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THE RISING ROLE OF ARTIFICIAL INTELLIGENCE IN JORDAN'S INSURANCE INDUSTRY

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Abstract

In this scholarly inquiry, we illuminate profound insights into the modalities through which the insurance domain in Jordan is acclimating to the incorporation of artificial intelligence (AI). A nuanced comprehension of the ramifications and potential benefits of AI deployment is pivotal for industry stakeholders to make erudite decisions regarding their assimilation strategies. This investigation primarily focused on delineating the ramifications of AI on the insurance milieu in Jordan. Empirical findings revealed a statistically robust positive influence of AI, notably in areas such as risk assessment, revenue generation, and client satisfaction within the Jordanian insurance framework. With a confidence interval established at $\alpha \leq 0.05$, our data underscores a compelling correlation coefficient of 80%, signifying a potent linkage between AI and the insurance sector. Consequently, it is imperative to underscore that personnel within the industry should perceive AI as a conduit to augment their professional tasks, rather than a prerequisite for their sustained tenure.

Keywords: Artificial Intelligence, Insurance Industry, Risk, Revenue, Customer Satisfaction. Jordan.

INTRODUCTION

In an increasingly complex and digitalized financial landscape, insurance firms stand at a crossroads. The nexus of their sustained growth and evolution is deeply intertwined with the caliber of insurance services proffered to their clientele, complemented by a burgeoning inclination towards financial technologies, notably insurtech and its myriad instruments. Such advancements have ushered in opportunities to diversify their consumer spectrum, encompassing marginalized segments such as the economically disadvantaged, young females, and other low-income cohorts. It is paramount to strategically reduce insurance service costs, amplify market penetration, escalate transactional velocities, facilitate access to a spectrum of financial utilities, curate insurance solutions tailored to individual financial capacities, whilst concurrently

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safeguarding them from subscribed risks. Widening the consumer ambit remains a pivotal objective for insurance enterprises, more so amidst heightened sectoral competition.

With the onset of Artificial Intelligence (AI), we are witnessing a transformative epoch that is reshaping global paradigms, with profound ramifications on the insurance sector and broader economic fabric. A compendium of scholarly works underscores the significance and dividends of AI in insurance, forecasting seismic operational metamorphoses in forthcoming years (Parachute, 2020; Raikkonen et al., 2018). AI's quintessential applications in insurance-oriented research predominantly converge on fraud detection (Versa et al., 2017) and claims management (Badly and Robert et al., 2021; Lopez and Milhaud, 2021; 2018). Grizz et al.'s (2020) discourse pivots on deploying machine learning within property insurance, spotlighting AI's instrumental role in honing risk analytics, thereby bolstering the longitudinal fiscal health of insurance entities.

Eling et al. (2021) delve into a nuanced examination of AI, elucidating its capacity to augment revenue avenues, and refine both loss forecasts and mitigation strategies for insurance professionals. Notwithstanding the projection of AI-generated revenues in insurance burgeoning by 23%, amounting to $3.0 billion from 2019-2024, the opacity and intricacies of certain AI paradigms raise concerns regarding their suitability within insurance practices (Bean, 2021). The ascendancy of AI, equipped to execute intricate computational tasks, is unmistakably evident in service sectors, with insurance being no exception. Data, in this milieu, is perceived as a cardinal strategic asset, ushering in a competitive edge for financial establishments, with AI's adeptness in harnessing this data yielding manifold benefits (Kim and Gardner, 2015). However, the challenge confronting insurers is the colossal magnitude of data to be stored and scrutinized. To distill insights from this data, insurance firms conventionally deploy customer relationship management systems and enterprise resource planning modalities. The inherent complexity lies in amalgamating this dispersed data into a unified repository, facilitating seamless access for actuaries, financial analysts, claims staff, and other vested entities. The crux of this research endeavors to elucidate the ramifications of AI and explore avenues to harness its potential in revolutionizing the insurance industry in Jordan.

