

UNIVERSITY OF GHANA BUSINESS SCHOOL



TOPIC:

FACTORS AFFECTING THE TIMELINESS OF CORPORATE NON-LIFE INSURANCE
CLAIMS AND THE GENERAL CLAIMS MANAGEMENT SYSTEM IN GHANA

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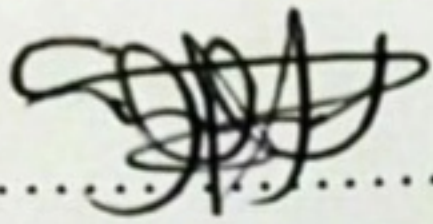
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DECLARATION

CANDIDATE DECLARATION

This is to certify that this dissertation is the result of my own research work and that no part of it has been presented for another degree in this university or elsewhere.



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SUPERVISOR DECLARATION

I hereby certify that this dissertation was prepared by the candidate's own work and supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Ghana.


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DEDICATION

I dedicate this dissertation to my late father who valued education above all. He believed in my capabilities to reach higher heights.

ACKNOWLEDGEMENT

I thank the Lord Almighty for how far He has brought me, for giving me the strength to continue even when I felt like throwing in the towel multiple times. For giving me the mental fortitude and wisdom to complete this thesis. Special thanks to my supervisor and mentor, Dr. Charles Andoh who saw my potentials and pushed me to achieve more and for his guidance, advice, patience, and willingness to mentor me the whole period. God richly bless him. I would like to also thank my very good friend Francis Victober Aggrey-Fynn for the countless corrections and proof reading of my thesis. I was able to complete this with his enormous help. Another appreciation goes to my grandparents, Mr., and Mrs. Spio for their financial support. Finally, a big thank to my family and friends who encouraged me to keep on pushing.

ABSTRACT

This study explored the actions of policyholders that affect the timeliness of claims settlement (the reporting time of incidence (RTT), understanding of policy's term and conditions (PTC), provision of information and documents (PID), review of insurers by policyholders (RA)). The study also examined from the insurers' point of view, some of the factors surrounding claims settlement and finally established some challenges faced by both parties externally in the claims process.

Data collection was done by administering questionnaires to corporate policyholders and non-life insurance providers. Data obtained from randomly selected corporate policyholders was analyzed using the GL^+ regression method. Results from the regression showed that a delay in reporting of incidences reduced the chances of receiving claims on time while a better understanding of policy's terms and conditions and, a good provision of information and documents increased the chance of claims being paid on time. Also, how policyholders view and rate their insurers affect the timeliness of their claims settlement. A descriptive analysis was carried out for the data collected from insurers and results showed that insurers do not view the quantity and quantum of claims made as a factor to delays in claim settlements. In addition, some challenges faced by policyholders are poor customer services, complicated paperwork, delays in brokers' activities and procrastination of payment.

Some challenges insurers face during the claims process are delays in the reporting of claims by claimants, delays from the insured in presenting documents to substantiate claims, fraudulent claims, exaggeration of claim amounts, rush to go to court by some solicitors, sometimes issuing a write off summons before informing the insurer about the claim, misunderstanding of policy terms and conditions by insureds, cash flow challenges, delays in receiving reports from loss

surveyors and other third parties, lack of local loss adjustors to handle complex claims, inadequate staffing of the claims department, underinsurance and poor attitude of claims management staff.

The results found educates policyholders on how certain actions affect their claims settlement which will help put in place necessary measures in other to avoid any inconvenience. This study also creates awareness on issues concerning insurance claims which will soften the blame on the insurer and improve upon the image of insurance companies.

Keywords and phrases; challenges, claims, corporate policyholders, descriptive analysis, GL⁺ regression, insurers.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Insurance over the years has been touted as one of the most sought-after products. Insurance companies play a vital role in the affairs of any economy by allowing individuals and firms to transfer risks (Caporale, Cerrato, & Zhang, 2017). Development in this sector contributes to economic growth and bank development (Kaushal & Ghosh, 2018).

Insurance is made up of life and non-life; life insurance is a kind of long-term investment that serves to cover current and future damages that threaten the life of the insured (Emamgholipour, Arab, & Mohajerzadeh, 2017), while non-life insurance deals with current and future damages that affect the properties of the insured other than his or her life.

The growth and value of the insurance market are measured in terms of its gross premium income and the Insurance Global Industry Guide report in 2017 showed that in 2016, it was \$4,609.3 *billion*, representing a compound annual growth rate (CAGR) of 4% between 2012 and 2016. The Life insurance sector was the most lucrative with a total gross premium of \$256.0 *billion*, equivalent to 55.6% of the overall market value.

Looking at the insurance contract, one of the main attributes of it is the indemnification clause which states that if a specified event occurs and this event causes financial loss to the policyholder, the insurer is by law expected to compensate the policyholder as previously agreed upon in a way that brings the policyholder to his or her original financial stand provided the policyholder adheres to all conditions in the contract.

In lieu of this, policyholders hope to be fairly and quickly compensated when claims are sent to insurance companies, but insurers are known to delay in the settlement of claims made, pinning it to various reasons which include insurance fraud, poor claims management and so on (Tseng, 2017).

So far as insurance is concerned, customer satisfaction, quality services, the insurance company's reputation, and the insurer's relationship with clients are very important factors that contribute to the purchase of insurance (Epetimehin, 2011). Firms that face damages find it difficult to fulfill their contractual obligations and for those that do not have sufficient funds or capital to reduce the damage in question, they face the risk of bankruptcy (Michel-Kerjan, Raschky & Kunreuther, 2015). Therefore, firms are required to engage in one risk management practice or the other to expand their value and decrease return and income volatility (Krause & Tse, 2016). Risk management practices usually adopted include, risk avoidance, risk prevention, risk reduction, and risk financing which consists of risk retention, non-insurance risk transfers, and insurance (risk transfer).

Michel-Kerjan, Raschky, and Kunreuther (2015) postulate that corporate firms patronize insurance for various reasons, some of which are compliant with the law (workmen's compensations), legal commitment from a bank or bond contract, tax incentives, a way of shifting firms' exposure to risks and liquidation to the insurance companies. Parsons (2005), opines that the ability to transfer risk exposures is the primary reason why any individual or firms will purchase insurance because it allows for compensations to be made (claims), hence the importance of fair and quick claims payment especially for corporate policyholders, whose continual operations might depend on it.

In Ghana, the body that supervises the affairs of insurance companies is the National Insurance Commission (NIC), which takes claims payment and complaints received very seriously, focusing on the improvement and promptness with which claims are paid and making sure that the insurer complies by the laid down rules and regulation (NIC, 2017). By the regulators, claims are said to be paid on time if, within three days of admitting liability, a discharge voucher is signed, and claims paid within five working days of signing the discharge voucher.

1.1.1 Why Corporate Policyholders?

Successful businesses contribute to the financial stability and economic wellbeing of individuals in the city, district, or country that it operates. Successful business improves the livelihood of its citizens. A developing private sector is vital because it helps with employment and increases investment which adds to the economy's Gross Domestic Product (GDP) (Hamann & Wang, 2006). Consequently, a firm's success or failure is of importance to a country's development.

MacMinn (1987), Schnabel and Roumi (1989), Garven and MacMinn (1993), and MacMinn and Han (1990) suggest that insurance can reduce financial distress costs.

A major area of research pertaining to corporate policyholders in insurance has been reasons for the demand for corporate insurance by businesses. Pratt and Zeckhauser (1987) and Arrow (1971) attribute it to the risk aversiveness of the firms whilst Mayers and Smith (1982) give some reasons as risk-shifting, real-service provision, reduction of agency cost, and tax advantage, among others.

Modern corporations purchase substantial amounts of insurance and over half of the premiums received by insurance companies are paid by corporate policyholders (Hoyt & Khang, 2000). It shows that the accomplishment of corporate firms is critical to any economy and insurance gives

a path to these organizations to remain effective in business which implies that if insurance companies neglect to execute their part of the agreement, the effect may not exclusively be felt by the firms only but will include the economy and residents at large, thus the need to concentrate on delays in corporate insurance claims, what contributes to it and what these firms can do to lessen the timeframe in which claims get settled.

1.2 STATEMENT OF THE PROBLEM

It is no news the main reason why any individual or firm will purchase insurance is for the claims (Parsons, 2005), but the public view of insurance companies' attitude towards claims settlement throughout West African countries, is nothing to write home about. There is a popular notion in Ghana that insurance companies are a scam and they do not like to pay claims quickly and so have clauses hidden in the fine prints which impede the payment of claims to policyholders.

Basaula (2017) states that, since claims settlement is a reflection of the insurance companies, any insurer who fails to settle claims on time, risk losing the trust of its clients which will affect the continuity and repurchasing of policies. This brings out the need for insurers to look for more efficient ways to handle claims which will meet customers' satisfaction.

In Ghana, although there has been an improvement in how the public sees the insurance business, the image painted is still not good. The unpopularity of the business has not helped the efforts being made to increase the patronage of insurance products. This can, however, be attributed to the delays and inadequacy of claims payment, insurance agents' inability to clearly explain policy's terms and conditions, the use of complex insurance terms in the contract and so forth (NIC, 2017).

Clients mostly complain about insurer's inability to pay claims promptly and even sometimes deny claims completely. It is normal to hear individuals commenting that while insurance companies are quick to take premiums, settling claims is not matched with that same level of speed. Insurers have been continually accused of a late settlement of claims (Boadu, Dwuomo-Fokuo, Boakye & Frimpong, 2014).

Although insurance companies are perceived to be the cause for any delays in settlements and payments of claims, insurers also claim they are not the only party at fault for any delays as the provision of insurance is a service and the client, that is the policyholders' participation to some extent affects the outcome of the service. The notion of the inseparability of service comes to play where all parties involved in the service from production to consumption affect the success or failure of the business.

While there is empirical evidence to show that most often than not, claims settlements are delayed (Boadu, Dwuomo-Fokuo, Boakye & Frimpong, 2014; Tseng, 2017; NIC, 2017), very little evidence exists as to what causes these delays or what actions from both parties involved affects the timeliness of the claims being settled. After all, insurance is a mutual agreement between two parties which means that actions from both parties do affect the result or outcome which in this case is claims and their settlements.

This study seeks to look at some factors that affect the timeliness of claims settlements, focusing mainly on what actions of policyholders affect the claims during the settlement process.

1.3 RESEARCH PURPOSE

To enlighten corporate policyholders on the importance of their role in claims settlement and to take note of the necessary steps to take when incidences occur to ease and fasten the claims

process. It is also to shed more light on what insurers think causes delays in claims settlement and some challenges faced by both parties during the claims process.

1.4 OBJECTIVES OF THE STUDY

- i. Determine internal factors of the insurance companies that affect the timeliness of claim settlement.
- ii. To examine the effects of policyholder's characteristics on timely claim settlement using the GL^+ regression model and determine the accuracy of the predictors.
- iii. Establish some other challenges that insurers and policyholders face externally.

1.5 RESEARCH QUESTIONS

- i. What are some of the internal factors in the insurance companies that affect the settlement of claims?
- ii. What characteristics of policyholders affects the claims process and settlement?
- iii. What other external factors affect the claims process and claims settlement?

1.6 RESEARCH HYPOTHESES

The following hypotheses will be tested by the study.

H_1 : Reporting time has no effect on claims being settled on time.

H_2 : Policyholders' understanding of policy's terms and conditions has no effect on claims being settled on time.

H_3 : Provision of information and documents has no effect on claims being settled on time.

H_4 : The way policyholders view and rate their insurers has no effect on claims being settled on time.

H_5 : Complaints received has no effect on claims being settled on time.

1.7 SIGNIFICANCE OF THE STUDY

The study seeks to bring attention to and explore how delays in claim settlement come about. It will show how certain actions of corporate policyholders affect claims settlement and create awareness which will soften the blame and improve the reputation of the insurance companies. Policyholders will know exactly what to expect as per their actions and prepare adequately to avoid any inconvenience. Insurance companies and corporate policyholders will better recognize the importance of timely claims settlement and help firms to make an appropriate choice in choosing which company to insure with. It will help firms in making financial decisions and putting in place sound business plans, risk management adoptions, and following a financially viable strategy.

The results of this study will be helpful for academics and industry experts in policymaking.

This study will also be useful for carrying out further study in the area and future development of theories by researchers and academicians in the field of corporate finance, economics, and risk management.

1.8 SCOPE AND LIMITATION OF THE STUDY

The study focuses on randomly selected corporate policyholders and non-life insurance companies. The study makes use of primary data where in-person visitation and frequent checking up were required for some corporate firms. Some firms also failed to give back questionnaires whether filled or not. The use of questionnaires is subjected to respondents' integrity, credibility, accuracy, and validity. In general, dependability on data is a matter of concern although the most appropriate way was used.

