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Article

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ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Empirical study on the impact of working capital management on going concern of manufacturing firms in Ghana

Abednego Osei^{1*}, Andrew Osei Agyemang², Joseph Owusu Amoah² and Inusah Sulemana¹

Abstract: Businesses strive for effective working capital management (WCM) since ineffective WCM influences firms' failure in developing economies. However, the connection between WCM and the going concern of firms has not received significant quantitative attention. Hence, this study examines the impact of WCM on the going concern of manufacturing businesses in Ghana. The study goes beyond the edges and fills the literature gap on WCM and going concerns. Using panel data for 55 large-scale manufacturing companies in Ghana from 2002 to 2022, the study employed the Fixed Effect as the main estimation technique and the Random Effect as the robustness test estimator. The findings affirm the need for working capital management since it influences the going concerns of manufacturing firms. Hence, it is recommended that measures including effective mobilization of inventories, cash, debtors, and creditors should be the main motive of management and owners of the business.

Subjects: Financial Accounting; Management Accounting

Keywords: Working capital management; going concern; manufacturing firms; business management

1. Introduction

In most nations, the manufacturing sector serves a vital economic role in gearing toward development by contributing significantly to the gross domestic product (Ejsmont et al., 2020). For the manufacturing industries to compete in the external environment, working capital management may give the companies an edge over their rivals (Le, 2019). In addition, manufacturers have recently learned they would access significant cash flow sources if they successfully monitor their working capital accounts (Chowdhury et al., 2018).

Working capital management procedures are essential since they define the cash flow amount intended to impact the firm's performance. Working capital management considers every choice related to handling current assets and liabilities. According to Louw et al. (2022), regardless of the kind and nature of the company, working capital management remains essential for its fiscal viability. Hence, working capital management influences the company's success (Agyemang, Yusheng, Twum, et al., 2023). Working capital management WCM remains essential for the manufacturing industry in Ghana at the moment due to the unpredictable economic crises brought

on primarily by uncertainty in macroeconomic fundamentals. Price volatility is, however, such an event that requires company owners to regulate their working capital efficiently (Sniazhko, 2019).

Working capital management which comprises account receivables, account payables, inventory, bank balance, and cash management, constitutes the most important aspect that management must focus on because it determines the going concern (foreseeable future) of a business. The going concern concept states that the business operations will continue in existence for the foreseeable future and continue in operation indefinitely. Careful working capital management will establish going concerns regarding the business operations in the foreseeable future. In a manufacturing setting, working capital management usually remains the main driver of the foreseeable existence (going concerned) in business operations. To achieve the going concern of business, management must emphasize effective and efficient working capital management.

Since industrial concerns caught the attention of economists, researchers focus on manufacturing industries due to the significant contribution of this sector to national economic growth (Lee et al., 2022; Machado et al., 2020). The traditional working capital theory excluded the manufacturing industry and concentrated on companies that deal directly with cash inflows and outflows. Undoubtedly, the rise of manufacturing issues presents an obstacle to the traditional working capital theory (Lee et al., 2022). Theoretical and empirical studies regarding the manufacturing industry frequently incorporate the effects of inventory management on the performance of the manufacturing industry, but their findings have proven inconsistent. This is due to the concentration of only one factor thus (inventory management) on the performance of the manufacturing industry. Consequently, a further empirical study is needed to explore the significance of working capital management in the manufacturing industry. Therefore, this study fills the gap and incorporates four factors of working capital management in the manufacturing industry going concern.

The main reason for manufacturing firms' failures has been recognized as ineffective management of working capital (Louw et al., 2022). However, the connection between working capital management and firms' going concern has received little attention over the years in developed and developing economies. The closest studies focused on working capital management to firms' profitability (Ahmed & Mwangi, 2022; Okphiabhele et al., 2022). However, to the greatest of our acquaintance, neither of the studies has examined the influence of working capital management on the going concern of firms. The study, therefore, intends to evaluate how working capital management affects manufacturing companies in Ghana's ability to remain in business for the foreseeable future. Hence, this study sets the pace and fills the literature gap regarding working capital management and the going concern nexus.