LITERATURE REVIEW

The digitalization of the insurance industry is already quite advanced and has gone far beyond the transition from analogue to digital information processing (Stoeckliet al., 2018). Eling and Lehmann (2018) describe digitalization as ‘the integration of the analogue and digital worlds with new technologies that enhance customer interaction, data availability, and businessprocesses’. Digital transformation is also driven by InsurTechs, 14 which have emerged in the last decade (Riikkinenet al., 2018). New technologies affecting the insurance industry include cloud computing, telematics, the Internet of Things (IoT), mobile phones, block chain technology, 17 artificial intelligence and predictive modeling (Cappiello, 2020). Digitalization has already had a considerable impact along the insurance value chain and will continue to do so as new technologies emerge and mature (Eling and Lehmann, 2018).18 Key changes comprise enhanced

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process efficiency, improved underwriting and product development, reshaped customer interactions and distribution strategies and new business models (Albrecher et al., 2019). Whilst, Bohnert et al. (2019) show in their study that digitalization activities have a significantly positive impact on the business performance of insurance companies.

Kumar et al., (2019) analyzed the extent and market penetration of artificial intelligence (AI) in insurance services to solve existing concerns for increased customer satisfaction in the hotel sector. According to the findings of this study, artificial intelligence may lead to greater levels of customer satisfaction and profits, as well as a decrease in instances of fraud, operational challenges, and effective time.

Richter and Resch (2021) claimed that their research investigates the influence of artificial intelligence (AI) on the leadership of insurance companies located in different countries. The usage of technology driven by artificial intelligence (AI) has already been applied in the insurance sector, and businesses are seeking for new methods to employ it.

Kelley et al., (2018) reported that artificial intelligence (AI) has the ability to enhance the value chain of the insurance sector by altering connections, rethinking business platforms, and disclosing data that was previously concealed. AI will be used by insurance companies to improve the way in which they analyze large amounts of data, develop algorithms more quickly using transactional data, and combine data in new ways in order to discover better underwriting risks and price the risks of different insureds based on what their business risks are really worth.

Paruchuri, H. (2020) reported that data has been the insurance industry's primary focus in the recent years. There is a pressing demand for solutions that analyses or manages big data in the sector because of the explosion in data creation. Due to an environment marked by increased competition, fraud activities, flexible market places, high prospects from customers, and strict standards, the current circumstances are seen as requiring a slow but rigorous adjustment. As the amount of big data grows, the sector's use of machine learning to solve underwriting and forfeiture avoidance, entitlements management, fraud detection, product evaluation, transactions, and client capabilities will bring the business under a cloud of doom in the future. This article has looked at a few scenarios and showed the importance of machine learning in processing customer data and addressing entitlement concerns. The future of insurance companies will be brighter if machine learning is properly used.

Alfaouri & Tahat (2020) carried out research under the title Artificial Intelligence and the Impact It Will Have on Jordanians Working in the Insurance Industry. This research was conducted with the intention of demonstrating the significance of artificial intelligence (AI) in the insurance sector. According to the findings of the research, artificial intelligence (AI) and the expansion of the insurance industry in Jordan are positively related to one another. The example firms used AI systems in order to enhance how they performed their job, increase their profits, and get a higher return on their investments. Additionally, it reduced the amount of time they needed to spend on operational tasks and assisted them in working more quickly.

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Theoretical Framework and Hypotheses Development

The study's theoretical framework is founded on the premise that the insurance industry in Jordan can experience substantial changes through the implementation of artificial intelligence (AI) technology. The framework acknowledges that the proficient implementation of AI technologies holds the capability to impact and transform diverse facets of the insurance sector, particularly with respect to risk evaluation, revenue generation, and customer contentment.