1.9 OUTLINE OF THE STUDY

This work is structured in five chapters. The first chapter is the introduction which explored the background of the research and throws light on the purpose, significance, objectives, and limitations of the research. This is followed by the literature review chapter which is a survey and review of the extant literature on the subject under investigation. The third chapter focuses on the methodology of the research whereas chapter four analyses and discusses the data collected. Chapter five summarizes the results obtained, draws conclusions, and makes recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This section will explore the related and relevant literature on insurance companies, claim settlement processes, and some of its related issues. The chapter is structured to contain information relevant to this study's objectives and subsequent analysis. The literature will be sourced from journals, web articles, news reports, books, and other credible sources.

2.2 HISTORICAL BACKGROUND OF THE GHANAIAN INSURANCE

The insurance industry in Ghana dates as far back as 1924 in the colonial period, when Royal Guardian Enterprise, now known as Enterprise Insurance Company Limited, was established. In 1955, Gold Coast Insurance Company was established as the main local private insurance company then came the State Insurance Company in 1962. By 2017, the authorized insurance companies who were actively operating had shot up to 48, with 20 of them offering life insurance and the rest, non-life.

The National Insurance Commission (NIC), the legitimate body in charge of monitoring the affairs of insurance companies, was established in 1989 under the protection law, PNDC Law 229 (Gadahn, 2010). It was to guarantee the effective administration, management, regulations, and control of the operations of the insurance companies as stated in the Insurance Act (Act 724).

The commission was set up generally to manage the various complaints of policyholders concerning any discomfort or unfairness in their dealings with insurers (NIC, 2017).

The minimum capital required to set up insurance as of 2013 was *GH¢10 million*. This however saw an increase in 2015 to *GH¢15 million* and currently at *GH¢50 million*. This is enforced in other to improve upon and maintain the financial capacity of insurance companies so they can properly underwrite more risky businesses (NIC, 2010).

The insurance industry has seen a substantial increase in the number of legally operating insurance firms and their related personnel. The number of insurance entities excluding agents has increased from 105 in 2013, to 154 in 2019. As of 2019, the NIC was monitoring 29 non-life insurance companies and 24 life insurance companies with three reinsurance firms. Additionally, there are 90 brokerage firms, 5 reinsurance broking firms, and 3 loss Adjustors.

Table 2 below shows the increment in the number of insurance companies and their personnel, and table 3, the growth in the required minimum capital over five years, from 2013 to 2019.

Table 2.1: licensed insurance entities as of December 2019

Types of Insurance Entity	Number
Non-Life Companies	29
Life Companies	24
Reinsurance Companies	3
Insurance Brokers	90
Bancassurance	41
Reinsurance Brokers	5
Loss Adjusters	3

Source: NIC Annual Report (2019)

Table 2.2: Growth in industry gross premium

Year	Premium Income (GHC)	Growth Rate (%)
2013	1,052,090,981	24
2014	1,239,853,442	18
2015	1,560,679,185	26
2016	1,928,838,573	24
2017	2,271,368,033	18
2018	2,937,534,716	29
2019	3,486,390,926	21

Source: NIC Annual Report (2019)

Today, the insurance industry in Ghana has been very vibrant, in serving the needs of both local and foreign partners, although general penetration has been low (Gormley, 2008).

2.2.1 Claim Settlement Process

Insurance includes the pooling of funds from many insured individuals and organizations to pay for the likely event that may cause financial loss to the insured (Sebiyam, 2005; Rejda, 1992; Gart, Gibbon & Nye, 1990). It offers a safety net against the monetary effect of fortuitous misfortunes, untimely passing, among others. The party who offers to pay an amount of money to the insurance provider to transfer his risks is the policyholder, or the insured (policy owner) (Black & Skipper, 2000). They make claims in case of fortuitous events. The other party that accepts the offer made by the policyholder and hence takes on the risk associated with the insured in exchange for receiving premiums, is the insurer.

A mutual agreement between two parties, called the insurance contract is signed where in exchange for an amount of money paid by the insured called premium, the insurer takes on a specified risk and uncertain event that the insured might face in the future which will cause financial loss to the insured. In case of any fortuitous event, as specified in the contract, the insurer is to indemnify the insured for losses made. Indemnity is bringing the insured back to his original financial position or close before the occurrence of an incident.

The amount paid or payable for an insurance policy is the premium. It is the consideration paid to purchase a policy and to keep it in force. In case of an unforeseen accident, the policyholder sends in claims to the insurer to be indemnified.

Claims are a legal demand by an insured to be compensated for the occurrence of an event as specified in the insurance contract. The person who will receive claims/compensation under the insurance policy is the beneficiary. In cases where there are disputes which cannot be settled, other methods are adopted together with other terms associated with insurance transactions. These methods are discussed below.

Arbitration: Where negotiations fail, this turns into an alternative where the two parties involved (insurer and insured) present their disputes to an outsider known as the arbitrator. The arbitrator decides (award) what should be done and how much should be paid. This choice hosts legitimate support and all parties involved must stick to it.

Litigation: A third option when negotiations and arbitration fail in settling insurance disputes in the court of law. This affects the image of the insurer and hence is usually a last resort where the aggrieved party uses to seek redress. In most cases, insurers always strive to get problems solved before it gets out of hand or resorts to litigation.

Average: The proportionate reduction in the amount payable when the amount of premium paid by the policyholder is for a smaller proportion of the total value at risk given that, that was what was disclosed by the insured. This is made possible because claims settlement under the policy acknowledges this fact.

Excess/Franchise/Deductible are amounts of money, less the claims to be settled which is decided from the beginning stages of the policy contract. In cases where the deductible is bigger than the claims to be settled, claims will not be settled (Wildman, 2005).

Ex-gratia: This is when insurance providers choose to indemnify a customer for certain misfortunes, which leads to losses incurred even though they are not liable to. This customer might be an esteemed one and the insurer might want to relate to him/her during adversity. In such circumstances the insurer considers the payment "by favor" (ex gratia) of monies to the policyholder. This is the payment of a claim made by the insurer even though there is no legitimate commitment (Chiejina, 2004).

2.2.2 Conceptual Framework

An insurance claim is a formal request to an insurance company for compensation against loss or damage to an insured item or risk. A paid insurance claim serves to indemnify a policyholder against financial loss. NIC term claims as being paid on time if, within three days of admittance of liability, a discharge voucher is signed, and claims paid within five working days of signing the discharge voucher. The following are the procedures.

Notification: It is of importance and all insurance policies do require that on the occasion of a foreordained danger, there should be prompt (at the soonest opportunity) notice of the insurer. While there are several ways incidences can be reported, it is generally done through an agent, a

broker, or directly to the insurer through the filling of claim forms. In Ghana, however, claims cannot be made on the telephone without filling the claims forms and some policies have a type of cut-off time within which incidence must be reported and claims made. The insurer is entitled to reject the claims made when a report is delayed.

Verification: After the insurer is alerted, there is the need to check the insured's record and make certain of the hour of loss, if there is a cover on the said incidence that caused the loss and the qualification of the insured. The cycle incorporates a cautious appraisal of the insured's records with the insurer and ensuring that the relevant policy was in force at the hour of the incidence and the policy covers that definite incidence. Loss adjustors are also dispatched to verify the extent of the reported loss.

Confirmation of Loss: The policyholder must clearly and quantitatively prove that an incident has occurred as indicated by the policy and above all that it was accidental and the said event caused financial loss to the person in question. The claimant ought to convince the insurance provider that the individual in question should be appropriately indemnified for an occurred incidence, inability to do so will bring about dismissal of claims made.

Negotiation: Most claims are settled by negotiations between the involved parties without the requirement for such formal methods as arbitration or litigation. This is the quickest and most conservative technique for adjustment. In many cases of claims made, there might be nothing over which to negotiate and the claims might be paid very quickly. But the point when negotiation does not work, the agreement may itself recommend some other method to be followed, for example, arbitration and litigation.

Payment of Claims: This is when all necessary investigations, estimations, and adjustment has been made and agreed upon by all parties. The policyholder at this stage is entitled to receive the agreed amount as claims. There are in any event four strategies for compensation, which insurers can utilize in settling claims. They are:

- i. Repair
- ii. Cash Payments
- iii. Reinstatement
- iv. Replacement

The wording of the policy gives the insurer the power to choose which method to use as a settlement.

Despite the above, the insurer, in paying claims must balance the interest of the claimant and all other policyholders who have contributed to the fund. The insurer is to ensure that although the insured is entitled to the compensation as specified in the contract, no unearned claims are given out. There are certain prohibiting factors like average and excess/franchise/deductibles inherent in the practice of the insurance that makes it possible for clients not to receive their full payment. See Appendix A for definition of terms used.

2.2.3 Image of Claims in The Insurance Industry

It is no news the main reason why any individual/firm will purchase insurance is for the claims (Parsons, 2005), but the public view of insurance companies' attitude towards claims settlement throughout West African countries, is nothing to write home about. There is a popular notion in Ghana that insurance companies are a scam and they do not like to pay claims quickly and so have clauses hidden in the fine prints which impeded the payment of claims to policyholders.

Basaula (2017) states that, since claims settlement is a reflection of the insurance companies, any insurer who fails to settle claims on time, risk losing the trust of its clients which will affect the continuity and repurchasing of policies. This brings out the need for insurers to look for more efficient ways to handle claims which will meet customers' satisfaction.

In Ghana, although there has been an improvement in how the public sees the insurance business, the image painted is still not good. The unpopularity of the business has not helped the efforts being made to increase the patronage of insurance products. This can, however, be attributed to the delays and inadequacy of claims payment, insurance agents' inability to clearly explain policy's terms and conditions, the use of complex insurance terms in the contract, and so forth (NIC, 2017).

Clients complain about insurer's inability to pay prompt claims and even sometimes deny claims completely. It is normal to hear individuals commenting that while insurance companies are quick to take premiums, settling claims is not matched with that same level of speed. Insurers have been continually accused of a late settlement of claims (Boadu, Dwuomo-Fokuo, Boakye & Frimpong, 2014).

2.2.4 Claims Administration and E-Commerce

Technology today is changing the insurance business in terms of how services are introduced and offered, how policyholders and insurers relate, and more. Computerized reasoning in terms of self-administration applications is steadily replacing human interaction. Insurance suppliers are progressively utilizing computerized innovation and the web as a channel for correspondence, communication, and dissemination, effectively encouraging their clients to do the same. Other fields of business have seen a massive improvement with this line of dealing with things, but the insurance industry has been rather slow to adjust to the change as certain clients despite

everything incline toward human interaction. Reports demonstrate that one of the most significant patterns in the insurance innovation advancement is the robotized and modified claim settlement (Gebert-Persson, Gidhagen, Sallis & Lundberg, 2019).

The usage of new and better technology, better business measures, and offshoring have all been contributing factors in the advancement of claims with the internet assuming a significant function in the decrease in cost and more inventive and responsive client administrations (Ofori-Attah, 2012).

The introduction of technology has drawn out the requirement for quicker and more productive administrations to be offered as there are presently various ways accessible which are better, quicker, and more effective (Collins, 1997).

E-commerce has gotten progressively incorporated into individuals' lives as more merchandise and ventures are being offered online. With the all-inclusive advanced change, merchandise and ventures are getting more volatile and complex (Gebert-Persson et al., 2019).

2.2.5 The Outsourcing of Claims Services

Firms through the years have sorted to the outsourcing of traditionally noncore yet necessary parts of the operation to focus more on the main core of the business. Outsourcing was mainly seen to be done in the manufacturing industry but has currently been stretched to include other sectors like service and the insurance industry (Hood & Stein, 2003).

Outsourcing claims in the insurance industry means putting an aspect of or all the claims process in the hands of an outsider. Outsourcing of claims is an ever-increasing number of insurers putting their claims service in the possession of third parties (Cata, 2007). It is less expensive to

use outsiders than use tremendous number of persons in-house which will incur more bills and overheads.

Although outsourcing claims is picking up grounds in the insurance industry, the empirical research available is not concrete enough to confirm either the success or failure of the approaches to the insurance industry (Hood & Stein, 2003).

The issue of outsourcing-related risks has been fairly analyzed (Welch & Nayak, 1992; Venkatesan, 1992; Probert, 1997) regarding its various strategic risk aspects. Lonsdale and Cox (1998), categorize the risks as

- i. Inability to do vital activities.
- ii. A Supplier having more power over the business.
- iii. Inability to make strategic decisions freely.
- iv. Supplies being interrupted.
- v. Lack of trust and confidentiality leaks.
- vi. A decrease in the overall morale of employees to work.
- vii. Inability to maintain consistency and rhythm within the business.

