

## **Investigation of Pareto's Rule On Wealth Distribution to Modulate the Condition Consigned to 'Trivial Many' Through Contemporary Commercial Pursuits. A Case of Accra-Tema Metropolis, Ghana**

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**ABSTRACT:** *Wilfredo Pareto was an Italian sociologist, economist and a philosopher who propounded the theory for wealth distribution in the latter part of the 19<sup>th</sup> century; the theory was postulated by Juran in 1937 and popularized by Nugent in the 1st decade of the 21<sup>st</sup> century, on 'vital few and trivial many'. Wilfredo Pareto held the view that wealth was unevenly distributed and that approximately 20% of the global population had 80% of the wealth, whilst 80% of the populace had only 20% of the wealth. This theory has survived many generations and is still given the prominence to the extent that most people, including entrepreneurs, have accepted the theory and live under its shadows. However, the researcher has carried out this study to give a ray of hope to the marginalized 'trivial many' in society, including entrepreneurs; that the '80/20' rule by Wilfredo Pareto should not be a command to constrict people to their predicament, especially with the advent of technology. Rather, they should extricate themselves from this unfavourable position and be empowered to keep proper records of their businesses which should be supported with the best performance/management to enhance their economic status within the market they operate.*

**KEYWORDS:** Pareto rule, wealth distribution, vital few, trivial many, population, entrepreneurs and start-ups.

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### **INTRODUCTION**

Vilfredo Pareto was an Italian sociologist, economist and a philosopher who developed theories for wealth distribution and analysis of choices of individuals (Nugent, 2003). The work of Nugent (2003) on 'vital few and trivial many' led to the popularization of the Pareto's rule. According to Vilfredo Pareto, wealth was unevenly distributed, and that approximately 20% of the population had 80% of the wealth, whilst 80% of the population had only 20% of the wealth (Nugent, 2003; Velkoska, Tomov, & Kuzinovski, 2018).

Rothkopf (2011) corroborated the view of Nugent (2003) that, there was an increasing concentration of power at the top, and the few top organisations control the fate of the larger proportion of the global population; for example, pricing of essential commodities, like gold, cocoa and oil is always dominated by the top few global organisations. Consequently, it can be stated that greater number of organisations achieve insignificant success, whilst only a few get tremendous benefits from the activities they perform, globally.

Vilfredo Pareto's rule was about the approximation that 20% of the global population had 80% of the wealth, whilst 80% of the population had 20% of the wealth, which is simply given as the '80/20' rule. This rule highlights how larger percentage (trivial many) of occurrences achieves little, whilst the smaller percentage (vital few) achieves much (Evans, 2023; Laoyan, 2022).

Evans (2023) highlighted the above by indicating that for many events, roughly 80% of effects come from 20% of the causes that we encounter and that the rule can be applied to a variety of situations, including business, education, economics and quality control. Evans (2023) added that Vilfredo Pareto's rule is always touted as a powerful tool for productivity and business transactions, however, it has also been criticised for likely a statistical manipulation than a 'universal law'.

Taking a cue from Evans (2023) proposition that Wilfredo Pareto's rule might be a statistical manipulation has challenged the researcher to investigate the rule within the business environment, globally. Thus, the study focused on the effect of the '80/20' ratio given by Pareto's through the work of Nugent (2003) on 'trivial many' and 'vital few', by subjecting the rule to further analysis/investigation to ameliorate the effect on the 'trivial many' through the exploration of commercial businesses, globally.

The researcher thinks there is the need to investigate Wilfredo Pareto's '80/20' rule, which is detrimental to majority of people(s) in most spheres of activity, example, business, education, economics and quality control (Evans, 2023). It is therefore, the intention of the researcher to study and unravel what the 80%, 'trivial many', business wo/men could do to ameliorate the 20% achievement (only) ascribed to them; on the other hand a whopping 80% of global wealth achievement has been ascribed to 20%, 'vital few' (Velkoska et al., 2018). Hence, the importance of this study by the researcher to investigate the rule and help to ameliorate the hardship on the 'trivial many' affected by this rule.

### **Background and Statement of the Problem**

Wilfredo Pareto's rule underscores the point that the larger percentage of the global population is not doing much to attain what is due them and therefore achieves little, as compared to the smaller population who is doing so much and therefore, wields much power/resources to be able to achieve much. Juxtaposing the Wilfredo Pareto's rule to the contemporary business environment implies that most global businesses, 'trivial many', are doing little by way of reaching out to consumers/customers with their products and therefore, control little of the

global wealth, whilst very few businesses, 'vital few' are carrying out their businesses very well to reach out to the majority of the global population.

Pareto's rule highlights how 'trivial many' of occurrences achieves little, whilst the 'vital few' achieves much, the '80/20' rule. Subjecting Pareto's rule of '80/20' to the global industrial environment may support the fact that, 80 percent of industrial systems are likely to fail at the inception phase, whilst only 20% are likely to become successful (Nugent, 2003), as envisaged by Wilfredo Pareto. Furthermore, comparing the application of this rule to the global business environment could suggest that approximately 80% of start-ups are likely to collapse, with only 20% surviving the harsh global economic conditions [sustaining the rule propounded by Wilfredo Pareto and popularized by Nugent (2003)]. Consequently, investors and venture capitalists are always sceptical when investing in start-ups as announced by Mazzarol and Roboud (2019) and therefore, make sure that they are represented on management boards of their investments.

The researcher holds a different view to the above proposition by Wilfredo Pareto and thinks that Pareto's rule might likely hold during the advent/period before the arrival of technology; technology might include the world wide web (www), mobile apps and browsers which have brought numerous good things like electronic commerce, email, social media and easy access to vast stores of reference material for carrying out any activity (Laudon & Traver, 2022). In these contemporary times and the arrival of technology, www, internet and internet of things (IoT) – (Laudon & Traver, 2022), there is the likelihood that Wilfredo Pareto's rule would not be valid and therefore the '80/20' rule might not hold and be applicable anymore (Evans, 2023). It is, therefore after the invention of these new technologies, that the researcher would like to explore the current happenings and investigate the business environment to know how the effect on global 'trivial many' could be ameliorated. The researcher believes that, through this study, the harm inflicted by the Wilfredo Pareto's rule of '80/20' propounded in the latter part of 19<sup>th</sup> century (Laoyan, 2022) would be doused.

However, to make the study meaningful to be undertaken and to achieve its objectives, the researcher has constrained the study to the Ghanaian business environment, precisely the Accra-Tema metropolis, which is a bustling and hot business centre in Ghana. It is the intention of the researcher to make the research successful, so he has limited the study to the commercial pursuits within the Accra-Tema metropolis of Ghana, as the study would be difficult to complete, if a much bigger/larger area is used as a sample.

### **Objectives of the Study**

The main task of the research study is to explore the business environment through investigating Wilfredo Pareto's Rule on wealth distribution and the modulation of its effect on the 'trivial many' (approximately 80% of the population had only 20% of the global wealth) through contemporary commercial pursuits. The study would be centred on start-ups/businesses in the Accra-Tema metropolis and the specific objectives are to:

- i. determine the causes of failure of Ghanaian businesses at the start-up phase;
- ii. examine the customer data collection types of Ghanaian businesses; and
- iii. ascertain the impact of MIS on corporate sustainability/success.

### **Research Questions**

The research questions that would help collect good data from respondents to achieve the objectives are:

- i. What are the causes of failure of Ghanaian businesses at the start-up phase?
- ii. What types of customer data are collected by Ghanaian businesses? and
- iii. Is there a relationship between MIS and corporate sustainability/success?