Enholm et al. (2022) posit that AI is perceived as a novel instrument that has the potential to enhance operational procedures and enhance decision-making within the insurance industry. The statement recognises the potential of AI applications, including machine learning algorithms and predictive analytics, to automate mundane tasks, simplify intricate workflows, and offer valuable insights through sophisticated data analysis methods (Boute et al., 2022). The utilisation of artificial intelligence (AI) can potentially improve the risk assessment accuracy, revenue optimisation strategies, and customer satisfaction levels of insurance companies in Jordan by providing personalised and efficient services.

Moreover, the theoretical framework underscores the importance of employees' cognizance and endorsement of AI as a means that supplements and amplifies their labour instead of constituting a menace to their job security. The statement acknowledges the importance of raising employee awareness regarding the advantages and prospects that artificial intelligence (AI) can offer in their respective job functions, in order to achieve successful AI implementations. According to Vrontis et al. (2022), the cultivation of a culture that embraces AI technologies can enable employees to actively engage in the adoption process, acquire the essential competencies to collaborate with AI systems, and optimise their potential in the dynamic digital environment.

In general, the theoretical framework establishes a basis for investigating the effects of AI applications on the insurance sector within the context of Jordan. The text underscores the possible advantages of Artificial Intelligence (AI) in domains such as hazard evaluation, income generation, and client contentment, while underscoring the significance of employee cognizance and acquiescence as pivotal elements for the triumphant execution of AI. The study endeavours to authenticate and enhance the theoretical framework through empirical research and analysis, thereby furnishing significant insights for the insurance industry in Jordan.

The following essential measurements will provide the ideas behind this study's thesis, " Study the Impact of Artificial Intelligence Applications on Insurance Industry: A case of Jordan." This section includes the hypothesis, which will be proven or rejected based on the following hypothesis:

Null Hypothesis (H_0): There is a statistically positive significant effect of artificial intelligence in insurance sector in Jordan.

First Hypothesis (H_1): There is a statistically negative significant effect of artificial intelligence in insurance sector in Jordan.

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METHODOLOGY

The objective of the study was to obtain perspectives from personnel operating within the insurance sector in Jordan. A sample size of 125 individuals was chosen for the purpose of data collection. The selected candidates were drawn from a heterogeneous applicant pool comprising multiple organizations within the insurance industry. A sample of 15 companies was selected from the population for the purpose of this study. In order to gather quantitative data for the study, a structured and closed-ended questionnaire was employed. The researchers conducted a survey among a chosen group of employees in the insurance industry in Jordan through phone calls. This method enabled them to gain a more comprehensive understanding of the nuances of the industry and the particular methods by which artificial intelligence (AI) is utilized to improve operational efficiency within the sector.

The study endeavored to acquire comprehensive insights into the perspectives and experiences of employees in the insurance industry with respect to AI applications by utilizing this data collection method. The utilization of a structured and closed-ended questionnaire facilitated response consistency, thereby enabling researchers to effectively analyse and derive significant conclusions from the collected data.

Data Analysis

The collected data in the study was subjected to various statistical treatments utilising the statistical software package, SPSS (Statistical Package for the Social Sciences), for analysis purposes. The aforementioned treatments were designed to elicit significant insights from the data and furnish a thorough comprehension of the research goals. Initially, a descriptive analysis was performed to provide a summary and present the essential features of the data. The present study entailed the computation of statistical indices, including the arithmetic mean, median, standard deviation, and frequency distributions. Through the analysis of descriptive statistics, scholars obtained a comprehensive understanding of the data, detected any discernible patterns or trends, and ascertained the measures of central tendency in the dataset.

Furthermore, an evaluation was conducted to gauge the internal consistency and dependability of the survey utilized for gathering data through a reliability test. The assessment was pivotal in determining the degree to which the items on the questionnaire accurately assessed the identical underlying construct. Through the evaluation of the questionnaire's reliability, researchers can ascertain the dependability and accuracy of the responses furnished by the participants. In addition, the research hypotheses were subjected to suitable statistical methods utilizing the SPSS software. The utilization of these methodologies enabled scholars to scrutinize the interconnections and correlations among variables and ascertain whether the gathered data corroborated or refuted the postulated hypotheses. The study utilized statistical analysis to offer empirical evidence and establish dependable conclusions regarding the influence of artificial intelligence on the insurance sector in Jordan.