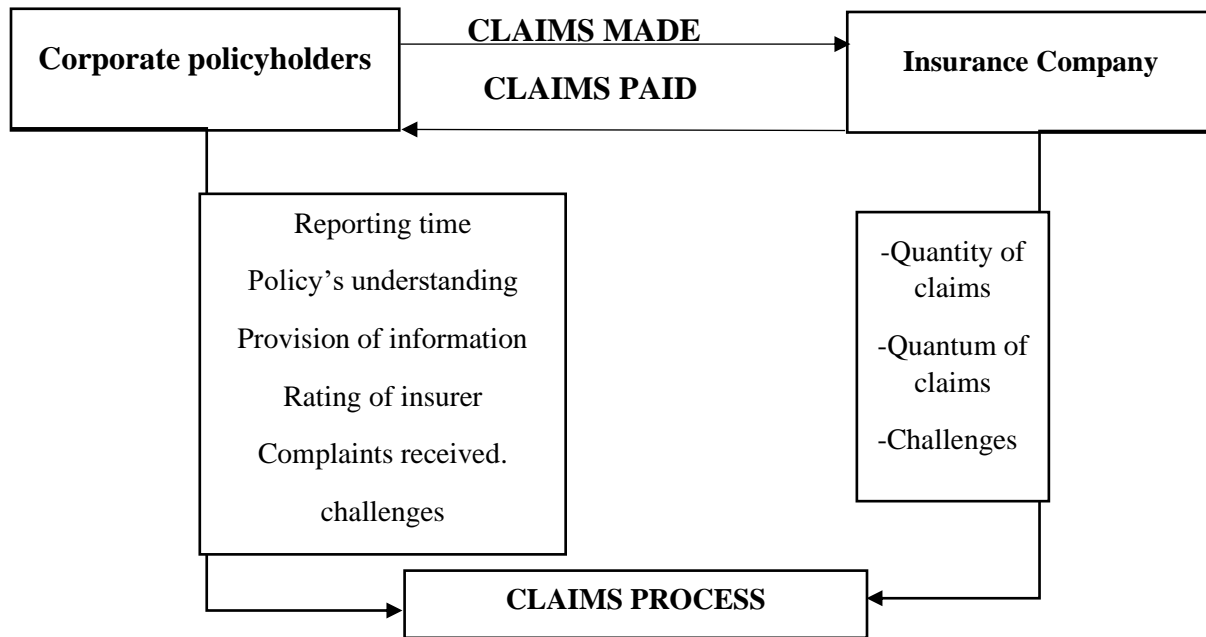
Several of these risks seem particularly important to insurance claims outsourcing.

The fear of doubtful claims is not lost in the industry and simultaneously, if the third party outsourced to, is stringent concerning claims settlement arrangement and negotiations, the customer loyalty which is important to the insurer may be compromised.

It appears therefore that outsourcing is a relentless power in the insurance industry, as the need to reduce costs and offer better services gets imperative to its survival. For the insurance businesses

in West Africa with specific reference to Ghana, outsourcing of claims is a zone that is yet to be considered for widespread selection (Ofori-Attah, 2012).

2.2.6 Diagram of the General Things Affecting Claims Process



Source: Compiled by Author.

When an incident specified in an insurance contract occurs, the policyholder notifies the insurer and makes claims which starts the claims process. The activities from both parties contribute to how fast the process will take and claims be settled by the insurer. Factors that might cause claims to be paid on time from the policyholder might be how fast he reports the incidence, how well he understands his policy, and based on that what can kind of information and documents he makes available. What the policyholder knows about his insurer and how he rates them might also play a role. Lastly, complaints from the insurer during the process might affect how fast the process will be. On the other hand, an insurer might find it challenging settling claims based on

the number of claims coming in which might be too much to handle by staff. The volume of claims made might also be financially draining to the insurer.

2.2.7 Theory of Corporate Demand for Insurance

Mayer and Smith (1982), examine the set of motivators, consistent with the theory of finance (Modigliani and Miller, 1958) which inspire the acquisition of insurance policies by organizations, inferring that the risk aversiveness of managers is not enough reason to buy a policy.

However, corporate interest for insurance originates from the capacity of the insurance contract to bond the firm's real investment decisions, lower expected transaction cost of liquidation, allocate risk to those of the firm's claim holders who have a comparative advantage in risk-bearing, monitor the consistence of legally binding arrangements, provide genuine help efficiencies in claims administration, lower corporation's expected tax liability.

2.2.8 Corporate Demand for Insurance

Although limited, the literature points to various reasons why insurance will be utilized as a tool for managing risks by both firms and individuals. Mayer and Smith (1982), examine the set of motivators, consistent with the theory of finance (Modigliani and Miller, 1958) which inspire the acquisition of insurance policies by organizations, inferring that the risk aversiveness of managers is not the reason why corporate firms purchase insurance. However, corporate interest for insurance originates from the capacity of the insurance contract to:

- i. Bond the firm's real investment decisions
- ii. Lower expected transaction cost of liquidation

- iii. Allocate risk to those of the firm's claim holders who have a comparative advantage in risk-bearing
- iv. Monitor the consistency of legally binding arrangements
- v. Provide genuine help efficiencies in claims administration.
- vi. Lower corporation's expected tax liability

On the contrary, Krummaker (2019), infers that managerial attitude is a definitive factor in the choice cycle about the demand and purchase of insurance policies by corporate firms.

Furthermore, Michel-kerjan, Raschky, and Kunreuther (2015), find that the demand for terrorism and property insurance rather price inelastic with terrorism more inelastic. Results also showed a negative relation between property insurance and firms' solvency ratio.

An examination by Regan and Hur (2007), still on the corporate demand for insurance gives exact proof which supports the hypothesis that firm size, tax incentive, and firm management are essential in deciding the purchase of insurance. Results further demonstrate that as opposed to the hypothesis, demand for insurance is higher for less leveraged firms than firms with higher debt-to-equity ratios and that firms that have greater liquidity demand more insurance.

Hau (2006), proposes that liquidity might be a significant explanation behind the demand for property insurance by companies by presenting a hypothetical system that clarifies the acquisition of actuarially reasonable or even ominous corporate property insurance by a risk-neutral organization.

2.3 EMPIRICAL REVIEW

A research paper by Mahlow and Wagner (2016a), on the process landscape and efficiency in non-life insurance claim management introduces a standardized claim management process model and applies process benchmarks to various operational parameters. The study structures the claims-handling process into five core stages, that is; Notification stage (which spans from when the incident occurs, when the policyholders get to know of the occurrence of the incidence to when it is reported to the insurer), registration (spans from when claims are received to when it is categorized), audit (the decision by the insurer of whether the policyholders contract covers the loss), settlement (amount and mode is determined) and finally the closing stage where the payout of the claim amount and the adjustment are initiated. Using a benchmark survey of gathering data from 11 German and Swiss insurers in their car, property, and liability business, they measure the claims process times (cycle time), together with the claim's quantities and average claims payout at different levels. The research showed that, when it came to claims operations, insurance companies tend to have differed strategic principles and that there is no best practice; the processing time (work and cycle times) of claims are often very different within companies, with only a few and basic industry-wide standards. The study further finds car insurance to be the most standardized. Insights from strategy differences revealed three trends; that is, lumpsum adjustments and employment of auditors affect the cycle times, the transfer of allowance to the insurers' sales force tends to increase fraud, and lastly that there seems to be no correlation with cycles times and fraud.

Another article by Mahlow and Wagner (2016b), discussing the competing strategic goals and success factors in non-life insurers' claims management, finds that among the three aims of companies that is, the minimization of claims volume, the optimization of internal claims

processes, and the maximization of customer satisfaction, the biggest disagreement comes from the difference between what is important to policyholders and what is important to the insurer (efficient claims administration and low-cost volume). The study finds that even within the companies, there is always some sort of debate when it comes to actions taken to reduce claims volumes and keeping claims administration cost low. Out of the three strategic goals, they find that customer satisfaction seems to be the most important presently, predicting some future changes to the efforts given to reduction in claims volume and administration cost.

Research done by Machui (2015), looking at the nature and challenges of claims management by reinsurance in Kenya found that between accident, aviation, engineering, fire, marine life, and motor policies, the most common claims made are motor-related with the least being aviation. The paper looks at some challenges that almost all reinsurers believe affect claims and how true it is. Some of the challenges included late notification of claims, policies in which claims exceed the aggregate limit, incorrect computation of claims, incorrect accessioning, and unsettled premiums. The study found out that the main challenges were incorrect accessioning, and unsettled premiums with the other challenges affecting reinsures moderately. The study also revealed that challenges faced usually vary by policies on which claims are made. For instance, results showed that apart from incorrect accessioning, claims dealing with motor faces all the above-mentioned challenges which are not so for other policies. The study concludes by revealing that indeed, reinsurers are faced with some challenges during the claims process which contributes to delays in claims settlement.

Finally, Ndonga (2018), on the determinants of delays in the payment of private health insurance in Kenya concludes that the availability of information on policy claims process is unclear and difficult to understand when filling forms, the whole documentation process is too cumbersome

for policyholders who usually do not complete it, are some factors which contribute to the delays in payment of claims. Also, the inability of hospitals to adopt and integrate IT system which enhances claims process often leads to loss of claims data and subsequently delays. Furthermore, the study shows that there is usually some form of ambiguity in the laws governing the claims processing methods which leave the insurance firms to operate at their own discretion. The weakness in the existing laws and regulations is also mentioned as a factor. Lastly, the study reveals the main challenges of the cause of delays in claims as weak underwriting standards in firms, the delay in reporting a claim, and the excessive workload of claims management staff.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

A detailed description of techniques used for the study is done in this chapter. It consists of the research design, identification of the data gathering methods and process used to analyze the data, extracting meaning from the data to be assembled throughout the work. The numerical and measurable method utilized for the analysis of collected data is also introduced and explained.

3.2 RESEARCH APPROACH

The research design used for this study is a survey. A survey is utilized here for its promptness, adequacy, and adaptability to obtain the data required for analysis.

The survey plan in this study includes the administration of questionnaires to corporate policyholders and insurance companies. The questionnaire used closed-ended questions with predetermined alternatives of answers for respondents to browse. For the appropriate response alternatives, a blend of "Likert-type scales", "Yes-No choices" just as "Numerous decisions" were utilized. The questionnaire ends by asking for opinions from both parties, what other factors they think affect claims apart from the ones asked. The last part of the questionnaire was used to answer the last research question of the study. Dissemination of the study questionnaire was done using two fundamental channels: an online stage (counting electronic mail) just as printed copy conveyance. A copy of the questionnaire can be found at the Appendix C.

3.3 POPULATION AND SAMPLE

The population in this research consists of 79 corporate firms chosen out of the 150 corporate policyholders randomly selected from various firms who have a selected policy (Motor,

Liability, Bonds and Workmen Compensation) in Ghana and 28 non-life insurance companies for the analysis.

3.4 MOTIVATION FOR THE CHOICE OF MEASUREMENT AND TECHNIQUE

Andoh and Laryea (2018), employed logistic regression in an attempt to identify reasons why students skip the first week of lectures at the University of Ghana. They also assessed the impact of skipping the first week of lectures on the academic performance of students through cross-section regression and went ahead to prescribe some mechanisms to reduce such behaviors in students. Results showed that unperturbed students and preoccupied older students are most likely to miss the first week of school and though Students' GPA was negatively related to absenteeism, it was not significant in determining absenteeism in students. The paper selected the model based on the smallest AIC but did not include the BIC. The AIC intends to minimize the Kullback-Leibler divergence between the true distribution and the estimate from a model while BIC tries to select a model that maximizes the posterior model probability. The strengths of these two cannot be shared and are best used together. This study makes use of both the AIC and BIC in the model selection.

Also, the study does not show the group with the highest probability of occurrence. This study uses the Proportional Chance Criteria (PCC) and the Maximum Chance Criteria (MCC) to find the percentage accurately classified if all observations were put in the gathering of the best likelihood event.

A study by Awunyo-Vitor (2012), uses logit regression to ascertain factors that influence the demand for comprehensive motor insurance in Ghana. Data were collected from registered private car owners in Kumasi. The dependent variable here was whether a car owner will purchase comprehensive motor insurance or not. The independent variables involved in this

study were income, the value of the vehicle, age of the vehicle, perception of the premium, and claims process. Results showed a negative relation between the demand for comprehensive motor insurance and premiums. A significant relation was found for income, the value of motor, claims process. Generally, wealthy people and individuals who used a bank loan to purchase a vehicle are more likely to purchase comprehensive motor insurance. In addition, claim procedures and the premium if perceived satisfactory would improve demand for comprehensive motor insurance. Although the chi-square test was used to determine the correlation of the dependent variable with each independent variable, the study fails to report the correlation matrix which shows the correlation between variables, therefore, multicollinearity is possible.

Ebrahimzadeh, Hajizadeh, Vahabi, Almasian, and Bakhteyar (2015), use both logit and probit regression together with discriminant analysis to predict unwanted pregnancies in an urban population. 887 pregnant women in Khorramabad, Iran were selected by the stratified and cluster sampling. To compare models, sensitivity, specificity, the area under the ROC curve (receiver operating characteristic curve), and the percentage of correct predictions were used. The Logit and probit regressions showed a relationship between unwanted pregnancies and parity and pregnancy spacing, contraceptive methods used, household income, and the number of males living males. They concluded on the necessity to revise family planning programs. With regards to the models and their accuracy, the recommendation was to use logistic regression to interpret results well. Although cluster sampling can be more efficient than random sampling, if the chosen cluster does not properly represent the population, there could be an increase in sampling error and an increased risk of bias. Random sampling on the other hand allows the sampling error to be calculated and reduces selection bias. It is a straightforward method of probability sampling and this study uses that.