The study aims: (1) To examine the effect of account receivables on the going concern of manufacturing firms in Ghana. (2) To analyze the impact of inventory management on the going concern of manufacturing firms in Ghana. (3) To examine the effect of account payables on the going concern of manufacturing firms in Ghana. (4) To investigate the impact of cash management on the going concern of manufacturing firms in Ghana.

In terms of novelty, this study differs from previous literature and adds novel insights to the existing literature on working capital management towards going concern of manufacturing firms in the following ways.

First, in contrast to earlier studies that emphasized working capital management and profitability, this study presents an insight into how working capital management affects going concern of manufacturing industry in Ghana. We utilized the most existing growth rate approach to measure going concern which included factors other than return on assets used to measure profitability in the earlier research. The measurement of going concern, such as the Z-score measure, reveals to be one-sided, which presumes that going concern is unpredictable. Arguably, since industry can only stop operating for materiality reasons, achieving unpredictability

of going concern is difficult and impossible. Consequently, it is essential to adopt the growth rate approach that emphasizes the effectiveness of foreseeing the future of investment while attaining high reliability of the firms to foresee their future existence. Therefore, this study adds to the existing literature on how to evaluate going concern by using the growth rate approach, which signifies how companies will foresee their future existence and provides an understanding of the applicability of the results to firms and industries.

Second, the study employs a comparatively large sample size and broader control variables on working capital management and going concern nexus which contribute highly to the applicability of the results in the growth of firms and industries. The study used a large sample size of 55 large-scale manufacturing firms for 20 years. Large sample sizes constitute both listed and unlisted large-scale manufacturing companies, leading to increased estimation accuracy and an improved capacity to discern the effects of working capital management on the going concern of firms. The literature will benefit from adding more knowledge on working capital management and going concerns of firms since the study utilizes a large sample size and years.

Third, the study concentrates on the direct impact of working capital management on going concern, as opposed to other research that concentrated on profitability or the indirect influence through other variables. By concentrating on going concern, the study demonstrated how working capital management directly affects businesses' achievement, growth, and success. Consequently, our research educates policymakers on the necessity of managing working capital for achieving growth, success, and the foreseeable future of companies.

The study considered manufacturing firms in Ghana as the original sample because of the enlarged contribution of these firms to sustainability, economic development, and growth. The study employed a quantitative design for the empirical analysis. The study then selected 55 manufacturing companies from 2002 to 2022. The data was extracted from the sampled manufacturing firms' annual reports and financial statements. The study employed the Fixed Effect (FE) and Random Effect (RE) estimation techniques due to time-invariant and unobserved heterogeneity.

The empirical results revealed a positive and statistically significant link between account receivables and going concern. Similarly, inventory management was found to be positive and statistically significant with going concern. Contrary, account payables showed a negative and statistically significant association with going concern. Finally, cash management revealed a positive and statistically significant link with going concern.

In terms of contributions, adequate econometrics analysis was performed for the empirical connection, including testing for robustness and considering the datasets characteristics. This gives the study's results validity and accuracy. The findings can be used by policymakers in implementing strategies that will enhance working capital management and benefit the going concern of firms in the long run and future operations. As a result, the suggestions and implications guide owners and managers of manufacturing businesses that want to achieve going concern and improve the performance of their operations.

The study is grouped into five sections. The first sections introduce the study area. The second part outlines the concept, theoretical, empirical literature, and hypothesis development. The third segment shows the methodological approach to the study. Also, econometric methods used for the studies are examined in detail in the third part. The data is analyzed in part four with the findings of the study. Finally, part five is dedicated to the conclusion and policy implications.

2. Background

The rapidly expanding industrial sector has greatly influenced Ghana's economic development (Obodai et al., 2022). The growth is mainly concerned with the significant contribution that

manufacturing companies have made to the growth of the Ghanaian economy. In light of this, there is a need to research this area to explore the main contributor that will help increase the growth, success, and going concern of manufacturing firms in Ghana. After a thorough review of the manufacturing firms in Ghana going concern, it was found that the main element that significantly impacts their operation is working capital management and other external factors like; macroeconomic variables, technological innovation, tax reforms and implications, and government regulations. Therefore, effective working capital management in manufacturing firms will boost going concern and enhance firms' economic sustainability. Hence, emphasizing working capital management to the development and growth of going concern of manufacturing firms is the main idea of this study.

