatory data, each contributed equally at 16%, highlighting a well-rounded approach to data collection that leverages both internal and

various external information streamed to inform business decisions. This suggested that Microsoft power BI's analysis of consumer behavior and preferences showed a strong reliance on internal company data (53%) for business intelligence (BI).

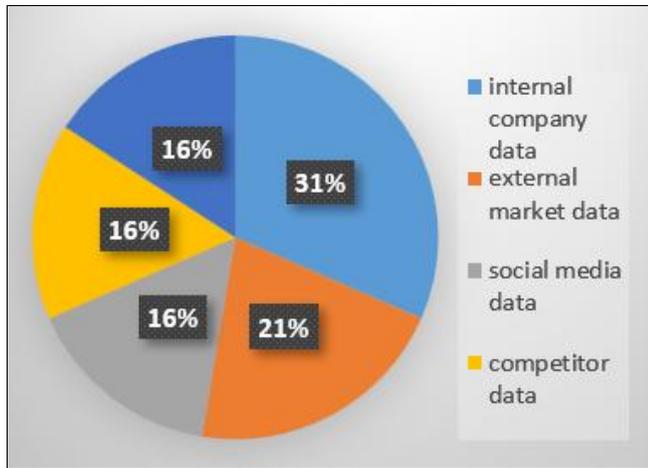


Fig 8: Types of data sources BI utilizes

4.1.9 In Addition it was found that Microsoft power BI assisted in predicting future market trends, the majority of respondents (54%) find Power BI to be very effective in this aspect. Another 25% of respondents considered it effective a smaller percentage, 11%, found it moderately effective, and 10% found it slightly effective in predicting future market trends. Overall, a significant portion (79%) of respondents found Power BI to be either very effective or effective in predicting future market trends. This suggested that a significant majority found Microsoft power BI to be very effective.

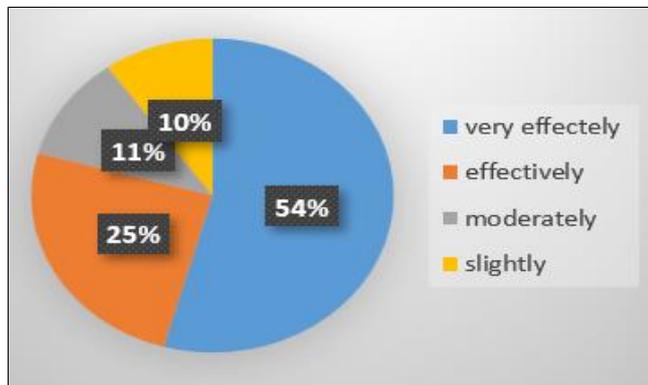


Fig 9: Microsoft power BI in predicting future market trends

4.2 Limitations of adapting Microsoft power BI within the Zambian insurance sector

The results highlighted the limitations or challenges in implementing Microsoft Power BI within the Zambian insurance sector through a pie chart. The biggest challenge was difficulty integrating with existing legacy systems, cited by 26% of respondents. Other notable challenges included high cost of licensing and implementation (16%), lack of specific industry templates or best practices for Power BI (15%), and several challenges tied at 11% resistance to change from employees, data privacy and security concerns,

and lack of skilled personnel. The least significant challenge was limited understanding of Power BI at 10%. This suggested that Zambian insurance sector faces several challenges when implementing Microsoft power BI.