The logistic and probit regressions have some underlining assumptions that, make it easy to work with but also restrains it. Unlike multiple regression, this method is more flexible as it makes no assumptions concerning the nature of the relationship between the dependent and independent variables. It also has the power to accommodate both categorical and continuous independent variables (Yeboah, 2012). On the other hand, they do not allow for possible asymmetries and the shape is already determined. This could lead to suboptimal decisions (Andoh, Mensah & Atsu, 2018). A more general method that has been proposed by Andoh et al. (2018), is the GL^+ and GL^- regression analysis in place of logit and probit regressions respectively. These models allow for potential asymmetries and make allowance for the independent variable to assume its own shape. Simulations done showed the GL^+ having higher predictive power than that of the logit and probit, although this was done for just one independent variable. Nevertheless, the logistic regression is a special case of the GL^+ . Results in the study are based on simulation with one independent variable without exploring more independent variables. This study however makes use of more than one independent variable to ascertain what affects the timeliness of claims made.

3.5 ESTIMATION APPROACH

Data collected were analyzed using the GL^+ regression method proposed by Andoh et al. (2018), to recognize the variables of delayed claims payment brought about by corporate policyholders. GL^+ regression was adopted because of the binary nature of the dependent variable which Ordinary Least Square (OLS) may not be applicable here especially when dealing with small samples. In addition, the model permits the data to select the skewness and shape. Moreover, the error terms of the dichotomous response model will in general display heteroskedasticity. Along these lines, utilization of OLS will make the standard errors biased and subsequently inferential

statistics, using the standard errors, for example, and the t-values will be invalid. Lastly, dependent variables that are binary in nature, are normally expressed as linear functions of a set of regressors. The estimates of Y given x_i are contingent probabilities of Y happening ($Y = 1$). Therefore, the contingent probabilities are expected to lie in the range of $[0,1]$. But OLS might have the contingent probabilities lying outside the $[0,1]$ territory. The maximum likelihood estimator was used in this study. To explore the insurers' views about claims and issues surrounding claims, a descriptive method was adopted to help gain a better understanding of the situation that is being examined.

3.6 WHAT GL^+ REGRESSION ABOUT?

GL^+ regression analysis as proposed by Andoh et al. (2018), can be used in place of the classic logit regressions for dealing with binary regression models. Unlike logit, the GL^+ considers potential asymmetries governing the binary output variable and offer leniency for the dependent variable to take its own shape. This reduces the chances of making suboptimal choices as the shape and skewness are not forced like that of the logit. Nevertheless, the logit regression is a special case of the GL^+ .

GL^+ as a major aspect of the generalized linear model, helps by utilizing at least one independent variable to foresee the values on a dichotomous independent variable (that is it divides the cases into two mutually exclusive groups such as gaining admission into a university or not).

GL^+ regression is a technique that centers around whether an event happens or not or the odds of an event happening and not 'when' it happens. For example, given the data on the background of admitted students in the university, we can predict whether they will or will not complete their first year without failing any course.

It can also be used for a more common aim, to identify which predictor variables do predict the outcome and their comparative value in making the prediction.

For example, we might find that a student's food menu does not predict their passing a course and that their previous grades are a better predictor of their success than their food menu.

It is critical to take note of the chance of decreasing numerous multi-categories or even continuous factors to dichotomous ones. For example, if you had measured students' grades on a seven five-category scale from "excellent" to "very poor", you could reduce this to two categories such as "pass" and "fail".

Although the GL^+ regression bears some likeness to multiple regression, it is a more adaptable method as it makes no supposition concerning the nature of the relationship between the independent variables and the dependent variables. Likewise, even though the power of analysis improves with normally distributed independent variables, and linear relationships between the dependent and independent variables are ideal, it doesn't have to be so.

The GL^+ regression has the power to accommodate both categorical and continuous independent variables. For any given case, GL^+ computes the probability that a case with a set of values for the independent variables is a member of the modeled category.

3.6.1 The GL^+ Regression Model

In this study, the response variable, claims, is a binary or dichotomous variable. Therefore, the GL^+ regression is a suitable technique to use because it is developed to predict a binary dependent variable as a function of predictor variables.

The definition of the GL^+ as given by Andoh et al. (2018) is as follows.

Definition: Given a random variable X , the GL^+ distribution with parameters μ, v^2, a and b denoted as $GL^+(\mu, v^2, a, b)$ has a density function as

$$f(x) = b \frac{\log a}{v} \frac{a^{-\left(\frac{x-\mu}{v}\right)}}{\left[1+a^{-\left(\frac{x-\mu}{v}\right)}\right]^{b+1}} \quad (1)$$

where $-\infty < x < +\infty, \mu \in (-\infty, +\infty), v^2, a \in R^+$, and $b > 0$.

The distribution is negatively skewed if $b \in (0,1)$, positively skewed if $b \in (1, +\infty)$, and the distribution is symmetric when $b = 1$. The logistic distribution is just a special case of this distribution with $b = 1$ and $a = e$.

The cumulative distribution function of the GL^+ distribution is

$$F_+(x) = \left[1 + a^{-\left(\frac{x-\mu}{v}\right)}\right]^{-b} \quad (2)$$

defining Y by X and Y following the GL^+ distribution, then

$$\hat{p}_i = F(\hat{z}_i) = \frac{1}{(1+a^{-\hat{z}_i})^b} \quad (3)$$

where $i = 1, \dots, n, \hat{z}_i = \hat{\beta}_0 + \hat{\beta}_1 x_{1i} + \hat{\beta}_2 x_{2i} + \dots + \hat{\beta}_k x_{ki}$,

$\hat{\epsilon}_i = z_i - \hat{z}_i$ being the error term and k is the number of independent variables.

deriving \hat{z}_i from the equation (3),

$$\hat{z}_i = \frac{1}{\log a} \log \left(\frac{\hat{p}_i^{\frac{1}{b}}}{1-\hat{p}_i^{\frac{1}{b}}} \right) \quad (4)$$

equation (4) is the GL^+ of p with skewness parameter b .

The probability of the independent variable causing an outcome success is less for values of the dependent variable being less than one, holding all other factors constant. For a dependent variable that is greater than one, holding all other factors constant, the probability of the independent variable causing success is great.

The model then becomes

$$\hat{z}_i = \frac{1}{\log \hat{a}} \log \left(\frac{\hat{p}_i^{\frac{1}{\hat{b}}}}{1 - \hat{p}_i^{\frac{1}{\hat{b}}}} \right) = \hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2 + \dots + \hat{\beta}_k x_k \quad (5)$$

solving for \hat{p} we have

$$\hat{p}_i = F(\hat{z}_i; \hat{\theta}) = [1 + \hat{a}^{-(\hat{\beta}_0 + \hat{\beta}_1 x_1 + \hat{\beta}_2 x_2 + \dots + \hat{\beta}_k x_k)}]^{-\hat{b}} \quad (6)$$

3.6.2 Parameter Estimation: Maximum Likelihood (ML)

Maximum likelihood estimation is an iterative procedure that successfully works to get closer and closer to the correct answer. The method of maximum likelihood estimation chooses values for parameter estimators (regression co-efficient) which make the observed data “maximally likely”.

We want to choose (a, b, β) , $(\beta = \beta_0, \beta_1, \beta_2, \dots, \beta_k)$ that maximizes the probability of observing the data we have.

Estimation of $k + 1$ unknown parameter in equation (6) is done with maximum likelihood estimation which entails the finding of the set of parameters for which the probability of the observed data is greatest.

The log-likelihood function is

$$l(\theta | X) = \log L(\theta | X) = \sum_{i=1}^n [y_i \log F(x_i; \theta) + (1 - y_i) \log (1 - F(x_i; \theta))] \quad (7)$$

$$l(\theta | X) = \sum_{i=1}^n [\log(1 - F(x_i; \theta)) + y_i \log(\frac{F(x_i; \theta)}{1 - F(x_i; \theta)})] \quad (7)^*$$

where $F(x_i; \theta) = [1 + \hat{a}^{-(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k)}]^{-b}$

See Andoh et al. (2018).

The parameters of interest are solved by maximizing $l(\theta | X)$ with respect to the parameters, θ

3.6.3 Properties of ML Estimators

Maximum likelihood yields unbiased estimators, consistent estimators, asymptotically normally distributed estimations, and asymptotically efficient estimations.

3.6.4 Standard Errors

The method of estimating the variance of the estimated coefficients follows the theory of maximum likelihood estimation by Rao (1973).

The standard errors of the estimators are obtained from the matrix of second partial derivatives of the log-likelihood function from equation (7) *

$$\frac{\partial^2 l(\beta)}{\partial \beta_j^2} = \sum_{i=1}^n x_{ij} F(x_i; \theta) (1 - F(x_i; \theta)) \quad (8)$$

and

$$\frac{\partial^2 l(\beta)}{\partial \beta_i \partial \beta_j} = \sum_{i=1}^n x_{ij} x_{il} F(x_i; \theta) (1 - F(x_i; \theta)) \quad (9)$$

for $i, j = 0, 1, 2, \dots, p$.

The matrix containing the terms in the equations (8) and (9) is denoted as $I(\beta)$. This is the Fishers Observed information matrix. The variance of the estimated coefficients can be obtained from the inverse of $I(\beta)$.

That is,

$$Var(\beta) = I^{-1}(\beta)$$

The standard errors of the estimated coefficients are

$$\widehat{SE}(\hat{\beta}_j) = [\widehat{Var}(\hat{\beta}_j)]^{1/2}$$

for $j = 0, 1, 2, \dots, p$. See Hosmer, Lemeshow, and Sturdivant (2013).

3.6.5 Marginal Effects of the GL^+ Distribution

The marginal effect of the x_i 's is given by

$$\frac{\partial p}{\partial x_i} = \frac{\partial p}{\partial z} \frac{\partial z}{\partial x_i} = f(x)\beta_i = \beta_i b \log a \frac{a^{-z}}{(1 + a^{-z})^{b+1}}$$

See Andoh et al. (2018).

The equation above explains the positive parameter as ‘a unit increase in the related variable would lead to an absolute value β probability increase in the dependent variable’. The negative β on the other hand shows a reduction in the occurrence of the dependent variable with the absolute variable of the β . The marginal effect measures the change in the dependent variable because of a unit change in an independent variable, holding all other independent constant.

3.7 MEASUREMENT AND DEFINITION OF VARIABLES

The binary output variable here is the receiving claims. If a corporate policyholder received claims on time, 1 is assigned and 0 otherwise. The independent variables x_i 's is defined as follows:

- i. RTT, Reporting Time x_{1i} : This measures the number of days it takes to report a happened incident to the insurer. The earlier an incidence is reported, the better details of the incidence the insurer will have, which will quicken the claims process. It is therefore expected that the coefficient of RTT be negative meaning that, the more days there are to report, the less chance there is to receive claims on time.
- ii. PTC, policyholders' understanding of policy's terms and conditions x_{2i} : This looks at how well the policyholder understands policy's terms and conditions. This is measured by the 'Likert-type scale of 5 being having 'excellent' understanding and 1, having 'very poor' understanding. A good understanding of the policy will allow the policyholder to know exactly what to do and what information is vital when making claims. The policyholders will know exactly how the policy works and act appropriately. PTC is expected to be positively related to the dependent variable, in that the better a policyholder's understanding of the terms and condition is, the better chance they have of receiving claims.
- iii. PID, Provision of all the necessary Information and Documents x_{3i} : this also is measured by the Likert-type scale of 5 being providing 'excellent' information and documents and 1, 'very poor' provision of documents and needed information. A better provision of information and document will better equip the insurer and quicken any claim settlement. A positive coefficient is expected.

- iv. RA, Ratings of policyholders' insurer x_{4i} : This looks at how each policyholder rates their insurer and their claims handling process. Again, the Likert- type scale of 5 being 'excellent' claims services and 1 for 'very poor' services. Any policyholder who does not hold the insurer and the claims process in high esteem is most likely not to receive claims on time as the reputation of the insurer is known. A positive coefficient of β_4 is expected.
- v. Cp, Complaints received from the insurer during the claims process x_{5i} : Any complaint from the insurer during the claims process will mean the insurer is not satisfied with something regarding information or documents provided and this might delay the timeframe in which claims might get settled. It was measured where 1 was for 'no complaints', 2 was for 'yes, some complaints' received, and 3 being 'yes, complaints' received all the time. A positive coefficient of β_5 is expected.

3.8 THE GOODNESS-OF-FIT OF THE ESTIMATED MODEL

Assessing this can be done in two ways; to assess the model fit and to examine predictive accuracy like the classification matrix in discriminate analysis. These two approaches yield similar results though they vary in perspective.

3.8.1 Model Selection

The Akaike information criterion (AIC) and the Bayesian Information Criterion (BIC) will be used to select the most appropriate model to use. The model that gives the least value of AIC and BIC will be selected and used.