The increase in tax reforms and regulations in Ghana has called on many companies to increase their level of production in order to clear the amount of tax imposed on them. The increase in production level has led to the growth of many manufacturing firms in Ghana after the COVID-19 pandemic. Since working capital management is the essential tool for the growth of manufacturing firms in Ghana, factors like; cash management, inventory management, account receivables, and payables must be managed and controlled to enhance these firms' existence. After the COVID-19 pandemic, which led to world economic distractions, the government of Ghana, through the Ministry of Trade and Industries, has imposed measures to restore the economic situation and boost the performance and growth of the industry in Ghana. To increase the performance of companies and enhance going concern, the government of Ghana has implemented tax holidays for small and medium size companies operating in the country and also granted financial support in the form of grants and loans to the prospective companies to increase their sales, growth, and performance.

Most manufacturing companies could not survive after the COVID-19 pandemic due to the ineffective management of the company's working capital. In order to increase efficiency and boost the companies going concern, working capital management is an essential tool for the growth and success of manufacturing firms in Ghana. The Ministry of Trade and Industry has developed strategies to categorize manufacturing companies into two main categories thus; large-scale manufacturing companies and small-medium scale manufacturing businesses. The division made by the ministry has helped identify the amount of tax imposed on all companies, whether large or small-medium size companies. After the COVID-19 pandemic, price volatility, externalities, market power, and government regulations have hindered Ghana's industry development and growth. Due to this, many companies have increased the price of their product and service due to high tax rates and other factors to achieve going concern. The high cost of capital needed to commence a business and the tax imposed on them hinders many investors from investing and opening up a business.

To enhance the overall performance of manufacturing firms going concern, working capital management of firms in Ghana is an important aspect that firms must emphasize to attain credibility. Several manufacturing companies in Ghana are expanding at the highest rate possible, while others are expanding more slowly. This is mainly due to the capital needed to start manufacturing firms. Due to the high cost of capital needed to commence manufacturing firms and the high tax imposed on them, some manufacturing firms in Ghana are based on external sources of funds, for example, loans, credit, and borrowing, which are used for business operations. In order for these manufacturing firms in the country to expand their business operation and size, there is the need to manage their working capital effectively.

3. Theoretical literature review

3.1. System management theory

According to the systems management idea, organizations, like the human body, comprise several parts that must collaborate harmoniously for the greater system to operate as efficiently as possible

(Caesar et al., 2017). The idea contends that integration, interdependence, and relationships between distinct subsystems are crucial for a company's success and growth (Saad et al., 2021). Organizational systems that incorporate inventory and cash management as components of working capital management for the growth and success of the business practice the system management theory. The central idea of the system management theory incorporates all systems in the company for the growth and success of each unit, which in turn leads to going concern of their operations. According to this notion, a company's most critical aspects include its working capital management (Zeidan & Shapir, 2017). Additionally, essential to the success and growth of going concern of companies, the divisions, departments, and operations, as the central idea of system management theory, should collaborate to enhance effective working capital management to boost going concern.

In reality, managers must assess trends and occurrences inside their business to decide on the most effective management strategy to enhance the growth and success of the business. Thus, management must control and direct the company's inventory, account receivables, cash, and account payables to attain the company's success and growth and achieve going concern. Furthermore, working together on various initiatives can function as a unified unit instead of individual parts (Caesar et al., 2017).

The systems management theory suggests that decisions and steps made in one company unit will impact other departments (Khan et al., 2022). The production division, for instance, will only be equipped to do its duties if the buying unit gets the appropriate level and quality of materials and inputs needed for production. By this, the absence of any working capital management variables will lead to ineffective operation of the systems in the organization and hinders the business's going concern. The four-core working capital management variables are interrelated and attributed to various company departments. Therefore, the system management theory postulates that companies should mainly emphasize on account payables and receivables, cash and inventory management to achieve going concern of their operations.