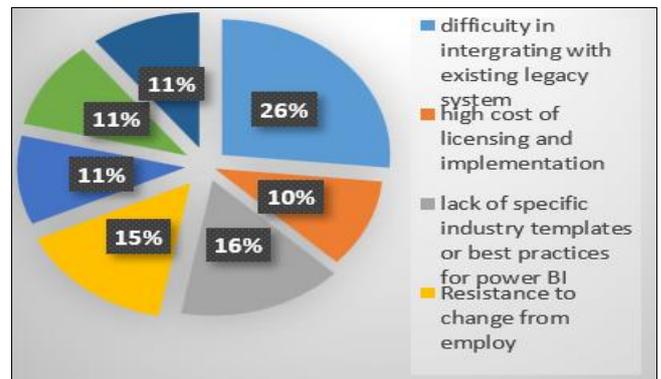


Fig 10: limitations/challenges in implementing BI

4.2.1 The researcher further inquired from participants the impact of insufficient training on the use of Microsoft Power BI. The data indicated that a lack of training had a notable negative effect, with the majority of respondents, 64%, reported a moderate impact. A significant portion of the participants experienced an even more severe consequence, as 25% indicated a high impact and 11% reported a very high impact. The findings suggested that while a lack of expertise was not always a complete barrier to use, it universally hindered performance and effectiveness.

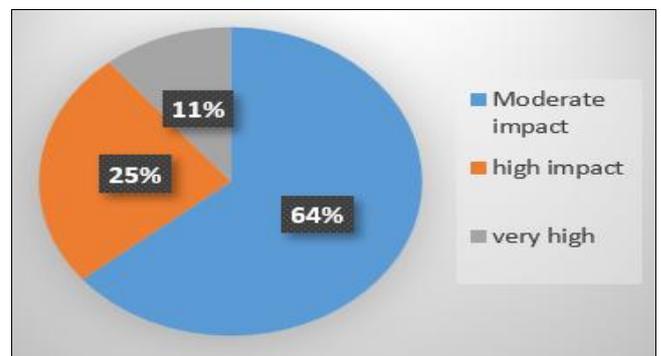


Fig 11: Effects of lack of power BI training/expertise

4.2.2 The findings also suggested how well Microsoft power BI integrated with the company's current system and data sources, the data indicated that Microsoft Power BI integrated successfully with existing corporate infrastructure. A combined 84% of respondents reported a positive experience, with 54% rating the integration as well and 30% as very well. This suggested that the tool was largely compatible and could be implemented smoothly. Only a minor portion of the participants, 16%, described the integration as moderately well, which implied that significant integration challenges were not common for the majority of users. This was derived from the overall total of participants. The findings concluded that Microsoft power BI successfully integrates with existing corporate infrastructure with 84% respondents with a positive experience.

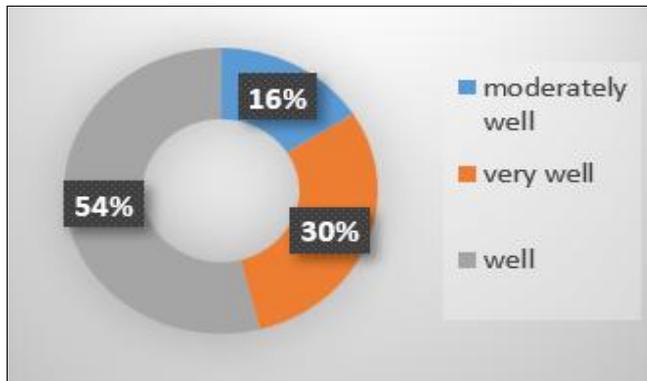


Fig 12: Integrating with the company's current system and data sources

4.2.3 Discussion of Findings

4.2.4 Overview

This chapter presents and explains thoroughly the findings of this study. The results will be discussed under each objective to clearly show response and their contribution to the generation of new knowledge.

4.2.5 The effectiveness of Microsoft power BI's implementation in enhancing efficiency among leading insurance firms in Zambia

The chapter highlighted the effectiveness of Microsoft power BI 's implementation in enhancing efficiency among leading insurance firms has improved the speed and efficiency of strategic decision making. Notably, 67% of participants considered implementing Microsoft Power BI highly significant, while 33% deemed it very significant, demonstrating a unanimous view on its high value. In terms of effectiveness, Microsoft Power BI was rated as effective by 27 respondents, showcasing its perceived value in driving business outcomes. Furthermore, the tool improved the speed and efficiency of strategic decision-making, with 31% of participants reporting a high improvement and 14% reporting a very high improvement. The findings align with previous research, by Pukala, Polak and Kania (2020), who demonstrated how Microsoft Power BI effectively monitors and manages insurance activities, thereby improving operational oversight. Forrester Consulting (2024) found that organizations using Microsoft Power BI and Azure Analytics achieved a significant return on investment (ROI) and a reduction in the total cost of ownership (TCO) for their business intelligence solutions.