We compute the AIC as follows:

$$AIC(K) = \log\left(\frac{SSR(K)}{n}\right) + \frac{2}{n}K$$

where K is the number of coefficients in the model, including the intercept, n is the sample size and $SSR(K)$ is the Residual Sum of Squares.

The BIC is computed as follows:

$$BIC = \log\left(\frac{SSR(K)}{n}\right) + \frac{\log(n)}{n}K$$

where K , n and $SSR(K)$ have the same description as that of the AIC above.

3.8.2 Pseudo R^2 Measures

The study makes use of the pseudo R^2 values together with the statistical chi-square test to assess the fitness of the model.

Also used in this study are the Cox and Snell R^2 measure and the Nagelkerke R^2 measure.

3.8.3 Interpreting the Odds Ratio (OR)

Holding all other factors constant, with a unit increase in the variable x_i , the odds of the dependent variable increased by a factor e^{β_i} . This has a range of 0 to positive infinity. The relative amount by which the odds of the outcome increase or decrease when the value of the corresponding independent variable increases by a unit is indicated.

3.8.4 The Number of Significant variables to Use

The reduced model with only the statistically significant variables is used in the study.

The P-value Criterion:

The confidence interval of 95% that is the alpha value of 5% would be used in the research.

Variables with a p-value less or equal to 5% are treated as statistically significant.

CHAPTER FOUR

DATA COLLECTION AND ANALYSIS

4.1 INTRODUCTION

Data were obtained from 79 randomly selected corporate firms that have at least one of the four selected policies, that is, liability, workmen's compensation, motor, and bonds insurance. These policies were chosen based on their frequency of being bought and their regulatory compulsion. A questionnaire was administered to managers who had in-depth knowledge about the firm's insurance dealings to ascertain information about claims made, the claims process, their actions during the process, and in their opinion what other factors affect the claims process apart from the listed ones. Questionnaires were also administered to 28 non-life insurance companies to gather their views on what causes delays in claims and other issues surrounding claims. In all, a total of 178 questionnaires were sent to the field (150 to corporate policyholders and 28 to insurance companies) but 79 of them were received on time from corporate policyholders and 28 from non-life insurance companies. The data collection lasted for 7 weeks of personal submission and collection from firms and another 5 weeks of online collection by use of Google. The respondents were randomly selected from various industries mainly located in Greater Accra.

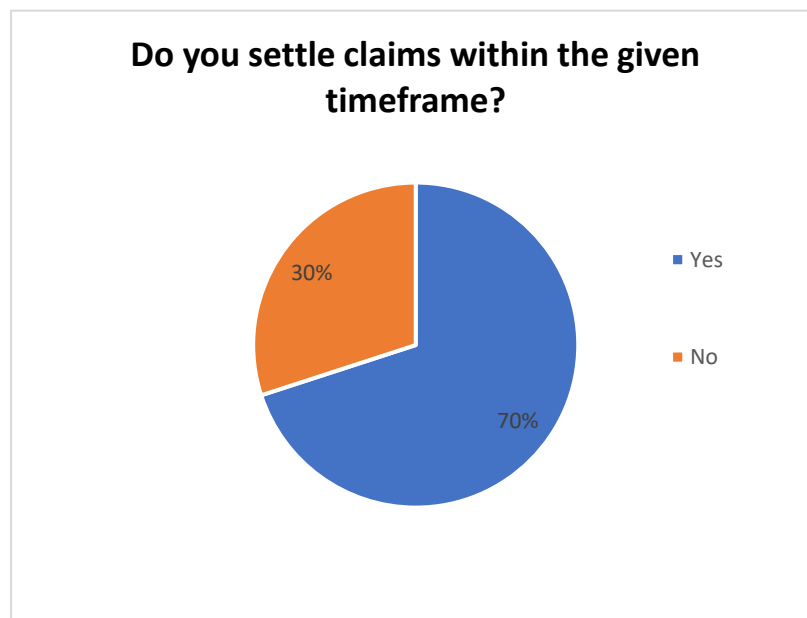
4.2 DATA DESCRIPTION

This part reports the results of the descriptive analysis done on the data collated from the non-life insurance companies.

4.2.1 Insurance Companies

All insurance companies who were surveyed indicated they were aware of the timelines for claims settlement given by the NIC. Of all the insurance companies who answered the questionnaires, only about 30% said they do not adhere to these timelines while the other 70% of insurance companies said they go by these timelines although not strictly for one reason or the other. This result shows that majority of insurers claim they know the guidelines provided by the NIC and adhere to it. If this were the case, then there is really will be no need for policyholders to be complaining about claim settlement but as it is, there have been several studies that show that claims settlement usually delays (Boadu, Dwuomo-Fokuo, Boakye & Frimpong, 2014; Tseng, 2017; NIC, 2010, 2017 & 2019), gives some reasons as to why even though the insurer is aware of the timeline, he may still delay. *Figure 4.1* shows the results to the question of claims being settled on time.

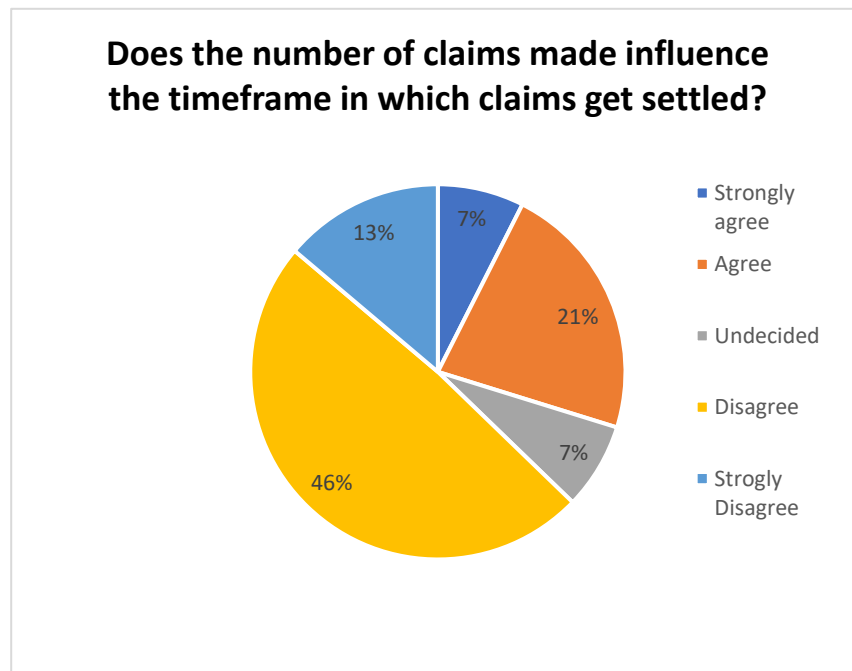
Figure 4.1: Settlement of claims



Source: Author's compilation.

Figure 4.2 below looks at the influence of the number of claims made on the timeliness of claims settlement and here, the respondents (insurance companies) generally disagreed that the number of claims made affects the timeframe in which claims get settled. 13% of insurers questioned were strongly against the idea or notion that the number of claims they receive affects the time in which they can pay these claims. Likewise, also, 46%, which is the majority disagreed with the number of claims affecting the timeframe of a claim's settlement. On the other hand, 7% of insurers were not sure about it/undecided while 21% agreed and another 7% strongly agreed to this idea. It can be deduced from the results that the volume of claims made affecting the timeliness is generally firm specific even though a bulk of them disagreed as showed by Mahlow and Wagner (2016).

Figure 4.2: Assessment of the quantity of claims made

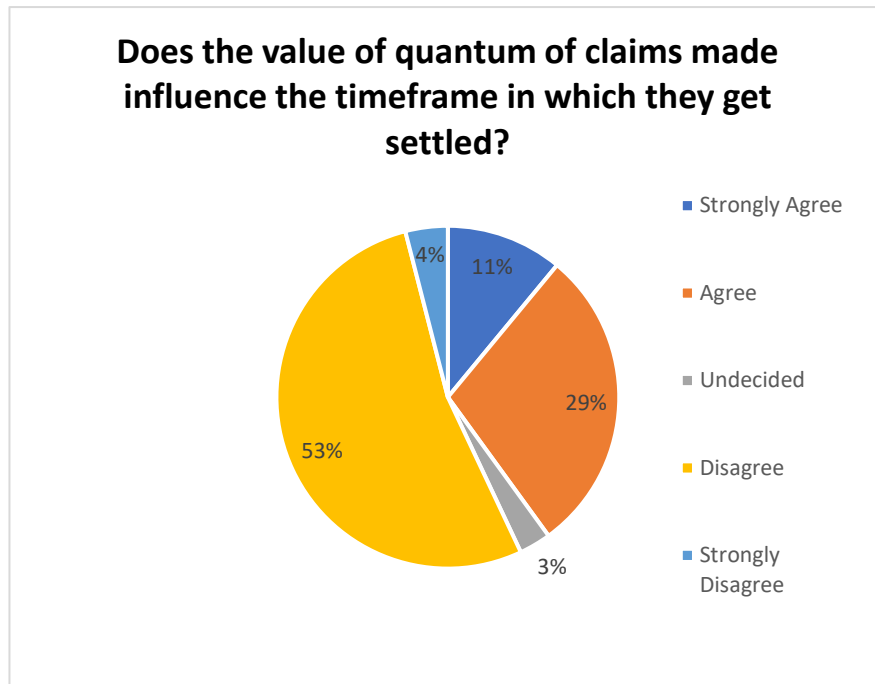


Source: Author's compilation.

The survey done showed that non-life insurance providers generally did not agree that the quantum of claims affects the timeframe in which claims are settled. This is depicted in *Figure 4.3* below where 53% of the respondents disagreed and 4% strongly disagreed. It is worth noting also that although small, a good amount of the insurers, that is 29% and 11% totaling 40%, agreed that the quantum of claims does affect the timeliness of claims settlement. Only 3% were not sure that the value affected the timeliness of claims settlement.

From the results it seems insurers non-life insurers in Ghana do not see the quantum of claims made as a factor to late claim payment. Mahlow and Wagner (2016), shows that amongst the three-principal goal of insurers that minimization of claims volume, the optimization of internal claims processes and the maximization of customer satisfaction, the latter is of the greatest importance. This means that if indeed the quantum of claims is viewed as a factor to claim delays, then the insurer in attempt to satisfy clients will prioritize the first goal and hence satisfy it clients but we see from current studies that policyholders are still complaining.

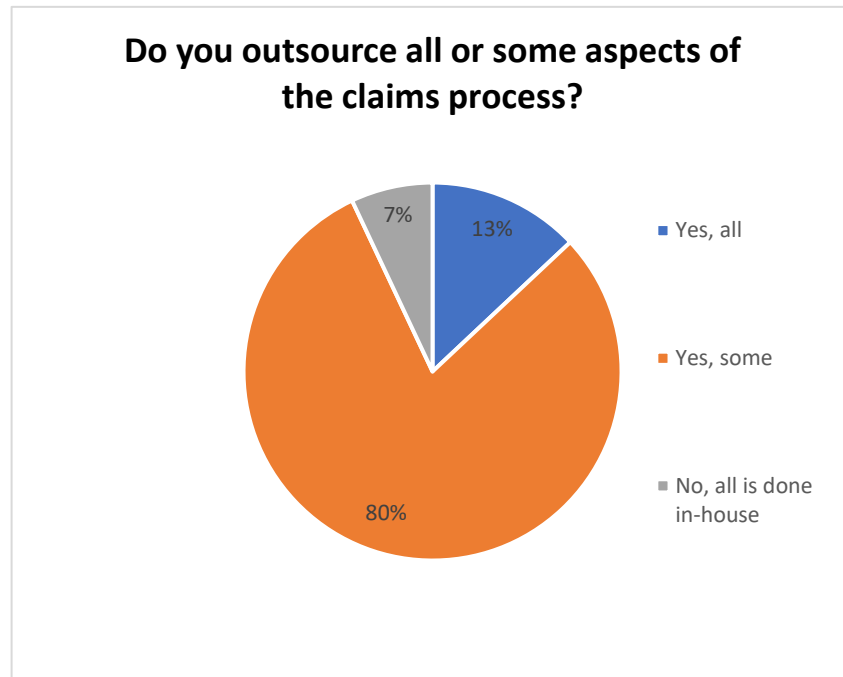
Figure 4.3: Assessment of the quantum of claims made



Source: Author's compilation.