3.2. Cash Conversion Cycle theory (CCC)

Laughlin and Richards (1980) established the cash conversion cycle theory. The theory asserts that a business's ability to transform existing expenditures or capital expenses in inventory, inputs, or resources into operating cash flow is expressed by the cash conversion cycle theory, a statistic that measures the duration of account receivables, payables, and inventory days. The cash conversion cycle aims to quantify whether lengthy every net input or resource (capital in nature) is involved in the manufacturing and sales activity prior to being turned into operating cash received. Inventory, receivables, cash, and payables are components of working capital management that the cash conversion cycle theory elaborates on by bringing these factors together to make the manufacturing process complete (Marita & Permatasari, 2019). Since it depicts the timeline between spending on acquiring raw materials, collecting revenue from sales of completed items, and accounting for unpaid revenues, the cash conversion cycle is employed as an integrated indicator of working capital management (Musa & Ibrahim, 2022).

Cash and inventory used for company activities are tracked over time by cash conversion cycle, which leads to going concern for the company. In practice, the cash conversion cycle measures the speed at which a business may transform its original investment into profit from the beginning to the end of the period (Agyemang Andrew A. A. Osei, K. Yusheng, A. E. Caesar, et al., 2019). Therefore, this shows that a company in practice, may manage its working capital to attain going concern of future existence.

The CCC theory generates possible theoretical conclusions that link working WCM and going concern. The working capital effects, for example, comprise both current assets and liabilities, which is also attributed to the transformation of existing business expenditures into operational cash flows expressed by the cash conversion cycle theory. Additionally, going concern affects the foreseeable existence of the business by transforming the business's ideas to practice and yield

positive results for the business's operations. This process of transforming business expenditures into operational cash flow determines the company's foreseeable future, as expressed by the cash conversion cycle theory. Therefore, employing working capital management and going concern of firm's activities is applicable to the CCC theory. Hence, the cash CCC theory is linked with working capital management and going concern about firm's activities.

4. Empirical review and hypothesis development

4.1. Account receivables and going concerns of firms

Account receivables are parties that own debts to a business due to the provision of products or services on credit (Supriyanto et al., 2021). According to the system management theory, companies should incorporate the various aspects of their units to achieve their operations' success and growth. The system management theory is linked with account receivables which is the main organ of a company's systems and going concern of firms as it incorporates the theory's ideal to working capital management in the attainment of going concern. Firms that operate with account receivables (customers) will ensure going concern of its existence if the firm incorporates the system management theory in its operations.

In line with the cash conversion cycle theory, a company must transform its inventory, inputs, resources, and materials into existing cash flows expressed by account receivables (debtors) who will purchase the goods produced and pay to turn these resources into cash flows. Therefore, account receivables are an aspect of working capital management linked with the cash conversion cycle theory to achieve the going of the firms' operations. Based on the theory, payment made by account receivables for goods purchase demonstrate the process of cash conversion theory and enhance going concern.

Empirically, Rahayu et al. (2020) studied the impact of account receivables on profitability at Legian Bali. The study used trade receivables, accounts receivable policy, and income statement data which was gathered by investigation, documentation, and interviewing. Descriptive and qualitative analytical methods based on financial ratio formulae were utilized in the study. According to the results, account receivable has a positive impact on profitability. Collection days for accounts are longer due to the high percentage of accrued expenses, which generates little cash to be converted from accounts receivable.

Using the earlier literature as support, an argument arose that allowing lengthy collection periods may boost economic viability by bringing in more new customers and income in the long term, impacting the firm's financial viability (Rahman et al., 2023). Conversely, this impact, however, is not permanent since the business's collection practices may eventually draw too many clients with cash flow issues, which might result in the appearance of defaulters and potentially irrecoverable liabilities and, ultimately, a reduction in corporate profitability (Khan et al., 2022), which by the indefinite period can affect the existence of the business. In addition, Receivables may be advantageous, but they can also result in losses owing to particular concerns (Mahmud et al., 2022). This argument is backed by (Jory et al., 2020), which state that the threat of not being paid by all debtors, the possibility of settling for some debtors, the delayed payment, and, indeed the concern of investing money in the form of receivables will impact the business negatively. The going concern of firms may be significantly affected by selling to customers on credit for a long-time basis. Based on the above literature, the first hypotheses predict that;