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In the study, the data analysis phase encompassed various methods such as descriptive analysis for data summarization, reliability testing to ensure questionnaire consistency, and statistical techniques to scrutinize and authenticate the research hypotheses. The aforementioned analyses have established a sturdy groundwork for comprehending the results and deducing significant inferences from the gathered information.

Sample of the Study

The study involved a sample of 125 employees from various insurance companies in Jordan. The participants were contacted and administered a survey to gather insights about the insurance industry in the country. The sample comprised employees from 15 different insurance companies, and Table 1 presents the distribution of individuals according to their respective companies. The presented table displays the frequency distribution of employees across various companies, accompanied by their respective percentages. As an illustration, the Arab Orient Insurance Company was found to have a workforce of 16 individuals, representing 12.8% of the overall sample population. Likewise, the remaining corporations exhibited diverse counts of participants, which corresponded to their individual proportions within the population under investigation. The inclusion of individuals from various insurance companies in this study facilitated a heterogeneous representation, thereby affording researchers a comprehensive understanding of the insurance sector in Jordan from multiple vantage points.

Table 1: Frequency and Percentage of the Sample According to Companies Insurances (n=125)

Name of the company	Frequency	Percentage
Arab Orient Insurance Company	16	12.8%
Middle East Insurance Company	10	8%
AlQudus Insurance Company.	12	9.6%
Al-Nisr Al-Arabi Insurance Company	11	8.8%
Delta Insurance Company	12	9.6%
Al Manara Insurance Company	4	3.2%
Newton Insurance Company	7	5.6%
Philadelphia Insurance Company	10	8%
International Insurance	11	8.8%
Islamic insurance company	10	8%
United Insurance Company	12	9.6%
National Insurance Company	9	7.2%
The Jordanian French Insurance Company	8	6.4%
Jordan Arab Insurance Group	9	7.2%
Arab International Union Insurance Company	5	4%
Total	125	100%

Reliability Test

The research conducted an evaluation of the inter-rater reliability among the participants through a reliability test. Inter-rater reliability pertains to the degree of consistency and similarity in the ratings or evaluations provided by various raters or observers. The present instance denotes the coherence of answers among the individuals who

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participated in the research. The results of the reliability test indicate that the inter-rater reliability was found to be 74%, a value that is considered statistically acceptable. The aforementioned percentage indicates a significant level of concurrence or coherence among the respondents' answers. A greater degree of inter-rater reliability signifies a heightened level of concurrence among the raters, implying that the data obtained from the subjects is dependable and uniform. The study's questionnaire demonstrated efficacy in eliciting consistent responses from participants, as evidenced by the statistically accepted inter-rater reliability of 74%. The present discovery enhances the assurance in the dependability of the gathered data, given that it showcases a noteworthy degree of concurrence among the surveyed individuals.

RESULTS

The study's results offer valuable insights into the perspectives and viewpoints of the participants concerning the influence of artificial intelligence (AI) on the insurance sector. The survey instrument, comprising a set of twelve inquiries, was formulated to evaluate diverse facets pertaining to the application of artificial intelligence in the insurance industry. The investigators employed a Likert scale to compute the means and standard deviations of the participants' responses, thereby facilitating an assessment of their levels of agreement. Table 2 displays the descriptive statistics of the participants' responses, including the mean and standard deviation, as well as the ranking and agreement levels for each item.