Figure 4.4 below indicates that 80% of insurers handle some of the claims that come in by themselves and outsource some to an outsider. 7% of non-life insurers handle hundred percent of claims themselves while 13% of them do not handle any of the claims they receive

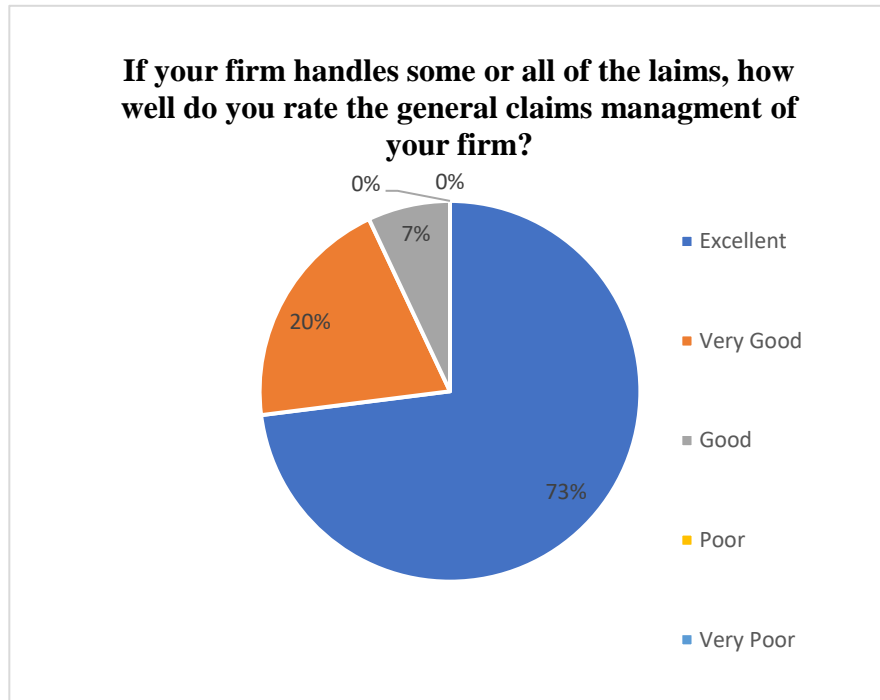
Figure 4.4: Outsourcing of claims



Source: Author's compilation.

For insurers who revealed that they handle some or all of their claims, 73% of them rated themselves as having excellent claims management system while 20% of them agreed to having a very good claims management with only 7% agreeing to a good claims management system. This is show in *figure 4.5* below.

Figure 4.5: Rating of general claims management system



Source: Author's compilation.

4.3 DESCRIPTIVE STATISTICS

Results of the analysis done on the data collected from corporate policyholders is reported here.

From table 4.1 below, the dependent variable has an average of 0.456 with a standard deviation of 0.501. On average, the reporting time of incidence is 2.177 that is incidence are averagely reported after five working days with a standard deviation of 1.141. The most common days it takes for incidence to be reported is 2 that is after five working days. It also appears to be skewed.

Policyholders seems to on average have ‘good’ understanding of their policy’s terms and conditions. The information provided on average is close to being ‘very good’ (3.810) with standard error of 0.105. Policyholders rates their insurers an average of 3.329, which is in the ‘good’ category with most rating their insurers below the average.

Lastly, table 4.1 shows that the mean of complaints is 2 showing that on average, a policyholder receives complaints sometimes although not all the time.

Table 4.1: Summary Statistics of Variables

Statistics	Claims Received	Reporting Time	Policy Understanding	Provision of Information	Rating	Complaints
Mean	0.456	2.177	3.152	3.810	3.329	2.000
Standard Error	0.056	0.128	0.118	0.105	0.109	0.081
Median	0.000	2.000	3.000	4.000	3.000	2.000
Mode	0.000	2.000	3.000	3.000	3.000	2.000
Standard Deviation	0.501	1.141	1.051	0.935	0.970	0.716
Sample Variance	0.251	1.302	1.105	0.873	0.942	0.513
Kurtosis	-2.019	0.049	-0.575	-0.385	-0.011	-1.013
Skewness	0.181	0.864	0.368	-0.284	-0.106	-3.504E-17
Range	1.000	4.000	4.000	4.000	4.000	2.000
Minimum	0.000	1.000	1.000	1.000	1.000	1.000
Maximum	1.000	5.000	5.000	5.000	5.000	3.000
Sum	36.000	172.000	249.000	301.000	263.000	158.000

Count	79.000	79.000	79.000	79.000	79.000	79.000
Confidence Level (95%)	0.112	0.256	0.235	0.209	0.217	0.160

Source: From author's Compilation.

From table 4.2, it can be observed that a total of 36 representing 45.6% of the respondents received their claims on time while 43 representing 54.4% did not receive their claims on time. The data collected are skewed and so emanate from the non-elliptical distribution. This suggest that employing the GL^+ distribution is suitable.

Table 4.2: Percentage Frequency Table for the Dependent

Did you receive claims on time?

		Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid	No	43	54.4	54.4	54.4
	Yes	36	45.6	45.6	100
Total		79	100	100	

Table 4.3: Percentage Frequency Table for variables under Study

Variable	Number Claims Received	of Percentage (%)	Number Claims Received	of not Percentage (%)	Total
Reporting Time (RTT)					
Same day	20	25.32	6	7.59	26
Less than 5 working days	14	17.72	14	17.72	28
6-14 working days	1	1.27	13	16.46	14
15-30 working days	1	1.27	6	7.59	7
After 30 working days	0	-	4	5.06	4
Understanding of Policy's terms and conditions (PTC)					
Excellent	12	15.19	0	-	12
Very Good	8	10.13	4	5.06	12
Good	12	15.19	21	26.59	33
Poor	4	5.06	16	20.25	20
Very Poor	0	-	2	2.54	2
Provision of Adequate Information and document (PID)					
Excellent	14	17.72	8	10.13	22
Very Good	13	16.45	12	15.19	25
Good	8	10.13	20	25.32	28
Poor	-	-	3	3.6	3
Very Poor	-	-	1	1.27	1
Complaints from insurers (Cp)					
Yes, all the time	4	5.06	16	20.25	20
Sometimes	18	22.79	21	26.59	39
None	14	17.72	6	7.59	20
Ratings of Policyholders (RA)					
Excellent	9	11.40	1	1.27	10
Very Good	14	17.72	7	8.86	21
Good	12	15.19	24	30.38	36
Poor	1	1.27	8	10.13	9
Very Poor	-	-	3	3.6	3

Table 4.3 displays the percentage frequency of the variables under study with regard to claims received on time and claims delayed for policy holders.

Out of the 79 policyholders, 26 reported an occurred incidence “the same day” while 28 reported within “5 working days,” 14 reported “between 6-14 working days” with 7 reporting “between 15-30 working days” and 4 reporting “after 30 working days”. For same day reported incidence, 25.32% received settlement on time and 7.59% did not receive settlement on time. Policyholders who reported in less than 5 working days had 17.72% receiving claims on time with same percentage not receiving on time. 1.27% of policy holders received their claims when incidence was reported within 6-14 days while 16.46% of the policyholders who reported in the same time frame did not receive their claims. Also, 1.27% of policyholders who reported between 15-30 working days received their claims on time but 7.59% did not receive their claims on time. Lastly all policyholders who reported after 30 working did not receive their claims on time.

For policyholders understanding of Policy’s’ terms and conditions, 12 respondents representing 15.19% had “excellent” understanding, 12 respondents representing 15.19% had “very good” understanding, 33 respondents, representing 41.78% had “good” understanding, with 20 respondents representing 25.31% having “poor” understanding and 2 respondents that is 2.53% of policyholders had “very poor” understanding of their policy’s terms and conditions. All of the respondents who had “excellent” understanding received their claims on time. For respondents with “very good” understanding two thirds of them received timely claims settlement. While a third of respondents with “good” understanding received claims on time. 75% of policyholders with “poor” understanding did not receive their claims on time and none of the respondent with “very poor” understanding received their claims also.

Policyholders who provided “excellent” documents and information about an occurred incidence had the highest claims received of 17.72% of total respondents, followed by respondents with “very good” provision being 16.46% of total and then 10.13% for those in other categories. On the other hand, the majority of respondents with good provision did not receive their claims on time (25.32% of total) and all those below good, did not receive their claims on time.

Out of the 79 policyholders, 25.31% had “no complaints” from their insurer regarding the provision of information and documents and out of this, more than two thirds of them received their claims on time. For policyholders who received “occasional complaints”, this was about one half of total respondents and out of this, also about one half received their claims on time whilst the other half did not. The last piece of the pie is respondents or policyholders who received “complaint all the time” about their provision of information and documents for an occurred incidence, these had only about a fourth of them receiving timely settlement.

Finally, when it came to how these policyholders viewed their insurers and their claims processing system, 11.40% of total respondents who received timely claims said insurers provided them with “excellent” claims processes and 17.72% of those who received claims rated their insurers very good. On the other, it can be seen from the table that out of the 36 respondents who rated their insurers “good”, 30.38% of them didn’t receive their claims on time.

Table 4.4: Sample correlation coefficient among the dependent (Claims received) and the independent variables

	REC.	RTT	PTC	PID	RA	Cp
REC	1					
RTT	-0.524**	1				
PTC	0.548**	-0.386**	1			
PID	0.378**	-0.14838	0.160217	1		
RA	0.5048**	-0.296**	0.3651**	0.2252*	1	
Cp	-0.324**	0.3981**	-0.2675*	-0.313**	-0.32**	1

P – value < 0.01, p – value < 0.005 *****

Source: Author’s Compilation.

The correlation matrix in Table 4.4 shows that the correlation between the reporting time (RTT) and claims received (REC) is a negative one with coefficient, 0.52. This means that there is a relatively strong negative correlation, hence an increase in days of reporting incidence reduces claims received. The correlation between claims received (REC) and PTC, PID and RA are all positive.

From table 4.4, $corr(PTC, RTT) = -0.39$ which shows that for policyholders who have good understanding of their policy’s terms and conditions, their likely not to delay in reporting incidence. They know that the earlier reported, the faster it will be solved. Correlation between PTC and PID, and PTC and RA are positive, showing that policyholders who have good understanding of the policy will provide the necessary documents and information as well and also go in for insurers with good reputation. On the other hand, a negative relation exists PTC and Cp, which is expected as a better understanding of one’s policy will reduce the complaints received from the insurer.

From Table 4.4, the correlation coefficient between PID and RTT is negative (-0.14). This indicates that a policyholder who reports early is most likely to provide a more accurate information and documents. A negative correlation also exists between PID and Cp but $corr(PID, RA)$ is positive.

Table 4.4 also shows a negative correlation between RA and RTT but positive correlation with Cp.

Lastly, table 4.4 shows a positive correlation between Cp and RTT and this indicates that policyholders who delay in reporting incidence receive one complaint or another from the insurer.

4.4 MODEL ESTIMATION

Matlab and SPSS was used for the analysis. The estimation was carried with the optimization toolbox in Matlab to attain an optimum shape (a) and skewness (b). After repeated analysis with altering values for the coefficients, a and b , results obtained at optimum were similar to logit where $a = e$ and $b = 1$, using the AIC and BIC as a selection criterion. This shape and skewness' of the distribution gave the smallest AIC and BIC. Refer to Appendix B the altering values used and its results.

Table 4.5: Parameter Estimates for the fitted Model

Explanatory Variable	Co-efficient	Standard error	P-value	Odds Ratio
Constant	-9.088	3.3	0.006***	
Reporting time	-1.312	0.521	.012***	0.269
Understanding of Policy's terms and conditions	1.172	0.46	.011***	3.229
Provision of documents and information	0.903	0.453	.046**	2.467
Policyholders Ratings	1.146	0.505	.023**	3.145
Complaints received	0.325	0.623	0.602	1.384
Significant codes	0.01'****'	0.05'***'	0.1'**'	
AIC	72.235			
BIC	117.225			

It can be observed from the table 4.5 that the reporting time of incidence (RTT) has a significant effect on the timeliness of claim settlement ($OR = .269, P < 0.01$), and it is a negative relation. This means that holding all other factors constant, a day increase in the reporting time of an incidence multiplies the odds of receiving claims on time by 0.269. For policyholders who delayed in reporting an occurred incidence was 26.9% more likely to not receive their claims on time. This result is expected as per the hypothesis made in chapter one.

Also, table 4.5 shows that policyholder's understanding of policy's terms and conditions are significant and positively related to the timeliness of claims settlement ($OR = 3.229, p < 0.01$).

This shows that holding all other factors constant, an increase understanding of one's policy's terms and conditions multiplies the odds of receiving claims on time by 3.229.

Provision of necessary information and documents by policyholders is significant and positively related to the timeliness of claims settlement meaning that, holding all other factors constant, a better provision of information and documents about an incidence multiplies the odds of claims being paid on time by 2.467. Policyholders' chances of receiving claims more than doubles by each improvement.

Similarly, we can also see that how policyholders rate their insurers and their claims processes do have a positive effect on the timeliness of claims settlement. Holding all other factors constant ($OR = 3.145, p < 0.05$), for policyholders who rate their insurers highly are three time more likely to receive their claims on time.

Results here confirms the finding of Ndonga (2018), on the determinants of delays in the payment showing that delays are caused by availability of information, difficulty in understanding, filling, and provision of forms and documents.

4.5 ASSESSING THE MODEL FIT

Two approaches were used to assess the overall fitness of the fitted model, that is pseudo R^2 measures and classification accuracy.