Hypothesis 1: *A negative relationship exists between account receivables and the going concern of firms.*

4.2. Inventory management and going concern of firms

Inventory management deals with how the business manages and controls goods or stocks (Ushakov & Shatila, 2021). According to the cash conversion cycle theory, the business must

address both idea's essential components, from the initial stage to goods which shows inventories to debtors and expenditures, which indicate the cash portions (Musa & Ibrahim, 2022). Therefore, cash conversion cycle theory incorporates inventory management and going concern since inventory or stock is processed from the raw material stage, manufacturing stage, to the finish goods stage before converting into cash outlets after selling the final product to consumers.

According to the system management theory, companies must ensure to incorporate all unit and departments including (the store department) to achieve the success and growth of their operations. Therefore, companies must ensure to safeguard their inventory in order to attain going concern. Therefore, the system theory is linked with inventory management and going concern as it posits original contribution on how the companies should manage their inventory to achieve going concern.

An empirical study conducted by Tang et al. (2018) on the impact of inventory management and firms' performance in the telecommunication industry. The study used a descriptive research methodology, and quantitative analysis was carried out using SPSS. In addition, the study utilized both basic representative samples and selective sampling techniques for selecting the samples. The study's findings suggest that increasing inventory management practices may boost competitive edge and firms' performance.

Based on the earlier literature as support, inventory management practices have a positive link to the return on investments (Ochi et al., 2021). This statement is backed by Becerra et al. (2022), who claim that inventory management significantly affects financial performance. In addition, Ushakov and Shatila (2021) suggest that increasing inventory management practices may boost competitive edge and firms' performance. Furthermore (Zhou et al., 2022), discovered a direct correlation between stock control and a company's performance. Conversely, the Inventory Turnover Ratio does not significantly affect Operating Profits (Ali & Showkat, 2022). Moreover, the Inventory Turnover Ratio does not statistically influence Operational Earnings in a substantial way (Anh Thu et al., 2023). Our second hypothesis, which is predicated on the literature mentioned previously, states that;

Hypothesis 2: *Inventory management has a positive link with the going concern of firms.*

4.3. Account payables and going concerns of firms

A choice to allow creditors to have a say in a company's operations could be in the business's best interests (Singh, 2022). Account payables towards going concern of the firm's activities are linked with the system management theory, which postulates that companies' systems will work effectively if all units in their function as intended to achieve the success and growth of their operation. The system management theory incorporates the idea of account payables to the going concern of firms as it ensures that all company system, including account payables section, are effectively utilized to achieve going concern.

According to the cash conversion cycle theory, cash is converted from the production processes to the finished goods stage in the manufacturing process. The theory establishes the fact that account payables are the main essential component of the manufacturing process as they provide the raw materials needed for production before converting the final product to cash outlets. Therefore, the cash conversion cycle theory is linked with suppliers of goods and services to attain going concern of the firm's activities.

Empirically, Singh (2022) studied account payables reactions to hedge investing advocacy. The research offers extraordinary evidence that the effects of investment bank activism may affect unconventional lenders like trade creditors in addition to the official debt capital. Secondary data was used for the study. The findings reveal that activism-related adjustments

in operational retained earnings, net assets, and investment returns may explain trade payables.

According to, Twum et al. (2022), account payables react unfavorably to investment fund activity. Conversely, debt financing may generate business disputes since account payables are another set of stakeholders who impact competing interests Osei et al., (2019). This puts into doubt how the existence of account payables affects business performance (Ruhnke, 2022). Based on it, a model could be desirable to give creditors substantial or at least temporary control over the company's actions Osei et al., (2019). In order to reduce expenses brought on by information asymmetries, businesses also need to have a trustful relationship with their creditors to influence performance in the long run (Spasenić et al., 2022). Our third hypothesis, which is predicated on the literature mentioned previously, states that;

Hypothesis 3: *A positive link exists between account payables and the going concern of firms.*

4.4. Cash management and going concern of firms

The cash conversion cycle and going concern of a firm's activities explains how a business's cash flow will lead to the going concern of the firm activities. According to the cash conversion cycle theory, a business must address essential components, from the initial stage to goods that reveal inventories to debtors and expenditures that indicate the cash portions (Musa & Ibrahim, 2022). Therefore, the cash conversion cycle is linked to the cash conversion cycle theory because goods or products must be sold to customers and converted to cash for business transactions. According to the system management theory the business comprises of integrated system that are combine to achieve a specific objective. Management of cash is one crucial aspect of the business that integrate the whole aspect of the organization to achieve the stated objectives.