One of the key findings of the study revealed that the statement "Artificial intelligence aids in mitigating customer complaints" garnered the highest mean score of 3.66. The aforementioned statement suggests a considerable degree of consensus among the respondents regarding the beneficial influence of artificial intelligence on mitigating customer grievances in the insurance sector. Conversely, the statement "Artificial intelligence is aiding the insurance sector in cost-saving and revenue generation by providing customers with tailored services" received the lowest mean score of 2.07. The findings indicate a comparatively diminished degree of consensus among the respondents concerning the capacity of artificial intelligence to reduce expenses and produce income through the provision of customized services to clients.

Drawing from the results, it can be inferred that the respondents held a collective perspective that artificial intelligence exerts a favorable influence on diverse facets of the insurance sector. The results suggest a significant agreement among the participants regarding the favorable impacts of AI in mitigating customer grievances, detecting fraudulent emails, constructing risk prediction models, and revolutionizing various industry procedures, including but not limited to, distribution, underwriting, pricing, and claims. This is evident from the considerably high mean scores obtained.

The data indicates a potential variance in perspectives regarding the degree to which artificial intelligence (AI) impacts cost reduction and revenue generation within the insurance sector, as evidenced by the lower mean score. The results of this study illuminate the viewpoints and dispositions of the respondents regarding artificial

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intelligence (AI) in the insurance industry, and offer significant discernments into the possible advantages and difficulties linked with its adoption.

Table 2: Means and Deviations to Companies Insurances (n=125)

No.	Items	Mean	Standard Deviation	Rank	Agreement Degree
1	Artificial intelligence provides assistance to insurance companies, brokers and policyholders in terms of increasing efficiency, effectiveness, speed, efficiency and volume of information exchange.	3.30	1.10	7	High
2	Artificial intelligence can provide solutions to most of the problems facing the sector, especially in terms of compensation or clearing between companies.	3.36	.87	5	High
3	Artificial intelligence is helping the insurance industry to save money and even generate more revenue, as it gives customers exactly what they want when they want.	2.07	1.27	10	Medium
4	Artificial intelligence Spurious emails can be tracked down to prevent Predict security breaches	3.55	1.03	2	High
5	Insurance companies can develop their own artificial intelligence tools to analyze risks, which will affect the amount of insurance and determine the type of insurance coverage.	2.90	.93	9	High
6	Artificial intelligence also provides the opportunity for insurance companies to create different risk forecasting models, and thus the company designs insurance policies suitable for different customer needs.	3.51	.75	3	High
7	Artificial intelligence helps reduce losses incurred by insurance companies as a result of fraudulent claims.	3.22	.99	8	High
8	Artificial intelligence helps to reduce complaints from customers.	3.60	1.05	1	High
9	Features of the bank's artificial intelligence The ability to adapt to his cognitive environment In insurance companies.	3.35	1.10	6	High
10	Artificial intelligence technologies have played a major transformative role in the industry, from distribution processes to underwriting, pricing and claims.	3.46	.97	4	High

Hypotheses Testing

The objective of the research was to ascertain the presence of a statistically noteworthy influence of artificial intelligence (AI) within the insurance sector of Jordan. A multiple regression analysis was performed to evaluate the relationship between artificial intelligence, risk, revenue, and customer satisfaction in insurance companies, based on the correlation coefficients. Table 3 displays the correlation coefficients that exist between artificial intelligence and the three variables of interest, namely risk, revenue, and

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customer satisfaction. The findings demonstrate robust and affirmative associations between artificial intelligence and all three variables.

The Pearson correlation coefficient between artificial intelligence and risk is 0.65, and the associated p-value is 0.000. The data suggests that there exists a significant positive correlation between artificial intelligence (AI) and risk, as supported by statistical analysis. The present study reveals that the utilization of artificial intelligence (AI) in the insurance sector of Jordan is linked with an elevated degree of efficacy in risk management.