### **Significance of the Study**

Most businesses are not able to endure the hardships encountered in carrying out their activities/services as required of a business entity and, as such, are not able to survive after enlisting into the market to operate. This normally happens when the business is confronted with an avalanche and spells of challenges within the market of operation. There is always a strong competition as stipulated by Michael Porter's five (5) marketing forces model - the competition among supplier power, buyer power, barriers to entry, threat of substitutes, and degree / intensity of rivalry – which determines the appropriate activities an organization must engage in, to contribute to its performance within the industry (Daft, 2003; De Wit & Meyer, 2004; Kotler, 2003; Mazzarol & Roboud, 2019).

Furthermore, Mazzarol and Roboud (2019) mentioned two (2) additional forces that mitigate against start-ups as, regulation authorities and complementors; regulation authority is a government agency responsible for exercising responsibility over some activity and complementors are horizontal firms that benefit from each other (eg. Intel & Microsoft). The activities the organization would like to compete, as mentioned above, might in turn have emerged from the set of decisions and actions used by the management/owners to formulate and implement strategies that will provide a competitively superior fit between the company and its environment so as to achieve its goals – the strategic management of the company (Daft, 2003).

With the pressure of these forces hammering on the activities of the new business, the survival of that business becomes gloomy and it is only persistence, perseverance and strong-willed managers of businesses that can survive the market. However, these businesses are needed to supply the products/services required by consumers and they should be in existence to meet the demands from consumers, otherwise the 'vital few' businesses would continue to dictate, dominate and have the chunk of the global wealth. These problems that are encountered by the majority of businesses, 'trivial many', mostly go a long way to collapse these businesses thereby making entrepreneurs poorer and the researcher has undertaken this research to investigate the '80/20' rule. Hopefully, the research would help the 'trivial many' of businesses to ameliorate their survival rate, modulate the '80/20' rule and make most sustainable/successful, in the global business environment. Hence, the importance of this study.

### **Scope of the study**

The research encompassed exploration of the business environment and specifically, the investigation of Wilfredo Pareto's rule on wealth distribution and how to ameliorate the effect on the 'trivial many' of businesses that are not able to sustain/succeed. The study would be limited to commercial pursuits, start-ups, within the Accra-Tema Metropolis, Ghana, as a larger area than the proposed sample would be difficult to complete. There are 16 regions in Ghana and the researcher used the Greater Accra region; specifically, the Accra-Tema metropolis of the Greater Accra region was used for the study. Therefore, the findings were restricted to the views expressed by the respondents within the Accra-Tema metropolitan area, Ghana.

### **LITERATURE REVIEW**

The review was based on activities within the global business environment and how the different kinds of enterprises, including start-ups, do carry out their activities to survive the market and become successful. There are different types of entrepreneurships within the environment which would be explored and further examined about how they carry out their business functions.

#### **Commercial pursuits, including Start-ups**

Commercial pursuits are businesses carried out globally by people with the objective of making profit and to expand/manage their conglomerate. These businesses are important to enable the owners to 'survive' and at the same time help consumers get access to products/services they need. Santoro (2012) described start-up as a newly setup business or organisation, embarked on as a venture and which the work of an entrepreneur is always associated with. Start-ups are mostly ventured into by entrepreneurs, and entrepreneurship therefore, becomes one of the important theoretical frameworks to be considered when one thinks of what is involved in start-ups.

Start-ups are essential ventures embarked on by entrepreneurs with the objective to sustain, expand and populate the business in many other locations. They therefore, need every effort, including motivation, encouragement and good performance during their formative years so as to grow and be sustainable. Unfortunately, not many studies have been carried out by researchers on the sustenance of these businesses embarked on by entrepreneurs; this has unfortunately led to a greater percentage always collapsing within the early (few) years of establishment, due to the numerous problems/hardships they encounter. However, Eisenmann (2021) insinuated that start-ups might normally fail due to several reasons; he mentioned reasons, such as, false hopes by entrepreneurs, employees not giving their best, strategic partners not forth coming to help the new entrepreneurs and investors, including venture capitalists, not willing to deal with new entrepreneurs. There may be several other reasons which might contribute to this failure, which researchers are yet to find out; the problems encountered by entrepreneurs are mind boggling and there is the need to discover and understand why these problems.



### **Who and what of an entrepreneur**

Santoro (2012) and Sobel (2012) explained that entrepreneurs are people who carry out the process of discovering new ways of joining resources to undertake inventions, especially with business discernment, intelligence and expertise, in an effort to transform the inventions into economic ventures. According to Hornby (2020), entrepreneurs are people who carry out the act of creating money by running businesses and taking financial risks with the hope of fruitfully operating their businesses.

Again, an entrepreneur is one who undertakes to discover ingenuities/originalities by organizing, managing, controlling and assuming the risks of a business or enterprise to magnificently manage it with a specialized mix of innovation, drive and business acumen. Entrepreneurs are people who start their own business based on an idea they have and the products/services they would create, while assuming risks and reaping rewards from their ideas. Furthermore, they see the potential and hazards in ideas, understand the product/service to churn out and the business ambience well enough to make smart decisions realistically (Kuratko, 2016; Tidd & Bessant, 2018). Apparently, in undertaking innovations, the entrepreneur is also expected to relate to creating a new business, commonly referred to as start-up. Entrepreneurship, is therefore, the act of being an entrepreneur.

According to Shobhit (2022), an entrepreneur is an individual who initiates and runs a type of business with limited resources through prudent planning; s/he is responsible for the risks and rewards that accrue from the business venture. His/her business intention is usually to generate high returns of products/services from the venture, spending time as well as arranging for the needed capital, getting raw materials, employing skilled employees and with equally high level of uncertainty (Shobhit, 2022).

Globally, entrepreneurs have always been rolling out new businesses, but sustaining these enterprises has always been the biggest problem of entrepreneurship. It is no wonder that only a minute number of businesses survive the first few years of existence, and as such, making the attrition rate of new businesses notoriously high, as trumpeted by White (2004). This should not be the case at all, as these businesses are needed to supply the products/services desirable for consumers.

### **Types of entrepreneurs**

There are many different types of entrepreneurs, however the basic and the four (4) most popular ones would be discussed here. These are:

- a. small business,**
- b. scalable startups,**
- c. large companies, and**
- d. social entrepreneurs.**

**a. Small business** – a small business entrepreneur normally deals with known and established products/services and tends to transact business with known risks. They usually have limited

growth, continued profitability and remained confined to their domain/group of business (Shobhit, 2022). People who do this type of business have a personal desire to create new opportunities and pursue their dreams; the ability of such small businesses to survive the early years probable depend on how the owners are willing to research and understand the prospective markets (Mazzarol, & Reboud, 2020). Entrepreneurs included in this type of business are those with small shops (or no shop at all) who spread the products (examples, food items) they market on tables within a confined/constricted area and sell to consumers for household consumption. Such entrepreneurs do not think of enlarging their businesses but are confident and content of their business being in operation always.

Majority of entrepreneurs go for small business and they are most likely into entrepreneurship for profit that would support the family and lead an unpretentious lifestyle (Indeed.com, 2023). These entrepreneurs are into business seeking not large-scale profit nor looking for investors. These are businesses owned by the entrepreneurs and run and managed by themselves. People who work in such businesses are normally local people and have relationships amongst themselves. Such businesses include local grocery stores, hairdressing salons, small boutiques and plumbing works (Indeed.com, 2023).

**b. scalable startups** – this is a business model where the entrepreneurship is started with a unique idea and fuelled by a vision which may potentially impact globally. The goal of the entrepreneur is normally to find a recurrence and scalable business to attract investors for funding the growth of the business (Thelittletext.com, 2023). This kind of entrepreneurs believe that they can change the business landscape globally and receive funding from investors and are encouraged to look for specialist skills to enable them managed their businesses very well (Indeed.com, 2023). The entrepreneurs in this group contemplate on areas that are missing within a system/environment but would create solution to global problems; most of them start in silicon-valley and are technology focused with expansion and big returns of profits. Examples are, Facebook, Instagram, Twitter and Uber (Indeed.com, 2023).