4.5.1 Pseudo R^2 Measures

It can be seen from table 4.6 that the model has a generally bigger pseudo R^2 , 0.514 for the Cox and Snell R^2 , and 0.687 for the Nagelkerke R^2 . The cox and snell R^2 shows that there is a 50%

probability of claims being paid on time by the model. Also, the Nagelkerke shows that the fitted model is able to account for about 68.7% of the variations in the dependent variable. This indicates a decent model.

Table 4.6: Model Summary

-2 Log likelihood	Cox & Snell R^2	Nagelkerke R^2
51.91	0.514	0.687

4.5.2 Classification Accuracy

The predictive accuracy accomplished by the fitted model is presented here. Table 4.7 below shows that an overall percentage of 86.1% was correctly predicted by the fitted model, meaning that 77.8% of the result of yes of the variable “did you receive” is predicted accurately while 93% of the result no the variable “did you receive” by the fitted model.

A combination of this and the statistically based measures of model fit makes the model acceptable in terms of both statistical and practical significance.

Table 4.7: Classification Table

Observed	Predicted		Percentage Correct
	No	Yes	
Did you receive the claims within the NIC specified timeframe?	40	3	93
Did you receive the claims within the NIC specified timeframe?	8	28	77.8
Overall Percentage			86.1

Another statistical measure is the Hosmer and Lemeshow measure of general fit. This measures how the actual and predicted values of the dependent variable correspond. A smaller distinction between the observed predicted classifications is favorable as it indicates a good model fit. Table 4.8 below shows the measures for this study.

The Hosmer and Lemeshow test show insignificance for the fitted model (0.436 from Table 4.8), indicating that insignificant differences remain between actual and expected values. This is a strong indication of a good fit.

Table 4.8: Hosmer and Lemeshow Test

Chi-square	Degrees of freedom	Sig.
7.975	8	0.436

Table 4.9 below presents the contingency table for the Hosmer and Lemeshow Test.

Table 4.9: Contingency Table for Hosmer and Lemeshow Test

Did you receive the claims within the NIC specified timeframe? = no		Did you receive the claims within the NIC specified timeframe? = yes	
Observed	Expected	Observed	
8	7.959	0	0.441
8	7.799	0	1.08
8	7.421	0	1.413
5	6.512	3	1.927
4	5.562	4	2.704
7	4.428	1	4.08
2	2.204	6	5.473
1	0.786	8	6.178
0	0.291	8	7.04
0	0.038	6	5.664

4.6 PROPORTIONAL CHANCE CRITERION

The proportional chance criterion (PCC) is used to analyze two groups of unequal size assumes that the cost of misclassification is the same, that is the individuals from each gathering must be recognized equally well. Given the proportions of respondent in each group, that is respondents in the claims recovered group and respondents in claims not received group, the PCC is;

$$PCC = P^2 + (1 - P)^2$$

where:

PCC is the proportion chance criterion

P is the proportion of respondents in the claims “received” category?

$1 - P$ is the proportion of respondents in the claims “not received” category?

Hence the PCC in this study is 50.39% ($PCC = .456^2 + .544^2$)

4.7 MAXIMUM CHANCE CRITERION

Another measure, maximum chance criterion (MCC), is the percentage accurately classified if all observations were put in the gathering with the best likelihood of event. It mirrors the most moderate norm and furthermore accepts no distinction in the cost of misclassification.

Group 0 (respondents in the claims not received category) is the biggest group with 54.43% of the sample showing that observations assigned to this group will be 54.4% likely to be right.

A better and an acceptable model will be one with a higher level of accuracy than that of the largest group which is 54.43 in this case.

Both hits ratios are above the expected threshold of these values (comparison standard plus 25%), which in this study are ($50.38\% * 1.25\% = 62.97\%$) for the PCC and ($.544 * 1.25\% = 68\%$) for the MCC.

On all occasions, that is both the analysis sample and hold out example, the levels of classification are significantly higher than the threshold values, showing a satisfactory level of classification accuracy.

4.8 CHALLENGES

The questionnaire administered had a concluding portion that requested the views of the person answering the questionnaire on challenges relating to claims settlement and these views are collated below.

4.8.1 Challenges faced by Corporate Policyholder During the Claims Process

Although some of the policyholders who answered the survey claimed not to have experienced any challenges with their claims process, more than a few admitted to facing one or two issues which led to obtaining their claims payment later than scheduled.

Some of the challenges faced are as follows:

- i. **Poor customer service:** some of the policyholders complained that the insurance personnel who handled claims most often than not did not treat them nicely.
- ii. **Too much paperwork:** Some also spoke about the paperwork and requirement involved as being hectic and stringent. The follow up after the discharge voucher has been signed is also long
- iii. **Delay in activities by brokers:** for policyholders who deals with insurance through brokers, some also gave the delays in the activities of brokers after an incident has occurred as a challenge, pointing out that some do not report incidence on time even when the policyholders reported early and also feedback from the insurer about claims do not get to them on time leading to a delay in the whole process.
- iv. **Procrastination in payment:** Even after everything has been settled, one challenge that came up is the postponement of payment by the insurer.

4.8.2 Challenges faced by Corporate Insurance Companies During the Claims Process

Just like the policyholders, insurers who took part in this survey also agreed to having some challenges during the claims process.

Some of the challenges included:

- i. Delays in the reporting of claims by claimants
- ii. Delays from the insured in presenting documents to substantiate claims
- iii. Fraudulent claims
- iv. Exaggeration of claim amounts
- v. Rush to go to court by some solicitors, sometimes issuing a writ of summons before informing the insurer about the claim
- vi. Misunderstanding of policy terms and conditions by insureds
- vii. Cash flow challenges
- viii. Delays in receiving reports from loss surveyors and other third parties
- ix. Lack of local loss adjustors to handle complex claims
- x. Inadequate staffing of the claims department
- xi. Underinsurance
- xii. Poor attitude of claims management staff

4.9 SUMMARY

The emphasis of the study was to discover the connection between certain actions of policyholders and how quick claims will be settled. There is additionally the need for clients to understand that the claims process is not exclusively dependent on the insurer and that they also contribute their quota for proficient claim settlement.

This is a summary of the research questions analyzed. These questions dealt with the following variables:

For policyholders

- i. Reporting time of an occurred incidence and its effects on the timeliness of claims settlements.
- ii. The understanding policyholders have of their policy's terms and conditions and how it affects the likelihood of receiving claims on time.
- iii. How the provision of appropriate documents and information about a specified incidence aids in the timeliness of claims settlement.
- iv. How policy holders' view/rate the effectiveness of their insurer's competence in processing claims and how it affects the timeframe in which their claims will be settled.
- v. Complaints received by policyholders during claims processes and its effects on the timeliness of the claim settlement.
- vi. Challenges faced during the claims process

For Insurance Companies

Their opinions on whether:

- i. The number of claims and the value of claims made affects the timeline for settlement.
- ii. They outsource or handle claims themselves, and if so, how they view the general claims management system.
- iii. Challenges faced during the process.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 INTRODUCTION

This study draws attention to the connection between certain activities of policyholders and how quickly claims will probably be settled. Insurers views on claims were also ascertained and some challenges faced by both the insured and insurer during the claims process.

An organized survey was randomly administered to corporate firms in Accra and non-life insurance companies to accumulate the necessary data for analysis. GL^+ regression was used for the analysis of data from corporate policyholders and a descriptive analysis was done to get insurers' opinions on claims.

5.2 SUMMARY OF FINDINGS

From the analysis conducted, results showed that (reporting time of incidence) was negatively related to the timeliness of claims settlement while questions two, three, and four (understanding of policy's terms and conditions, provision of necessary documents and information, and how policyholders rate their insurers) showed positive relation. However, complaints from insurers during the process though positively related to the timeliness of claims received, it is not significant.

The time in which incidences are reported for a claim affects whether claims will be settled on time or not, showing that the earlier an incident is reported, the better the chances of claims being settled on time. Policyholder's understanding of their policies and how well they provide documents and information about an incidence also play a part in how soon they receive claims made. Some of the challenges faced by policyholders during the process are poor customer

service by claims personnel, complicated paperwork, delays by brokers, postponement of the agreed payment.

Analysis done found that generally, insurers do not think that the volume or value of claims made affect the timeline for which it is settled, although it is worth noting that a few did think that the value of claims made affects the timeliness.

On the issue of outsourcing of claims by insurance companies, it was discovered that while more insurers outsource, some handle all claims in-house. For insurers who handle claims, it was further discovered that more than 70% view their claims management as excellent.

Some challenges faced during the process include delays in the reporting of claims by claimants, delays from the insured in presenting documents to substantiate claims, fraudulent claims, exaggeration of claim amounts, rush to go to court by some solicitors, sometimes issuing a write off summons before informing the insurer about the claim, misunderstanding of policy terms and conditions by insureds cash flow challenges, delays in receiving reports from loss surveyors and other third parties, lack of local loss adjustors to handle complex claims, inadequate staffing of the claims department, underinsurance and poor attitude of claims management staff.

5.3 CONCLUSION

It has been identified that policyholders have a part to play in the timeliness of claims settlement.

Therefore, measures geared towards education on the contribution of each involved party to the early settlement of claims would go far intending to the reputation issue of the business and furthermore help meeting their primary objectives which are expanding deals/sales.

Although demand for certain insurance policies may have been influenced by authoritative and lawful prerequisite, for example, Bond, Motor, Workmen's Compensation Insurance and so

forth., the aftereffects of the examination of data in chapter four indicated that reporting time, understanding of policy's terms and conditions, provision of documents and information and ratings of insurers by their policyholders affects the timeliness of claims settlement. This affirmed the notion that delays in claims settlement are not just brought about by insurers and that policyholders contribute to "on time" claim settlement. This information will help reclaim the scratched image of the insurance business.

The claims department can be viewed as the reflection of the insurance agency so regardless of whether premiums are modest and underwriting is done well, toward the day's end, an insurer's judgment is based on his capacity to deal with claims appropriately and decently.

Insurance is a mutual agreement between parties and hence all parties do contribute to its success or failure.

5.4 RECOMMENDATIONS

The issue of claim settlement has tormented the Insurance business in Ghana for quite a while which has given it the unpopular reputation it currently has.

This reputation can be ascribed to the unpredictable and exceptional nature of the insurance business.

There is, therefore, the need to improve upon the reputation of the Insurance Company, which will prompt the development of the insurance business in general.

Claims must be settled speedily and evenhandedly. Decrease in expected documents to deal with claims and minimization of correspondence and claim communication and reporting will go far to assist policyholders with doing their part well.

The underwriting and claims personnel ought to be appropriately prepared to expressly clarify how certain activities by policyholders influence their claims settlement. They should be able to likewise create awareness of the peculiarity and complex nature of the insurance business.

Firms should have dedicated risk departments that will be able to quantitatively assess the factors outlined in this study (RTT, PTC, PID, and RA) and how well they can perform or comply with the factors to have a fair idea of what to expect when incidences occur and make necessary provisions to avoid any inconvenience.

The NIC together with insurance companies should organize functional literacy workshops for corporate policyholders to better equip them with the required knowledge on their actions that contribute to timely claim settlement.

The following areas can be further researched to improve upon the claims process, the services provided by insurers, and create a general awareness of the industry: claims settlement and its effects on the finances of corporate policyholders, an in-depth examination of the challenges face by insurance companies during claims processing, the effects of proper claims administration on the reputation of insurance companies, the effects of fraudulent claims on the profitability of insurance companies, and how the actions of third parties affect the timeliness of claims settlement.

5.5 LIMITATIONS OF THE STUDY

The study made use of the unconstrained optimization toolbox in Matlab to attain an optimum shape (a) and skewness (b) although a and b were constrained to be greater than zero ($a > 0, b > 0$). There is therefore room for more exploration using the constrained optimization toolbox.

Although the GL^+ regression method seems to be a good approach, this is based on the simulation that was done for only one independent variable. This study however made use of multiple independent variables and found the shape and skewness similar to that of the logit regression method. Adding more independent variables may create a different result.

Earlier versions of Matlab gave different results than the recent ones, although this study made use of the latest version, 2020.

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APPENDIX A

DEFINITION OF TERMS

Risk: The uncertainty of loss.

Insurance: The transfer of risk from insured individuals and firms to an insurer. An insurer receives a premium and in exchange provides benefits in case a specified of accidental loss. Insurance (Coker, 1995).

Insured: The party who offers to pay an amount of money to the insurer to transfer his risks. They make claims in case of fortuitous events. Also known as the assured or policyholder.

Insurer: The party which accepts the offer made by the policyholder and hence takes on the risk associated with the insured in exchange for receiving premiums.

An Insurance Contract: A mutual agreement between two parties, the insurer and insured where in exchange for an amount of money paid by the insured called premium, the insurer takes on a specified risk and uncertain event that the insured might face in the future which will cause financial loss to the insured. In case of any fortuitous event, as specified in the contract, the insurer is to compensate the insured for losses made.