Regarding the association between artificial intelligence and revenue, it is observed that the Pearson correlation coefficient is 0.67, with a p-value of 0.004. The findings indicate a noteworthy correlation of a positive nature between artificial intelligence (AI) and the generation of revenue within the insurance industry, as supported by statistical analysis. The results suggest that the integration of AI technology within insurance firms leads to a rise in profits through the improvement of operational procedures and decision-making capabilities.

Additionally, the association between artificial intelligence and customer satisfaction exhibits a Pearson correlation coefficient of 0.70, accompanied by a p-value of 0.000. The aforementioned observation denotes a statistically noteworthy and affirmative correlation between artificial intelligence (AI) and the contentment of customers. The findings indicate that the incorporation of artificial intelligence (AI) technologies within the insurance sector has a favorable effect on customer satisfaction, plausibly due to enhanced service provision, customized experiences, and streamlined operations.

In brief, the study has established significant positive correlations between artificial intelligence and risk, revenue, and customer satisfaction in the insurance sector of Jordan, as indicated by the correlation coefficients and their corresponding p-values. The results of this study suggest that artificial intelligence (AI) has a significant influence on multiple facets of the insurance domain. This supports the conjecture that there exists a statistically noteworthy effect of AI in the insurance sector of Jordan.

Table 3: Correlation Coefficients between Artificial Intelligence in the Insurance Industry in Jordan

		Risk	Revenue	Customer satisfaction
artificial intelligence	Pearson Correlation	0.65**	0.67**	0.70**
	Sig. (2-tailed)	0.000	0.004	0.002
	N	125	125	125

Table (4) shows the results of the statistical test for the model of this hypothesis, which is represented by the presence of a set of independent variables (risk, revenue, customer satisfaction) and one dependent variable representing (insurance industry).

The table indicates that there is a statistically significant effect of the variables of independent artificial intelligence by excluding them (risk, revenue, customer satisfaction) on the insurance industry, through the value of F and equal to (69.46), which is greater than its tabular value and equal to (2.65) and significant at the level of significance (0.05),

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and the value of R^2 and equal (0.69) indicates that artificial intelligence by excluding it has explained (69%) of the variation in the insurance industry. The correlation coefficient was (80%), indicating a strong relationship between artificial intelligence and the insurance industry.

It appears from the results of the table of coefficients for this hypothesis that the dimension of Customer Satisfaction had the largest impact among the dimensions of artificial intelligence in the dependent variable (insurance industry), as the value of its beta coefficient β = 0.385)) and what enhances this effect is the calculated and equal value of (T) (5.76), which is greater than its tabular and equal value (1.988), and a significant level (0.005 (Sig = after that, it came in second place in terms of impact after (Revenue), as the value of its beta coefficient = 0.255 (β), and what This effect enhances the calculated value of (T) equal to (3.161), which is greater than its tabular value, and a significant level (0.001 (Sig = = After that, it came in third place in terms of impact after (Risk), as the value of its beta coefficient reached (0.226 = β) and what enhances this effect is the calculated and equal value of (T), which is greater than its tabular value, and a significant level (Sig = 0.020) Which indicates the presence of There is a statistically positive significant effect of artificial intelligence in insurance sector in Jordan.

Table 4: the Results of Multiple Regression to Detect the Effect of Artificial Intelligence Diminsions Variables (Risk, Revenue, Customer Satisfaction) in Insurance Sector in Jordan

Independent variables	value t	Sig. t	Beta	R	R^2	Value F	Sig. F	Durbin-Watson
Risk	2.66	**0.020**	**0.226**	**0.80**	**0.69**	**69.46**	**0.001***	**1.72**
Revenue	**3.161**	**0.001**	**0.255**					
Customer Satisfaction	**5.76**	**0.005**	**0.385**					
Significant at the level of statistical significance (α ≤ 0.05).								
Tabularity of the value of (1.988)			For the calculated value (2.65)					

DISCUSSION

The research carried out on the ramifications of artificial intelligence (AI) within the insurance sector in Jordan produced a number of noteworthy discoveries. Gupta et al. (2022) reports that the responses obtained from a sample of employees in the insurance industry indicate a favorable perception of the advantages of AI in enhancing efficiency, effectiveness, and information sharing among insurance companies, brokers, and policyholders. This implies that artificial intelligence (AI) possesses the capability to improve diverse facets of the industry.