**c. large companies** – entrepreneurs in this group are normally advanced/experienced professionals who know how to sustain/nurture innovations and they set up businesses with a predetermined amount of life cycles (Indeed.com, 2023). Again, these entrepreneurs are high-ranking executives in charge of departments within organizations and may include Chief Executive Officer (CEO) or Chief Finance Officer (CFO). Furthermore, the entrepreneurs create products/services based on the need of consumers and to meet the market demand (Indeed.com, 2023). Examples of organizations fashioned out by these entrepreneurs are Google, Microsoft, Apple and Amazon.

According to Needle (2021), large business entrepreneurship/conglomerate is the opposite of small business entrepreneurship, and they are larger businesses with lifecycle of dependable innovations by creating products/services to meet the budding needs and demands of consumers. Furthermore, these businesses are already in existence and could grow from smaller companies; the entrepreneurs involved in this type of business are experienced and with access to investment, resources and capital to grow their businesses to meet the needs of prevailing

target markets (Needle, 2021). 101entrepreneurship.org (2019) mentioned some advantages peculiar to the large business enterprise, which include:

i. Availability of resources – the bane of majority of start-ups is investment or capital, as over 90% of them fail in the first few years of operation. Nevertheless, the large entrepreneurs have availability of large resources of investment and capital making the attrition rate of large entrepreneurs very low.

ii. Brand name – there is no doubt that brand recognition plays a major role in the success of any business and in the case of large companies their products/services are backed by a strong acknowledgement of brand, which is a great advantage for the entrepreneurs. Unfortunately, start-ups need hard work that would take many years to make them successful, and it is sad to mention that not all of them put in the needed hard work in their business.

iii. Better team – the large organizations normally have strong backup of professional entrepreneurs for business development, including marketing, sales and account teams, to guide and spearhead the business to success. There is no doubt that such an organization would succeed.

iv. Growth – there is the probability of the large organization having a stream of innovation on products/services to ensure constant flow/supply to customers/consumers. This would surely lead to growth of the business.

v. Innovation – the lifeblood of every successful business is innovation, as without it no firm will survive and be sustainable. However, the larger organizations have the structure, culture and set up with responsible professionals to churn out innovations of products/services. Technologies, including AI, machine learning and fuzzy logic are employed to maximise the inventive capabilities of professionals to churn out innovations that are beneficial to the organization and consumed by customers/consumers.

vi. Employee morale – with such assemblage of knowledgeable professional and associated opportunities, the sharing of technical skills and ideas enable co-operation within the larger organization; this leads to the efficient handling of activities and tasks with vigour and challenges/difficulties handled tactfully for maximum contribution and good work ethics of the employees within the organization.

vii. Competitive advantage – the greatest and most important assets of every organization should be profitability, sustainability and competitive advantage (being able to reach out to more customers/consumers than competitors). With an appropriate competitive strategy adopted and supported by good vision and mission disseminated to the employees, the achievement of competitive advantage of the enterprise is assured (De Wit & Meyer, 2004; Kotler, 2003; Mazzarol & Roboud, 2019).

viii. Recruitment and retention of employees – when good/talented professionals are recruited and retained, employees are able to implement entrepreneurial mind, ideas and opportunities in favour of the business, which leads to a greater level of satisfaction and forming a positive cycle within the organization (101entrepreneurship.org, 2019).

As there are always disadvantages whenever advantages are mentioned, the threatening or most dangerous disadvantage that would destroy such an enterprise is – fear of failure. The employees of the organization must not give room to fear of implementation of new ideas for the first time, as there is likelihood of some being positive or negative. This is human nature



and management therefore, should take bold steps and create an environment of sensitizing the employees about tolerating risks and develop the skills of taking new opportunity to learn how to innovate (101entrepreneurship.org, 2019).

**d. social entrepreneurs** – these are entrepreneurs whose predisposition is to solve social problems with their products/services and make the globe a better place to live; their intention is not to make huge profits or wealth, but to start nonprofits companies or dedicate themselves to the global social good (Indeed, 2023). According to Needle (2021), the overarching goal of a social entrepreneur is to address a social need, but not to generate profits for his/her business; s/he sets up the business to address social problems with the products/services churned out from the entrepreneurship and genuinely impact and enhance the livelihood of the citizenry, such as environmental, cultural and economic matters.

The ensuing business by the social entrepreneur could be for profit (not huge), non-profit or amalgamated, but funds are acquired purposely to support operations (eg. authentic peer-review journals, which publish articles of researchers virtually for free), and any extra capital generated or revenue accrued is re-distributed into community development. The entrepreneurship could be small, scalable or large business, which may grow and operate from different parts of the globe (Needle, 2021).

Unequivocally, the social entrepreneurship is unique from the other ventures, as the end products do not follow the traditional business structure (Needle, 2021). A good illustration is the mutual-aid funds, where a voluntary reciprocal exchange of resources and services are community-organized for the benefit of all. Social entrepreneurs exist to meet a social need and run/managed by volunteers without a hierarchical structure (Needle, 2021).

During the Covid-19 pandemic, many social entrepreneurs were set up in many countries to support essential workers. In Ghana, for example, the government in power teamed up with organizations and mobilised buses to convey workers from their homes to work sites and back free-of-charge to support essential workers like nurses, city/town cleaners and garbage collectors. The government recognized a need and joined up with organizations in the nation to craft an entrepreneurial venture dedicated to support the local communities' essential workers. This was very laudable and eased a lot of problems within the cities of Ghana.

Ansary (2023) mentioned that a social entrepreneur runs/manages his/her enterprise in accordance with a rigorous code of ethics and utilizes the expertise at his/her disposal to address social, environmental or economic issues. According to Ansary (2023), there are four (4) most common categories of social entrepreneurs. These are:

- i. Community,
- ii. Non-profit,
- iii. Transformative, and
- iv. Global (Ansary, 2023).

- i. Community – the community social entrepreneur creates a common initiative to serve the needs of a community and normally within a relatively narrow geographical area. The inventiveness/initiatives involve the active participation of people living in the community, even if the decision-making process is slow due to the number of beneficiaries involved. However, the initiative is very durable and involved all the community members.
- ii. Non-profit – this group of entrepreneurs are dedicated to social resources and whatever gains accrued are re-invested in the business. Over here, social goals are the norm and therefore, more important than profits. The social goals may be achieved alright, but the motivation of generating those funds might not be consistent.
- iii. Transformative – the task of this category is to expand the construction of businesses to meet the social needs which the government has not been able to adequately achieve; such businesses need to have the expertise and ability of a larger team administration. The benefits of a transformative social entrepreneurship is being able to recruit volunteers easily, but challenging to comply with rules, guidelines and regulations.
- iv. Global – the occupation of global social entrepreneurship encompasses the full transformation of social systems to meet the needs of the society and subsequently, change the composition of the global society. Global social entrepreneurs are privileged to go international and moreover, able to create tested and strong enterprises, which benefit the down-trodden on social needs. However, if the global social entrepreneurship fails to reach out and win the support needed to carry out its tasks, the efforts put into the total transformation of the society becomes useless/vain (Ansary, 2023).

### **Disincentives of entrepreneurs**

Most entrepreneurs who ventured into start-ups have become financially paralyzed due to problems of failure of their businesses (Hasan, 2021). Together with the financial unresponsiveness is where entrepreneurs go through tedious processes to contract loans from investors, venture capitalists and banks, which may become difficult to pay, after mortgaging their properties to securing the loans (Hasan, 2021).