Premium: The amount paid or payable for an insurance policy. The consideration paid to purchase a policy and to keep it in force.

Indemnity is bringing the insured back to his original financial position or close before the occurrence of an incident.

Beneficiary: The person who will receive claims/compensation under an insurance policy.

Claims: A legal demand by an insured to be compensated for the occurrence of an event as specified in the insurance contract.

Claims settlement: This is known as the benefit received. This is the compensation that is given to the insured upon the occurrence of a specified event.

Insurable Interest: A person is said to have insurable interest if the occurrence of an unforeseen incidence causes financial loss to him. It was defined in *Castellain v. Preston* (1883) as “The legal right to insure arising out of a financial relationship recognized at law between the insured and the subject matter of insurance (Weightman, 1883).

Utmost Good Faith (“Uberrima Fides”): This is a part of insurance that requires both parties to disclose all information that is valuable or key to the agreement and influences a party’s decision to enter the contract. These details are of such importance and must be revealed even when not asked (Wildman, 2005).

Proximate cause is defined as the active, efficient cause that sets in motion a train of events which brings about a result without the intervention of any force started and working actively from a new and independent source.” (Wildman, 2005).

Loss Adjuster: A professional in insurance whose job is to investigate, calculate, estimate and agree on the loss and the compensation to be given under an insurance contract through loss causing events.

Arbitration: The submission of a dispute by parties (Insured and insurer) where a decision is made upon investigation on the amount payable for a policy.

Ex-gratia Payment: This is a payment made to insured who are not legally entitled to receive. It is paid out of the grace and favor of the insurer and not by legal obligation as stated in the contract.

Expressed Terms: These are the terms and conditions declared in the policy.

Implied Terms: These are conditions that are not clearly stated in the policy documents but are legally binding.

Intermediary: A person who acts as a mediator or agent between parties in an insurance contract.

Liability: An action that has legal backing

Quantum: Amount to be paid to the insured by the insurer when claims are made.

APPENDIX B

Table 5.0: Report of some values of a and b analyzed and their corresponding AIC and BIC

Shape (a)	Skewness (b)	AIC		BIC	
		GL^+ model	Logit model	GL^+ model	Logit model
-30	4	2.7050	2.6890	2.5567	2.5501
-24	3	2.3734	2.3342	2.5881	2.5800
-10	2	2.5881	2.5880	2.4656	2.4511
-4	0.5	1.8345	1.8334	2.1905	2.1810
<i>Exp(1)</i>	1	1.3671	1.371	1.9670	1.9570
1	0.8	1.8118	1.8110	2.1445	2.1336
4	0.3	1.7375	1.7371	2.1227	2.1104
15	-7	1.4775	1.4667	2.1006	2.0041
20	5	1.5676	1.5578	2.3765	2.3561
21	8	1.4922	1.4910	2.2901	2.2845

Source: Author's Compilation

APPENDIX C

RESEARCH QUESTIONNAIRE TO INSURANCE COMPANIES

Researcher: Chantelle Buruwa Affum

Institution: University of Ghana Business School

Course: MPHIL Risk Management and Insurance

Topic: Effects of Delayed Insurance Claim Payment on the profitability of Corporate Policyholders’.

Dear Sir/Madam,

I am an MPHIL Risk Management and Insurance student of the UGBS and I will be grateful if you spare a moment to answer this questionnaire for me.

This questionnaire forms part of my academic work and all answers given will be treated with strict confidentiality and used for only academic purposes. Thank you.

INSURANCE COMPANY

1. Are you aware of the guidelines for the timelines of claims payment by the National Insurance Commission?
<input type="radio"/> Yes
<input type="radio"/> No
2. Do you settle claims in this time frame?
<input type="radio"/> Yes
<input type="radio"/> No

3. Does the number of claims made influence the time frame in which claims are settled?
<ul style="list-style-type: none"><input type="radio"/> Strongly Agree<input type="radio"/> Agree<input type="radio"/> Undecided<input type="radio"/> Disagree<input type="radio"/> Strongly Disagree
4. Does the Value/Quantum of claims made influence the time frame in which they get settled?
<ul style="list-style-type: none"><input type="radio"/> Strongly Agree<input type="radio"/> Agree<input type="radio"/> Undecided<input type="radio"/> Disagree<input type="radio"/> Strongly Disagree
5. Do you outsource all or some aspect of the claims process?
<ul style="list-style-type: none"><input type="radio"/> Yes, all<input type="radio"/> Yes, some<input type="radio"/> No, all is done in-house
6. If your firm handles some or all of the claims in-house, how will you rate the general claims management system of your firm?
<ul style="list-style-type: none"><input type="radio"/> Excellent<input type="radio"/> Very Good<input type="radio"/> Good

- Poor
- Very Poor

Challenges

In your view, what are the challenges associated with claims settlement in your institution.

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RESEARCH QUESTIONNAIRE TO CORPORATE POLICY HOLDERS

Researcher: Chantelle Buruwa Affum

Institution: University of Ghana Business School

Course: MPHIL Risk Management and Insurance

Topic: Effects of Delayed Insurance Claim Payment on the profitability of Corporate Policyholders’.

Dear Sir/Madam,

I am an MPHIL Risk Management and Insurance student of the UGBS and I will be grateful if you spare a moment to answer this questionnaire for me.

This questionnaire forms part of my academic work and all answers given will be treated with strict confidentiality and used for only academic purposes. Thank you.

Corporate Policyholders

1. Which insurance company(s) do you insure with?
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
2. Are you aware of the guidelines for the timeline of claims payment given by NIC?
<input type="radio"/> Yes <input type="radio"/> No
3. Which of these policies does your company have/bought?
<input type="radio"/> Motor Insurance <input type="radio"/> Liability insurance <input type="radio"/> Workmen’s Compensation <input type="radio"/> Bonds Insurance

<p>Kindly answer the rest of the questions that follow based on the policies you have.</p>
<p>A. MOTOR INSURANCE</p>
<p>i. How soon did you report the incidence when it occurred?</p>
<p> <input type="radio"/> Same day <input type="radio"/> Less the five working days <input type="radio"/> Between 6 to 14 working days <input type="radio"/> Between 15 to 30 working days <input type="radio"/> After 30 working days </p>
<p>ii. How many claims has your company made in the past 5 years?</p>
<p> <input type="radio"/> Less than 5 <input type="radio"/> Between 5-10 <input type="radio"/> Between 11-15 <input type="radio"/> Greater than 15 </p>
<p>In Ghana, the National Insurance Commission regulations stipulates that within three working days of admittance of liability, a discharge voucher be signed and within five workings of signing the discharge voucher the claim must be paid.</p>
<p>iii. Did you receive the claims within the NIC specified time?</p>
<p> <input type="radio"/> Yes <input type="radio"/> No </p>
<p>iv. If the answer to the above question is no, the approximate time it took after the discharge voucher was signed?</p>
<p> <input type="radio"/> Between 6 and 10 working days <input type="radio"/> Between 11 and 20 working days <input type="radio"/> Between 21 and 30 working days <input type="radio"/> Greater than 30 working days </p>
<p>v. Have you read the terms and conditions of your policy thoroughly?</p>
<p> <input type="radio"/> Yes <input type="radio"/> Some of it <input type="radio"/> No </p>
<p>vi. How well do you understand your policy's terms and conditions?</p>
<p> <input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor </p>
<p>vii. Amount of premium paid?</p>
<p> <input type="radio"/> GHC..... </p>

viii. Were there any complaints from your insurer about the adequacy of information and document provided for an incidence?
<input type="radio"/> Yes, all the time <input type="radio"/> No, but some <input type="radio"/> None at all
ix. How well did you provide all the needed information when a specified incident occurred?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
x. How well you rate the general management of claims by your insurer?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor

B. LIABILITY INSURANCE
i. How soon did you report the incidence when it occurred?
<input type="radio"/> Same day <input type="radio"/> Less the five working days <input type="radio"/> Between 6 to 14 working days <input type="radio"/> Between 15 to 30 working days <input type="radio"/> After 30 working days
In Ghana, the National Insurance Commission regulations stipulates that within three working days of admittance of liability, a discharge voucher be signed and within five workings of signing the discharge voucher the claim must be paid.
ii. Did you receive the claims within the NIC specified time?
<input type="radio"/> Yes <input type="radio"/> No
iii. If the answer to the question above is no, the approximate time it took after the discharge voucher was signed?
<input type="radio"/> Between 6 and 10 working days <input type="radio"/> Between 11 and 20 working days <input type="radio"/> Between 21 and 30 <input type="radio"/> Greater 30 working days
iv. How many claims has your company made in the past 5 years?
<input type="radio"/> Less than 5 <input type="radio"/> Between 5-10 <input type="radio"/> Between 11-15 <input type="radio"/> Greater than 15

v. Have you read the terms and conditions of the policy thoroughly?
<input type="radio"/> Yes <input type="radio"/> Some of it <input type="radio"/> No
vi. How well do you understand your policy's terms and conditions?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
vii. Amount of premiums paid?
<input type="radio"/> GHC.....
viii. Are there any complaints from your insurer about the adequacy of information and document provided?
<input type="radio"/> Yes, all the time <input type="radio"/> No, but sometimes <input type="radio"/> None at all
ix. How well did you provide all the needed information when a specified incident occurred?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
x. How well you rate the general management of claims by your insurer?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor

C. WORKMENS' COMPENSATION
i. How soon did you report the incidence when it occurred?
<input type="radio"/> Same day <input type="radio"/> Less the five working days <input type="radio"/> Between 6 to 14 working days <input type="radio"/> Between 15 to 30 working days <input type="radio"/> After 30 working days
In Ghana, the National Insurance Commission regulations stipulates that within three working days of admittance of liability, a discharge voucher be signed and within five workings of signing the discharge voucher the claim must be paid.
ii. Did you receive the claims within the NIC specified time?

<ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> No
iii. If the answer to the question above is no, the approximate time it took after the discharge voucher was signed?
<ul style="list-style-type: none"> <input type="radio"/> Between 6 and 10 working days <input type="radio"/> Between 11 and 20 working days <input type="radio"/> Between 21 and 30 <input type="radio"/> Greater 30 working days
iv. How many claims has your company made in the past 5 years?
<ul style="list-style-type: none"> <input type="radio"/> Less than 5 <input type="radio"/> Between 5-10 <input type="radio"/> Between 11-15 <input type="radio"/> Greater than 15
v. Have you read the terms and conditions of the policy thoroughly?
<ul style="list-style-type: none"> <input type="radio"/> Yes <input type="radio"/> Some of it <input type="radio"/> No
vi. How well do you understand your policy's terms and conditions?
<ul style="list-style-type: none"> <input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
vii. Amount of premiums paid?
<ul style="list-style-type: none"> <input type="radio"/> GHC.....
viii. Are there any complaints from your insurer about the adequacy of information and document provided?
<ul style="list-style-type: none"> <input type="radio"/> Yes, all the time <input type="radio"/> No, but sometimes <input type="radio"/> None at all
ix. How well did you provide all the needed information when a specified incident occurred?
<ul style="list-style-type: none"> <input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
x. How well you rate the general management of claims by your insurer?
<ul style="list-style-type: none"> <input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor

D. BOND INSURANCE
i. How soon did you report the incidence when it occurred?
<input type="radio"/> Same day <input type="radio"/> Less the five working days <input type="radio"/> Between 6 to 14 working days <input type="radio"/> Between 15 to 30 working days <input type="radio"/> After 30 working days
In Ghana, the National Insurance Commission regulations stipulates that within three working days of admittance of liability, a discharge voucher be signed and within five workings of signing the discharge voucher the claim must be paid.
ii. Did you receive the claims within the NIC specified time?
<input type="radio"/> Yes <input type="radio"/> No
iii. If the answer to the question above is no, the approximate time it took after the discharge voucher was signed?
<input type="radio"/> Between 6 and 10 working days <input type="radio"/> Between 11 and 20 working days <input type="radio"/> Between 21 and 30 <input type="radio"/> Greater 30 working days
iv. How many claims has your company made in the past 5 years?
<input type="radio"/> Less than 5 <input type="radio"/> Between 5-10 <input type="radio"/> Between 11-15 <input type="radio"/> Greater than 15
v. Have you read your policy's terms and conditions thoroughly?
<input type="radio"/> Yes <input type="radio"/> Some of it <input type="radio"/> No
vi. How well do you understand your policy's terms and conditions?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
vii. Amount of premiums paid?
<input type="radio"/> GHC.....
viii. Are there any complaints from your insurer about the adequacy of information and document provided?
<input type="radio"/> Yes, all the time <input type="radio"/> No, but sometimes <input type="radio"/> None at all

ix. How well did you provide all the needed information when a specified incident occurred?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor
x. How well you rate the general management of claims by your insurer?
<input type="radio"/> Excellent <input type="radio"/> Very Good <input type="radio"/> Good <input type="radio"/> Poor <input type="radio"/> Very Poor

Challenges

In your view, what are the challenges associated with claims settlement by your insurer?

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