4.2.6 The effectiveness of Microsoft power BI in predicting market trends and consumer behaviour

This chapter discussed Microsoft Power BI's effectiveness in predicting consumer behavior and preferences, with 74% of respondents rating it as either very effective (53%) or effective (21%). Additionally, the study revealed that Business Intelligence systems draw from a diverse range of data sources, with internal company data being the largest portion at 31%, followed by external market data at 21%, and other sources such as social media, competitor, and government data each contributing 16%. These findings suggested that Microsoft Power BI is a valuable tool for understanding consumer behavior and that BI systems utilize a well-rounded approach to data collection, leveraging both internal and external information streams to inform business decisions. Pukala, Polak and Kania (2020) demonstrated Microsoft Power BI's effectiveness in using data to monitor and manage insurance activities, showcasing

the tool's versatility across different business functions to gain a comprehensive understanding of business data. The research specifically noted that Microsoft Power BI's interactive dashboards and predictive analytics features enable companies to anticipate trends and make proactive decisions.

4.2.7 Limitations of adopting Microsoft power BI within the Zambian insurance sector

The research findings discussed the key challenges and benefits of implementing Microsoft Power BI in the insurance sector. The most significant hurdle is difficulty in integrating with existing legacy systems (26%), while high costs and lack of industry templates also pose notable challenges. Conversely, Microsoft Power BI integrates well with existing corporate infrastructure, with 84% of respondents reporting a positive experience. However, insufficient training has a notable negative impact, with 64% reporting a moderate impact and 36% reporting a high or very high impact. Overall, the findings suggested that while Microsoft Power BI offers successful integration and benefits, addressing challenges related to legacy systems, costs, and training is crucial for optimal.

5. Conclusion and Recommendations

5.0 Overview

This chapter provides the conclusion and recommendations drawn from the study findings on Microsoft power BI's role in enhancing strategic decision making and operational efficiency within the Zambian insurance sector.

5.1 Conclusion

In conclusion, the study on Microsoft Power BI's role in strategic decision-making within the insurance industry revealed its transformative impact. By leveraging Microsoft Power BI, insurance companies significantly enhance their competitive advantage, operational efficiency, and decision-making processes. The technology empowered them to collect, analyse, and interpret vast amounts of data, driving informed decisions that boost customer service and strategic planning. However, challenges such as a shortage of skilled data analysts, data privacy concerns, and limited awareness of the system's complexity hinder Microsoft Power BI's full potential. Despite these obstacles, Microsoft Power BI proves essential for optimizing resources and tailoring services to meet customer expectations. Moreover Insurance companies leveraging Microsoft Power BI gain a valuable edge in a rapidly evolving market. The study emphasized that realizing Microsoft Power BI's benefits requires a robust infrastructure, comprehensive training, and continuous updates to stay abreast of technological advancements and regulatory changes. With these elements in place, insurance companies can unlock Microsoft Power BI's potential and drive sustainable growth.

5.2 Recommendations

1. Establish stringent data governance policies to ensure data integrity, which includes regular audits, data cleansing processes, and a centralized data management system to support Business Intelligence (BI) initiatives.
2. Adopt advanced cybersecurity frameworks and data protection protocols to secure customer data. Compliance with data protection regulations, such as the Data Protection Act in Zambia, should be prioritized to foster trust and prevent breaches.

3. Invest in ongoing training and development programs for employees to enhance their skills in using Business Intelligence to drive data-driven decision-making.
4. Regularly review and update their Business Intelligence strategies to ensure alignment with evolving business needs, industry trends, and emerging technologies, enabling them to stay competitive and responsive to changing market conditions.

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