This usually leads to most entrepreneurs losing their valuable un/movable possessions, and in addition, culminating in the collapse of their business. Entrepreneurs really go through hardships to be able to secure loans for their business (Hasan, 2021). It should be noted that the few who are fortunate to secure loans for their businesses, are made to mortgage their valuable properties as security for the loans. Furthermore, the investors, venture capitalists and banks put in place rigid rules to hound for their loans, and moreover, make sure they are represented on the corporate boards that manage their investments (Sahlman, 2008).

### **Commercial Banks and dispensing of loans**

Banks charge outrageous interests on loans contracted by entrepreneurs, making businesses reluctant to go to them. According to White (2004), the global attrition rate of start-ups is notoriously high. The USA which happens to be the bastion of entrepreneurship has a large number of new enterprises failing each year, over 50,000, and with even large enterprises seldom lasting one / two generations as success of business becomes temporal, if not meticulously nurtured (White, 2004).

It is no wonder few entrepreneurs could achieve their entrepreneurial ideas, especially those who are fortunate to secure / raise investments, and are able to successfully repay these loans, which are always associated with huge interest rates. Hence, only few entrepreneurs survive this investment-ordeal, as most start-ups grind-down after few years of starting their businesses (Sahlman, 2008; White, 2004). The statistics above really go a long way to confirm Pareto's rule, 80% of businesses (trivial many) command only 20% of clientele, whilst 20% of businesses (vital few) command a huge 80% of clientele (Velkoska et al., 2018).

### **Management Information System - a dynamic factor for recording events**

Information is processed data, which is meaningful to the user, whilst data is any raw material, fact or figure. System is described as component parts that come together to achieve a common goal/objective. According to Nowduri (2011), Management Information System (MIS) is defined as the study of people, technology and the organisation as an entity, and the relationships amongst them to ensure the overall efficiency of the system. Through these relationships, MIS could provide a vital information which as a resource could help management to efficiently plan, organize, direct, control (Dessler, 2004) and govern (OECD, 2015) organizations during the start-up phase and beyond.

Nowduri (2011) hinted that MIS could be described as people-oriented, since it is through **people** who use the facility for the activities of businesses, but with emphasis on service through technology, to provide the needed results. Though Nowduri (2011) described MIS as people-centered, inappropriately and regrettably, the **people** are limited to only those working in the organization. It is important to include all that matter for the organization to function properly to successfully achieve its goals; these include employees, customers/consumers and stakeholders within the business environment, who could be counted as revered stakeholders (OECD, 2015) for a successful business environment. Customers patronize the products and services of the organisation, and as such are very important stakeholders within the organization to be considered/mentioned whenever evaluating the business environment.

Hence, when the information on their purchasing records is monitored, this would contribute to the improvement and subsequently, growth of the organization. To support a business to function properly and report on its activities accurately, there is the need for the **people** of the organization to use information systems at the various levels of operation to collect, control, organize, manage and store the processed data produced within the system efficiently. Consequentially, the processed data will generate the needed information for effective decision making by management of the organization.

The information generated from the information system has variously been called different names, such as resource, output, report and database; however, data that is processed for use by management to make meaningful, effective and timely decisions is called information. Information is vital for the effective management of organization. Businesses become seriously disparaged when they do not have the information needed to help define, describe, transfer and report on the operations performed within the setup. In this contemporary technological and global age, competition among organisations is keener and more pronounced for competitive

advantage (De Wit & Meyer, 2004; Mazzarol & Roboud, 2019), so lack of information for effective decision-making by management is detrimental to the organization.

An enterprise that allows its business to be crippled due to lack of information for accurate reporting on activities performed is doomed to collapse and therefore, will be wiped out entirely. There is the likelihood that lack of accurate reporting on organizational performance has been one of the causes that has led to countless number of businesses, including start-ups, dying-off early. The business might have been able to survive the start-up phase and, even to the next level (and even higher) to enable clientele to benefit from the needed products and services from the enterprise.

The information management within the organization for efficient/effective monitoring and management of the organization could become important for monitoring the performance of the business, as it might have tremendous effect on organizations becoming sustainable, particularly start-ups.

### **Management Information Systems - a resource for start-ups**

Start-ups and businesses in general need databases to monitor their activities and performance, as they are generally helpful for the management of organizations; databases contribute to better organising, controlling and managing of specialized managerial tasks, and in addition taking efficient decisions by an organization (Kwadade-Cudjoe, 2015). A Database is designed to offer an organized mechanism for creating, managing, storing, and retrieving information. This is possible using Tables, consisting of Rows and Columns (Kwadade-Cudjoe, 2015). Databases may be developed for general use (which is normally purchased *off-the-shelf*, that is, at the counter), in-house or by a contractor for a specific functional task, (where the software could be termed as *tailor-made*) - (Kwadade-Cudjoe, 2015).

Business Process Re-engineering (BPR) is a business management strategy, where specialized databases are recommended for achieving dramatic improvements in critical and contemporary measures of performance, such as cost, quality, service and speed to maximize value-added content of a business. This management strategy when adopted by entrepreneurs, enhances the performance of start-ups/businesses to achieve competitive advantage (White, 2004).

Databases are important for efficient management decision making activities of organizations and could enable entrepreneurs to efficiently plan, direct, control and govern operational performances and growth of their enterprise (Dessler, 2004; OECD, 2015).

There are three main approaches for designing databases – Hierarchical, Network and Relational Database Management System (RDBMS) - but the latter gives the best relationship among the data elements for example, one-to-one and one-to-many relationships, which is a pre-requisite for database development (Kwadade-Cudjoe, 2015). This makes RDBMS the most recommended approach for developing Databases.

MIS is acquired from Databases with the use of Technology. Technology, according to Hornby (2020), is a machine programmed with scientific knowledge and used practically to design application systems to solve problems in industry. MIS is the medium through which technology (eg. computer system) can be used to solve organizational problems. According to Gaines, Hoover, Foxx, Matuszek & Morrison (2012), MIS that is properly designed and implemented for use within an organization has become an even more valuable and useful strategic resource for achieving competitive advantage.

### **State of the global environment**

The environment is the medium that accommodates humans, animals, plants, businesses and organizations which entrepreneurs manage for survival, so it is very important to keep the environment clean and properly maintained to offer its services. This environment is very large and consists of both the internal and external parts. Similarly, the society/humans within the environment should be humane, cordial and co-operative to enable business/organization flourish. Hornby (2020) described the environment as the natural world which provides habitation for human beings, animals and plants and the surroundings in which animate objects survive. It is this natural world which provides people the opportunity to put their imaginations/ideas together to create businesses, and therefore, earn their living.

Globally, the environment is everything surrounding us; there are the living/biotic factors, such as climate, soil and living organisms and non-living/abiotic things, such as chemical and other natural forces. The biological environment encompasses all living and non-living things occurring naturally (Daly, 2008). Environmental sustainability has been the concern of all governments, due to the rampant deterioration of the earth, through fires and floods ravaging most countries, eg. Northern California in the USA, India, etc., not excluding Africa, which has had its fair share of the destruction (CNN, 2019; BBC, 2019). Additionally, fires in Australia, which started in the latter part 2019 through to January 2020, caused enormous havoc to, example, human and animal lives, plants and buildings (Chiwaya, Wu, & Muccari cited in Cales, 2020). Furthermore, land and properties, including human lives, have been destroyed in wildfires in Hawaii (Mirror Online, 2023; Peacefmonline.com, 2023). See appendices 1 and 2 for the illustration of havoc caused by wildfires to the environment, including properties, in Hawaii in 2023.