The participants recognized the potential of artificial intelligence (AI) to offer remedies to the difficulties encountered by the industry, specifically with regard to compensation or clearing among firms (Fatima et al., 2020). This underscores the significance of artificial intelligence in tackling challenges that are specific to various industries. Additionally, the research findings indicate that the implementation of AI technology can aid the insurance

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sector in reducing costs and increasing profits by enhancing customer satisfaction through more efficient fulfilment of their needs. The data suggests that there was a moderate level of agreement among the respondents, as evidenced by the comparatively lower mean score for this particular item (Shkarlet et al., 2020).

The aforementioned analysis has underscored the efficacy of artificial intelligence (AI) in monitoring and forecasting security breaches. This capability can aid in the prevention of unsolicited emails and safeguarding the industry against deceitful practices (Wang et al., 2020). The aforementioned discovery highlights the significance of artificial intelligence (AI) in reducing potential hazards and upholding the authenticity of insurance procedures. Additionally, the research illustrated that artificial intelligence enables insurance firms to construct prognostic models for risk assessment and customize insurance plans to cater to the specific requirements of clients (Satuluri, 2021). The capacity to tailor policies has the potential to augment customer contentment and enhance the overall quality of service. Furthermore, the results revealed that the implementation of AI technology has the capability to decrease financial losses that stem from deceitful claims, thus demonstrating its capacity to alleviate monetary hazards for insurance firms (Roszkowska, 2021).

In addition, the respondents expressed a high level of concurrence regarding the potential of AI to mitigate customer grievances. This implies that the integration of AI-based solutions can augment customer experiences and foster greater levels of contentment (Nguyen et al., 2022). The positive influence of AI on the insurance sector in Jordan was reinforced by the multiple regression analysis conducted in the study. The findings of the study indicate that there exist significant correlations between artificial intelligence (AI) and various factors such as risk, revenue, and customer satisfaction, as reported by the author in the specified year. The results suggest that the rise in AI adoption is associated with favorable outcomes in risk management, revenue generation, and customer satisfaction in the insurance industry.

In summary, the findings of this research offer convincing proof that Artificial Intelligence (AI) exerts a noteworthy influence on the insurance sector in Jordan. The research results emphasize the capability of artificial intelligence (AI) to augment efficacy, tackle obstacles, enhance risk mitigation, augment revenue, and elevate customer contentment in the industry (Boustani, 2022). The aforementioned insights can serve as a valuable resource for insurance companies seeking to efficiently integrate AI technologies into their operations, thereby achieving favorable results and maintaining a competitive edge in the dynamic landscape of the industry.

IMPLICATIONS

Practical Implications

The profound implications of our study's results can be a game-changer for decision-makers within the Jordanian insurance sector. Recognizing the positive correlation between the integration of AI and pivotal dimensions such as risk, revenue, and customer

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satisfaction underscores the need for insurance entities to intensify their investment in dynamic AI systems. By doing so, they're not just hopping onto the technology bandwagon but strategically positioning themselves to be more adaptive to shifting market trends. This adaptive capability will not only guarantee customers accurate and expedited services but also enable the companies to fine-tune their financial game plans.

One of the primary incentives for such a transition is the prospect of Revenue Enhancement. Modern AI has the prowess to empower insurance companies with predictive analytics for nuanced policy pricing, efficient fraud detection mechanisms, and the ability to automate the more tedious tasks. This isn't just about boosting profits but also about evolving in line with a tech-savvy client base.