According to Chiwaya, Wu, & Muccari cited in Cales (2020), these fires, started mostly by drought and extreme heat in Australia killed over 24 people and destroyed more than 1,000 homes. Similarly, the flames of the wildfires in Hawaii were fanned from the strong winds from a distant hurricane (Peacefmonline.com, 2023) and officials have confirmed that as at August 13, 2023 about 93 people have died through the wildfires in Maui, Hawaii (Mirror Online, 2023).

In Ghana, destruction of the environment is not caused by wildfires/bushfires, but the devastation of the water resources of the nation. Galamsey (translated as 'gather them and sell'), a local term/parlance coined for illegal small-scale gold/bauxite mining in Ghana, is causing a great damage to the water resources of the Ghanaian community and thereby



destroying the environment; most of the rivers in the country are therefore, being destroyed and the colour of them has turned turbid (Bimpeh, 2017). See appendix 3 for an illustration of the mayhem caused to the water resource in Ghana.

### **Sustaining the environment - survival of animate objects**

The ecological (green) issues of the environment and social responsibility of the inhabitants, especially, corporate organizations' assistance to the ecosystem through eradication of pollution and cleanliness of the environment are not adequate for sustenance; in addition, fresh water contamination, carbon footprint, climate change impacts, extreme weather events and ethical considerations of the people living within the environment under consideration in terms of moral laws contribute to the destruction of the environment (Kenton, 2022; Peterdy, 2022). The environment is normally wrecked through, for examples, fires ignited through inappropriate actions, cutting down of trees and not re-planting with new seedlings, and mining for minerals and not re-claiming the soil fertility. Consequently, the economic activity of the land is gravely affected. Most businesses and organisations of entrepreneurs are daily being destroyed through fires, floods and other natural disasters, due to lack of effective maintenance of the environment by humans living on the land and governments. Daly (2008), one of the pioneers of ecological sustainability explained 'environmental sustainability' from the maintenance of natural capital perspective as:

- a. Renewable resources – the rate of harvest should not exceed the rate of regeneration (sustainable yield);
- b. Pollution – the rate of waste generation from projects should not exceed the assimilative capacity of the environment (sustainable waste disposal); and
- c. Non-renewable resources – the depletion of the non-renewable resources should require comparable development of renewable substitutes for that resource (Daly, 2008).

The sustainability of the environment is surely related to the success of economic activities performed within the environment. Climate change, floods, fires and other natural disasters have great impact on global businesses; when the impact is negative this leads to collapse of most businesses.

### **METHODOLOGY**

The research encompassed exploration of the business environment and specifically, the investigation of Wilfredo Pareto's rule on wealth distribution and how to ameliorate the impact on 'trivial many' of businesses that are not able to sustain/succeed. Survey design approach was employed where data was collected from businesses, including start-ups within the Accra-Tema Metropolis, Ghana, for the sample; a larger area than the proposed sample would have made the study weird, overwhelmed the researcher and made the study difficult to complete. The study adopted the qualitative research approach, which was the best since it gave the researcher the ability to collect enough primary data from respondents which was converted into variable summations, frequencies, averages and ranges (Bryman & Bell, 2015). The target population for the study was businesses/organizations, including start-ups, in the 16 regions of Ghana, which consisted of many cities/towns within each region; Ghanaians are mostly

business-minded people, as their main business prerogative is trading, where most of them engage in small trading business throughout the year.

A stratified random sampling of convenience was used for the research, which gave information quicker to the Researcher to take appreciation of certain characteristics of the population to enrich the sample.

Questionnaire was used for the data collection method, which provided an effective way of collecting timeous response from the respondents. This instrument was developed, put into google-form, piloted and tested to verify that the questions were clear and not ambiguous, such that the respondents would be enthused and consistent with the purpose of the study. Questions were reviewed where necessary, based on response from the respondents, during the pilot study. This was done to improve the reliability, vitality and validity of the questionnaire.

Secondary data collected from other markets/businesses in the other regions of Ghana and globally were merged with the primary data collected from the questionnaire, where possible. This was coded for easy access, keyed into the computer system, qualitatively analyzed and presented in statistical Tables. Findings were arranged in logical and sequential formats, which led to conclusions to be drawn from the analyses. Respondents were advised that their participation was confidential and voluntary, and assured of a copy of the results from the study, based on request.

## **ANALYSES AND DISCUSSIONS OF RESULTS**

This section deals with the data/findings gathered from respondents through the questionnaire survey and which were coded and categorized, and further analyzed for presentation. A total of seventy-five (80) questionnaires were distributed (both physically and use of online Google Forms) to businesses, including start-ups within the Accra-Tema Metropolis, Ghana, of which seventy-two (72) were duly filled and returned; four (4) copies were filled wrongly, while four (4) were not returned. This brought the total questionnaire for the analysis to seventy-two (72), giving a response rate of 90% which was very good, as it fairly represented the views of the entire research population.

### **Demographic Statistics**

The demographic characteristics of the sample included the name and type of organization, type of industry, date of establishment and position of the respondent. These characteristics were found to be indicators of the nature of business and the status of the employee completing the questionnaire, which were vital for the research.

**For the Organization**, the study identifies four types - Government, MNC, Non-Governmental/Profit Organization (NGO) and Private Organisation; prominent organization type in Ghana is the Private (for Profit), and it obtained 74% out of the 72 organisations which responded to the questionnaire of the survey. Most of these Private organizations in Ghana are SMEs, which may have positive impact on the growth of the economy, as Agyeman (2012)

advised the Ghanaian government to set up an entrepreneurial fund to advance the good course of these SMEs. Government (SOEs) was second with 11% and MNCs was third with 8%. See Table 1.

**Most of the Organizations were established** between 2001 - 2010 and are predominantly SMEs with a score of 60%, followed by 1991 - 2000 with 17% and then 1981 – 1990 and 2011 – 2020 tied together with 6%. See Table 2.

**Organizations employing** between 2 – 50 are predominant with a score of 61% from the research, indicating Ghanaians are mostly small industry players, as majority are traders with manageable businesses; the bulk of these businesses are SMEs. This was followed by those employing between 401 – 1,000 employees with 19% and then 101 – 200 with 7%. See Table 3.

**Industry type** is mainly of Service, as it scored the highest value of 33%. This is followed by Procurement/Distribution with a score of 17% and then Financial with a percentage score of 14. This is followed by Regulation/Management with 11%, Other (comprising mainly of telecommunication, media, health, etc) 10% and followed by Manufacturing 9%. See Table 4

**Status of Respondents indicates that** Professional/Technical had 37 percentage-score responding to the questionnaire; followed by management (35); President/CEO (18); and executive management (10). See Table 5.

## DETAILED FINDINGS & ANALYSES OF RESULTS

### Corporate/Business Activity in Ghana

**Market of operation** with the highest percentage-score for the survey is Service (38) - comprising aviation, mobile communication, management consultancy, health, procurement/distribution, and office-secretarial. This is followed by: Equipment/Machines (21); Financial (15); Foods/Beverages (9); Others (8) - including environmental activities, fitness/gymnasium, and construction; Pharmaceuticals (4); Education/Research (3); and Toiletry (1) and Fuel/Chemicals (1). See Table 6.

**Ghanaians Attraction for goods/services** obtained 56 percentage-score from 72 sampled organizations and with Strongly Attraction coming out with 42 percentage-score. Uncertain and Unattractive have 1% each. See Table 7.

**Action taken stems from the previous question of Attraction** of Goods/Services, and therefore, the respondents whose goods/services are not attractive to customers were to complete this portion of the questionnaire. Only one respondent each was Unattractive and Uncertain that their organizations' goods/services are not attractive. They responded that they have evaluated the business goals and re-strategized, respectively, to improve the attractiveness of their products to consumers. See Table 8.

**Responsiveness of Consumers** to goods/services scored of 64% and Strongly Responsive had 33%; therefore, there is hope for the Ghanaian economy to rise if the manufacturing industry will be re-energized to add value to products from the factories. Ghanaians currently import a lot of goods from foreign nations; this is very bad for the economy. See Table 9.

**Action taken stems from the previous question of Responsiveness** of Consumers to purchasing goods/services. One respondent each for Re-strategize and Re-train of staff based on the previous question of Responsiveness of Consumers to purchasing goods/services, responded to this question. This implies that in percentage terms only four percent of respondents acted based on the previous question. See Table 10.

**On the question of information kept on customers/consumers**, this is the order of the respondents in percentage: Products purchased (40); Residential (13); Historical (13); Personality/Behavioural (11); Attitudinal/Manner (9); Empirical/Observation (6); None (3); and Other (3) which includes complaints. See Table 11.

**Follow-up on customers after purchase** (with their percentage-scores) are in the order of: Phone (41); Visits (24); Email (22); Social-Media (8); None (4) and Other (1). See Table 12.

**Initial problems encountered by entrepreneurs** was one of the most important data gathered from the questionnaire survey. The results in percentage order are: Financial (42); Labour (16); Other (13) for example, land acquisition; Socio-Cultural (8); Technological (5); None (5); Legal (5); Environmental (4) and Political (2). See Table 13.

**Period initial problems were encountered** with their corresponding percentage-scores are: 0<sup>+</sup> - 2 years (44); 2<sup>+</sup> - 4 years (20); Above 6 years (18); None (17); and 4<sup>+</sup> - 6 years (1). See Table 14.

**Data on success of company accomplishing goals/objectives** received from respondents are fascinating, with percentage-scores of: Successful (72); Strongly Successful (18); Uncertain (7); Unsuccessful (3). This is praiseworthy for entrepreneurship in Ghana as a success response-rate of 90 percent (successful-72 + strongly successful-18) shows that Ghanaian entrepreneurs are poised to getting the most benefit from their enterprises. See Table 15.

### **MIS and Corporate Performance/Growth**

**The various responses** on description of MIS and their corresponding percentage-scores are: Organization, People & Technology working together (89); Technology delivering results (7); People working hard (3) and Managing Organization well (1). See Table 16.

**For the use of MIS for monitoring organizational performance**, respondents obtained high percentage-scores of 46 and 43 in favour of Applicability and Very Applicability respectively for MIS for monitoring corporate performance and growth of organizations. Other percentage-scores are: Uncertain (7); Very Inapplicability (3); and Inapplicability (1). See Table 17. There

is surely hope that MIS use by entrepreneurs could change the dynamics of 80% ‘trivial many’ commanding only 20% global wealth.

### **Organizational MIS and CPM**

**The description of corporate performance management (CPM)** returned the following percent-scores from the respondents: Overall company performance for achieving goals (91); Business Performance (7); Divisional performance (1) and Departmental performance (1). See Table 18.

**Regarding the relationship in using MIS and CPM**, the responses to the questionnaire returned the various answers: Similar (75), Very Similar (14), Uncertain (7) and Dissimilar (4). This is important to the research as it indicates the similarities in using organizational MIS and CPM in solving business or organizational problems confronting entrepreneurs. See Table 19.

**Concerning the organizational functional areas MIS could be used**, the responses received with their percentage-scores are as follows: Accounting (23); Corporate Management (21); Administration (21); Procurement / Distribution (16); Technical/Stores (9); Production/Manufacturing (7); and Other (3) for example, Not Applicable. As reported from the responses above, MIS is strongly in use within the organization. However, the benefits of using the software to position the organization competitively over others might not have been given a thought by entrepreneurs. See Table 20.

Finally, for any additional information given by Respondents, few of the answers are:

MIS is critical to organizational success,

MIS is useful for monitoring all company’s operations, and

MIS should be applied to all levels within the organizational structures.

### **DISCUSSION OF RESULTS**

The results listed above are evident of the fact that majority of Ghanaians are in the Service industry who mostly are small business entrepreneurs and deal in trading of goods/services to consumers. There is the need for setting-up of more manufacturing industries in Ghana to boost the production of consumable products in the nation, which should be encouraged to give employment to the youth; Manufacturing industry scored only 9%, indicating most of the products sold in Ghana are imported whilst the Service(s) industry, mostly SMEs, who market these products scored 33%. See Table 4.

Furthermore, the setting-up of more manufacturing industries would process the numerous raw materials from Ghana, like cocoa, gold, diamond and bauxite, into finish products to feed the nation (Akordor, 2012; Teye-Gaga, Obeng, Afful & Boadu, 2023). This would in addition contribute to the growth/development of the economy which would thereby alleviate the poverty of most Ghanaians and modulate their statuses from the current position of ‘trivial many’.



The statistics indicates that 5% (None) of organizations do not keep any information at all, which is very unfortunate, as depicted in Table 11. It is unfathomable and unheard of that money would be invested into a business and no records kept by the owners; anyway, that is how 5% of businesses responded to the questionnaire. This surely indicates that these organizations are not interested in monitoring the activities and growth of their business to enhance their performance to, example, increase the revenue generated from their toils so as to extricate themselves from the ‘trivial many’ positions they currently occupy in the economy of wealth distribution.

There is a strong need for the Ghanaian government to introduce a venture capital to support entrepreneurs to alleviate their problems, as initial problems encountered by entrepreneurs in Ghana is financial, which scooped a whopping 42%, as compared to other problems encountered by entrepreneurs. Without a proper financing programme, entrepreneurs face a lot of problems, including collapse of business in the shortest possible time.

Furthermore, the period initial problems are encountered should alert entrepreneurs to when the difficult situation crops up to enable them to be on their guard and counteract such problems, thereby saving their business from collapse; this was mostly found to be 0<sup>+</sup> to 2 years and with a score of 44%, quite high.

The ‘80/20’ rule of Wilfredo Paleto, where approximately ‘80% of the population have only 20% of the global wealth’ is unfriendly and should be ameliorated to assuage the burden on majority of global citizenry and give them respite from their toils. Expectantly, the research would help the ‘trivial many’ of entrepreneurs to ameliorate the survival rate of their businesses, modulate the ‘80/20’ rule, enhance their status in the economy of wealth distribution and extricate them from the ‘trivial many’ positions most find themselves.

Finally, Ghanaian entrepreneurs understand and know the importance of management information system (MIS), as the high percentage-score of 89 for ‘Organization, People and Technology working together’ as an entity to achieve organizational goals, emphasizes this fact. MIS is good for entrepreneurs, as with the advent of technology, entrepreneurs should not go through hardship as previously but should use it to keep accurate records on their businesses, for growth, sustainability and profitability. This would strongly help them to extricate themselves from frequent collapse of business, modulate their statuses from ‘trivial many’ and douse the Wilfredo Pareto rule of ‘80/20’.

## CONCLUSIONS

The noteworthy relationship in the level of use between MIS and CPM within the organization, scoring 89% (similar + very similar), implies that both can be used as tools by management of organizations to sustain their businesses and make them successful. See Table 19.

The conclusions drawn from the research study are:

- i. Services, mostly SMEs are the employment and economic sustainability of governments in the emerging markets, and that governments must support the programmes of entrepreneurs with funding

to rescue them from collapse. This is because they give larger number of employments to the citizenry of the emerging nations, which normally goes a long way to promote the good governance of the prospective government. It is however, unfortunate that most of these businesses often do not survive, but fizzle-out after few years, because of lack of proper record keeping, i.e. information;

ii. entrepreneurship has been assumed by many as encompassing the formation of SMEs, instead of the broad innovative idea of establishing large businesses, MNCs and conglomerates as in Europe and North America, which would add value to the raw materials from the prospective nations to better serve the needs of consumers; and

iii. MIS has been investigated meticulously by this study, and potentially found to be an applicable tool for monitoring corporate performance/growth and corporate performance management (CPM), which monitors the attainment of corporate goals.