Then there's Risk Assessment. Traditional methods, with their inherent limitations, can often fail to keep up in a rapidly changing market. Here's where AI shines. Its ability to provide tailored insurance policies by meticulously assessing individual risks ensures that clients get value, and companies mitigate potential losses.

Lastly, there's undeniable merit in achieving Operational Efficiency. The current scenario, where AI's inclusion has already showcased a reduction in processing times for Jordanian insurance firms, is just the tip of the iceberg. A broader integration can metamorphose operational strategies, ensuring swifter and more reliable client services.

Theoretical Implications

From an academic lens, our findings are akin to a goldmine. They not only lay a sturdy foundation for ensuing research but also offer scholars a novel perspective. For starters, future studies can channel their resources to discern the nuances of specific AI implication within insurance. Imagine the potential insights from a study focused solely on AI-driven risk assessment models or one delving into the technological facets enhancing customer contentment.

Our findings can also spur the Development of Theoretical Models. With the concrete empirical evidence at their disposal, scholars can embark on journeys to either forge new theoretical paradigms or refine the existing ones. This can encapsulate the myriad ways AI impacts the multifaceted realms of the insurance business.

Moreover, our results serve as a bridge to enrich Existing Knowledge. Apart from reiterating AI's merits in the insurance domain, they shine a spotlight on an often-overlooked aspect - the superiority of dynamic systems over their static counterparts. It's a clarion call for industries to recognize the essence of adaptability in AI systems, ensuring they remain attuned to the mercurial nature of market dynamics.

In weaving all these threads together, it becomes evident that the interplay of AI in the insurance sector isn't just promising; it's transformative. While the Jordanian insurance landscape is already basking in the initial benefits of AI, the horizon beckons with uncharted territories waiting to be explored. For scholars and academics, this study isn't just a reference point but a springboard, catapulting them into deeper, more intricate realms of exploration.

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CONCLUSION

The main results showed that there is a positive statistical relationship between the use of artificial intelligence in its dimensions (risk, revenue, customer satisfaction) in the insurance industry in the Jordanian insurance sector, and this result illustrates the importance of using artificial intelligence systems that are characterized by speed and efficiency to enable insurance companies to develop models to generate revenue and start using smart financial management tools.

However, the AI technologies that are now accessible and used by insurance companies are mostly fixed and that the application of AI in the insurance sector is still in its early stages, and its primary output is to identify requirements and assess risks. It is essential to have dynamic systems that can recognize changing market trends so that they can provide more realistic and fast services and make the necessary adjustments to financial plans.

The use of artificial intelligence has also led to an increase in the level of investment for Jordanian insurance companies due to improvements in their profits. Moreover, the use of (artificial intelligence) in Jordanian insurance companies has led to saving time in their operations and speeding up operations.

RECOMMENDATIONS AND PROSPECTIVE ENDEAVORS

Given the burgeoning trajectory of global markets and the pivotal role of emergent technologies in redefining the contours of business operations, it is of paramount significance that Jordanian enterprises embed artificial intelligence (AI) into the very fabric of their operational framework. This stipulation holds transcendent relevance, not being confined solely to the realm of the insurance sector, but extending its purview across the entirety of the business spectrum.

Furthermore, there exists an imperative to cultivate a more enlightened organizational culture wherein the workforce recognizes AI not as a looming specter portending obsolescence of their roles, but rather as an instrumental ally poised to augment and embellish their professional capacities. Consequently, proactive initiatives and robust training modules need to be promulgated, ensuring that employees perceive AI as a catalyst for amplifying their productivity and enhancing the value they bring to the organization, rather than a mere replacement for human capital.

In terms of prospective endeavors, it would be judicious for researchers and industry leaders alike to delve deeper into sector-specific AI implications to tailor solutions that cater to the nuanced needs of each domain. Moreover, periodic reviews of the AI integration processes, and its subsequent impact on workflow dynamics, will provide invaluable insights, facilitating continuous refinement and optimization of AI strategies.

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