It is therefore, advised that entrepreneurs, including start-ups and particularly SMEs, should adopt the use of MIS for monitoring corporate performance to enable the success and sustenance of their businesses, as enterprises are difficult to manage, especially during the early few years, without the proper record keeping. This would help entrepreneurs to modulate their position in wealth distribution, globally, and douse the position of ‘trivial many’ consigned to most of them. No human being was born with a silver spoon in his mouth, but to work harder and achieve the status s/he desires to attain in life.

### **Recommendations**

It is so unfortunate that the 20% who controls 80% (vital few) of the global wealth, is still sustained. The 80% who controls only 20% (trivial many) of the global wealth still finds themselves trapped to that position. This is a worrisome situation, and governments should do well to set up venture capital groups to help small businesses and start-ups to disengage themselves from this mess. Poverty or unfair distribution of wealth, as postulated by Wilfredo Paleto in the latter part of 19<sup>th</sup> century (Laoyan, 2022) should not be accepted as a command, and entrepreneurs, including individuals should do well to keep proper records on their businesses, enhance their economic position within the markets they operate and modulate the position they occupy in the Wilfredo Paleto rule of ‘80/20’.

It is therefore, recommended that entrepreneurs should structure their businesses and look for:

i. profitability from the market operated in, by enhancing the acceptability and quality of their products/services to attract consumers;

ii. sustainability of their business, to make sure the commercial pursuit/ventures would stay and live for long to supply the needed products/services to consumers; and

iii. finally, entrepreneurs should make sure they look and aim for achieving competitive advantage in competing with competitors for the supply of products/services they market to consumers/customers.

They above recommendations would surely help entrepreneurs to modulate their statuses from ‘trivial many’ positions to be better placed in the economy of wealth distribution and douse Wilfredo Pareto’s rule of ‘80/20’ in the nearest future.

## REFERENCES

- 101entrepreneurship.org (2019). Large company entrepreneurship: Advantages and disadvantages. Retrieved from: <https://101entrepreneurship.org/large-company...>
- Agyeman, N. K. (2012, October). Set up entrepreneurship fund. *The Daily Graphic*, ISSN:0855-1529.
- Ansary, A. S. (2023). 4 Types of social entrepreneurs and 21 enterprises. Retrieved from: <https://www.careercliff.com/types-of-social-entrepreneurs/>.
- Akordor, K. (2012, May). Let's save TOR. *The Daily Graphic (Ghana)*. ISSN:0855-1529.
- BBC (2019, Aug.). India floods: More than a hundred dead after torrential rain. Retrieved from: <https://www.bbc.com/news/av/world-asia-india-45091665/India-floods-.....>
- Bimpeh, J. K. (2017). Ghana calls on African foreign missions to help fight galamsey. Retrieved from: <https://www.primenewsghana.com/business>.
- Bryman, B., & Bell, E. (2015). *Business research methods* (2<sup>nd</sup> ed.). NY: Oxford University Press.
- Cales, A. (2020, Jan.). The devastation of Australia's wildfires. Retrieved from <https://farragutananchor.org/8298/features/the-devastation-of-australias-wildfires/>.
- CNN (2019, December). How AI is helping spot wildfires faster. Retrieved from: <https://edition.cnn.com/2019/12/05/tech/ai-wildfires/index.html>.
- Daly, H. (2008). *Ecological economics and sustainable development: Selected Essays*. NY, USA: Edward Elgar.
- Daft, R. L. (2003). *Management (6<sup>th</sup> edition)*. USA: South-Western.
- De Wit, B., & Meyer, R. (2004). *Strategy: Process, Content, Context (3<sup>rd</sup> edition)*. Italy: Thomson Learning.
- Dessler, G. (2004). *Management-principles and practices for tomorrow's leaders (3rd ed.)*. USA: Prentice Hall Inc.
- Eisenmann, T. (2021). Why Start-ups fail: A new roadmap for entrepreneurial success. *Harvard Business Review*. May-June, 2021
- Evans, O. G. (2023). Pareto Principle (The 80-20 Rule): Examples & more. Retrieved from: <https://www.simplypsychology.org/pareto-principle.html>.
- Gains, C., Hoover, D., Foxx, W., Matuszek, T., & Morrison, R. (2012). Information systems as a strategic partner in organizational performance. *Journal of Management and Market Research*, 10(1). ISSN: 1941-3408.
- Hasan, I. (2021). Five realities that sum up the struggles of entrepreneurship – and how to overcome them. Retrieved from: <https://www.shopify.com/blog/challenges-of-entrepreneurship>.
- Hornby, A. S. (2020). *Oxford advanced learner's dictionary (10<sup>th</sup> edition)*. Oxford: Oxford University Press.
- Indeed.com (2023). The 9 different types of entrepreneurship (with examples). Retrieved from: <https://www.indeed.com/career-advice/career-development/types-of-entrepreneurship>.
- Kenton, W. (2022). What is Pest Analysis? Retrieved from: <https://www.investopedia.com/terms/p/pest-analysis.asp>.

- Kwadade-Cudjoe, F. (2015). *Sustaining corporate growth: Exploring the role of MIS in monitoring companies' performance*. Saarbrucken, Germany: Lambert Academic Publishing.
- Kotler, P. (2003). *Marketing Management (11<sup>th</sup> edition)*. USA: Pearson Education, Inc.
- Kuratko, D. F. (2016). *Entrepreneurship: Theory, Process and Practice*. Boston, MA: Cengage Learning
- Laoyan, S. (2022). Understanding the Pareto principle (The 80/20 rule). Retrieved from: <https://asana.com/resources/pareto-principle-80-20-rule>.
- Laudon, K. C., & Trevel, C. G. (2022). *E-commerce 2021–2022 Business. Technology*. Education. ISBN 13: 978-1-292-40931-3.
- Mazzarol, T., & Roboud, S. (2019). Surviving the early years. *Small Business Management*, pp.66-93.
- Mazzarol, T., & Reboud, S. (2020). *Small business management: Theory and practice (4th. Ed.)*. ISBN: 978-981-13-9508-6.
- Mirror Online (2023). Hawaii wildfires: Death toll rises to 93 as officials were warned island was tinderbox. Retrieved from: <https://www.mirror.co.uk/news/hawaii-wildfires-death-toll-rises-30693483>.
- Needle, F. (2021). The eight types of entrepreneurship (& companies that exemplify them). Retrieved from: <http://blog.hubspot.com/sales/types-of-entrepreneurship>.
- Nowduri, S. (2011). Management information systems and business decision making: review, analysis and recommendations. *Journal of Management and Market Research*, 7(9). April 2011, ISSN: 1941 - 3408.
- Nugent, J. H. (2003). *Plan to win: Analytical and operational tools-Gaining competitive advantage*. USA: McGraw Hill.
- OECD (2015). *OECD Guidelines on corporate governance of state-owned enterprises – 2015 Edition*. OECD Publications. ISBN: 92-64-24412-2.
- Peacefmonline.com (2023). Hawaii wildfires scorched land 'like an apocalypse'. Retrieved from: <https://peacefmonline.com/pages/foreign/news/202308/491539.php>
- Peterdy, K. (2022). What is a pestel analysis? Retrieved from: <https://www.corporatefinanceinstitute.com/resources/knowledge/strategy/pestel-analysis/>.
- Rothkopf, D. (2011). *The 20/80 Rule*. Video, stanford's technology ventures program. (25 June, 2011).
- Sahlman, W. A. (2008). How to write a great business plan. Retrieved from: <https://www.amazon.com/write-business-harvard-review-classics/dp/1422121429>.
- Santoro, G. (2012). *Entrepreneurship (1<sup>st</sup> edition)*. Delhi: University Publications. ISBN: 978-81-323-3994-6.
- Shobhit, S. (2022). Entrepreneurs and entrepreneurship: Definitions and examples. Retrieved from: <https://www.investopedia.com/articles/investing/092514/entrepreneur-vs-small>
- Sobel, R. S. (2012). *Entrepreneurship*. Retrieved from <https://www.econlib.org/library/Enc/Entrepreneurship.html>.
- Teye-Gaga, P., Obeng, C. K., Afful, B., & Boadu, M. T. (2023). Economic integration and survival of Ghana's manufactured and agricultural raw material export. Retrieved from: <https://doi.org/10.1016/j.heliyon.2022.e12723>.

TheLittleText.com (2023). What is a scalable startup? What are its examples? Retrieved from: <https://thelittletext.com/scalable-startup-entrepreneurship>.

Tidd, J., & Bessant, J. R. (2018). *Managing innovation integrating technological, market and organizational change*. Hoboken, NJ: John Wiley & Sons.

Velkoska, C., Tomov, M., & Kuzinovski, M. (2018). Application of the vital few and trivial many phenomenon as a function of the quality cost concept. *Mechanical Engineering – Scientific Journal*. 36(1), p. 39-45.

White, C. (2004). *Strategic management*, New York: Palgrave Macmillan. ISBN: 9781403904003.

## TABLES

Organization Type	Frequency	Valid Percent	Cumulative Percent
Government	8	11	11
MNC	6	8	19
NGO (Non-Profit)	5	7	26
Private (Profit)	53	74	100

Date of Establishment	Frequency	Valid Percent	Cumulative Percent
Before 1960	1	1	1
1961 – 1970	4	5	6
1971 – 1980	0	0	6
1981 – 1990	4	6	12
1991 – 2000	12	17	29
2001 – 2010	44	61	90
2011 – 2020	4	6	96
2021 – 2023	3	4	100



Number of Employees	Frequency	Valid Percent	Cumulative Percent
2 – 50	44	61	61
51 – 100	4	6	67
101 – 200	5	7	74
201 – 400	3	4	78
401 – 1000	14	19	97
Above 1000	2	3	100

Type of Industry	Frequency	Valid Percent	Cumulative Percent
Manufacturing	7	9	9
Regulation/Management	8	11	20
Monitoring/Policy/Legal	2	3	23
Financial	11	14	37
Education/Research	2	3	40
Procurement/Distribution	13	17	57
Service	25	33	90
Other	8	10	100

Status	Frequency	Valid Percent	Cumulative Percent
President/CEO	13	18	18
Executive	7	10	28
Management	25	35	63
Professional/Technical	27	37	100

Market	Frequency	Valid Percent	Cumulative Percent
Food/Beverages	7	9	9
Toiletry	1	1	10
Equipment/Machines	16	21	31
Fuel/Chemical	1	1	32
Financial	11	15	47
Pharmaceuticals	3	4	51
Education/Research	2	3	54
Service	28	38	92
Other	6	8	100

Product Attraction	Frequency	Valid Percent	Cumulative Percent
Strongly Unattractive	0	0	0
Unattractive	1	1	1
Uncertain	1	1	2
Attractive	40	56	58
Strongly Attractive	30	42	100

Action Taken	Frequency	Valid Percent	Cumulative Percent
Evaluated Business Goals	1	2	2
Re-strategize	1	2	4
Re-training	0	0	4
None	0	0	4
Other	0	0	4

Customer Responsiveness	Frequency	Valid Percent	Cumulative Percent
Strongly Responsive	0	0	0
Unresponsive	0	0	0
Uncertain	2	3	3
Responsive	46	64	67
Strongly Responsive	24	33	100

Action Taken	Frequency	Valid Percent	Cumulative Percent
Evaluate Business Goals	0	0	0
Re-strategize	1	2	2
Re-training	1	2	4
None	0	0	4
Other	0	0	4

Info Type	Frequency	Valid Percent	Cumulative Percent
Personality/Behaviour	11	11	11
Product Purchased	41	40	51
Residential	13	13	64
Historical	13	13	77
Attitudinal/Manner	9	9	86
Empirical/Observation	6	6	92
None	5	5	97
Other	3	3	100

Follow up	Frequency	Valid Percent	Cumulative Percent
Social media	9	8	8
Email	25	22	30
Phone	46	41	71
Visit	27	24	95
None	4	4	99
Other	1	1	100

Problems encountered	Frequency	Valid Percent	Cumulative Percent
Financial	33	42	42
Political	2	2	44
Technological	4	5	49
Socio-Cultural	6	8	57
Legal	4	5	62
Labour	12	16	78
Environmental	3	4	82
None	4	5	87
Other	10	13	100

Period of Problems	Frequency	Valid Percent	Cumulative Percent
0 <sup>+</sup> - 2	32	44	44
2 <sup>+</sup> - 4	14	20	64
4 <sup>+</sup> - 6	1	1	65
Above 6 <sup>+</sup>	13	18	83
None	12	17	100

Objective Accomplishment	Frequency	Valid Percent	Cumulative Percent
Strongly Unsuccessful	0	0	0
Unsuccessful	2	3	3
Uncertain	5	7	10
Successful	52	72	82
Strongly Successful	13	18	100

**Table 16: What is MIS?**

Description of MIS	Frequency	Valid Percent	Cumulative Percent
Organization, People & Technology working together	64	89	89
Managing Organization well	1	1	90
People working hard	2	3	93
Technology delivering results	5	7	100

**Table 17: Use of MIS for monitoring Organizational Performance (OP)**

MIS for monitoring OP	Frequency	Valid Percent	Cumulative Percent
Very Inapplicable	2	3	3
Inapplicable	1	1	4
Uncertain	5	7	11
Applicable	33	46	57
Very Applicable	31	43	100

**Table 18: What is Corporate Performance Management (CPM)?**

Description of CPM	Frequency	Valid Percent	Cumulative Percent
Overall company performance for achieving goals	65	91	91
Divisional performance	1	1	92
Business Performance	5	7	99
Departmental performance	1	1	100

**Table 19: Relationship in using MIS & CPM**

Relationship in using MIS & CPM	Frequency	Valid Percent	Cumulative Percent
Very Dissimilar	0	0	0
Dissimilar	3	4	4
Uncertain	5	7	11
Similar	54	75	86
Very Similar	10	14	100

**Table 20: Functional Areas MIS can be applied**

Applicability of Functional Areas with MIS	Frequency	Valid Percent	Cumulative Percent
Accounting	34	23	23
Administration	32	21	44
Corporate Management	32	21	65
Technical/Stores	13	9	74
Production/Manufacturing	10	7	81
Procurement/Distribution	23	16	97
Other	5	3	100

**Table 21: Any additional information**

MIS is critical for organizational success.

Management information systems should be applied to all levels of companies' structures.

MIS is useful for monitoring all company's operations.

## Appendices

### Appendix 1



Hawaii wildfires: Death toll rises to 93 as officials were warned island was flashpoint.  
Source://www.mirror.co.uk/news/us-news/Hawaii-wildfires-death-toll-rises- 30693483

### Appendix 2



Hawaii wildfires scorched land 'like an apocalypse'.

Source: <http://peacefmonline.com/pages/foreign/news/202308/491539.php>

### Appendix 3



Ghana calls on African Foreign Missions to help fight galamsy.

Source: Bimeh, J. K. (2017, May)