Empirical evidence shows that Iqbal et al. (2022) studied on cash conversion cycle on valuing firms of Pakistan stock exchange. Data about the Pakistan Stock Exchange's textile industry from 2012 to 2017 were gathered for this study. Various performance assessment proxies, including rate of return, earnings per share, rate of return on investment, and sale price (Tobin's Q), were experimentally assessed in their study. The results of their study discovered that the cash conversion cycle and liquid assets influenced market value.

According to Qadri et al. (2021), there is an imperfect correlation between the cash transaction time and net profit margin. In contrast with all book values regarded as a measure of efficiency, it was discovered that the cash conversion as well as liquid assets influenced firms' performance (Agyemang et al., 2022). In addition, results show that cash conversion cycle management results in greater asset values, profitability, and working capital, adjusting for influences on operational profits (Zeidan & Shapir, 2017). Our fourth hypotheses, which are predicated on the literature mentioned previously, state that;

Hypothesis 4: *Cash management has a positive link with the going concern of firms.*

5. Methodology

5.1. Research design

The study chose manufacturing firms in Ghana as the original object for the present study since it contributes significantly to the growth of GDP of about US\$ 936 billion each year to the growth of the Ghanaian economy. To get a strongly balanced panel data that will support all relevant tests, purposive sampling was used to select firms with complete and reliable data which will be used for the empirical investigation. Secondary data obtained from the sampled manufacturing firms'

annual report and financial statements was used for the analysis. The study considered the period from 2002 to 2022 for the empirical analysis due to data availability. Stata version 16.0 was used for the empirical analysis. The study considers going concern as the dependent variable and working capital management proxies as the independent variables, which is measured by inventory management, account receivable, cash management, and account payables.

5.2. Population and sampling

Manufacturing firms in Ghana are selected as the population of the study. Due to government tax implications reforms in Ghana, the Ministry of Trade and Industry has recently grouped all industries according to small-medium industry and large-scale industry based on their contribution to national economic growth. According to the report, small and medium size companies operate with a maximum number of 1 to 250 employees, whilst large-scale companies operate with a maximum number above 250 employees. Therefore, the study considered the large-scale manufacturing firms in Ghana. The report further indicates that the large-scale manufacturing firms in Ghana are grouped into two main categories thus; listed manufacturing companies on the Ghana Stock Exchange (GSE) (26) and large-scale unlisted manufacturing companies (41). Hence, the total manufacturing firms that fall under the category of large-scale firms in Ghana are 67.

In order to achieve reliable results, 55 out of the 67 large-scale manufacturing companies were selected using purposive sampling due to availability of data for the study period. 21 out of the 55 companies selected were listed on the GSE while the remaining 34 manufacturing companies were not listed. The remaining 12 manufacturing companies were excluded from the final sample due to the unavailability of data in some years considered in the study. Table 1 presents the study's population and sampling.

5.3. Model specification

To prove the link between working capital management and going concern, the study adopted and improved model by (Alvarez et al., 2021), given in Eq. 1 and 2

$$GC_{it} = f(AR_{it}, IM_{it}, AP_{it}, CCC_{it}, P_{it}, CS_{it}, D_{it}, ES_{it}, \varepsilon_{it}) \quad (Eq1)$$

To determine the going concern equation 1 can be re-write as;

$$GC_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 IM_{it} + \beta_3 AP_{it} + \beta_4 CCC_{it} + \beta_5 P_{it} + \beta_6 CS_{it} + \beta_7 D_{it} + \beta_8 ES_{it} + \varepsilon_{it} \quad (Eq2)$$

Where GC represents going concern, AR donates account receivables, IM donates inventory management, AP donates account payables, CCC donates cash conversion cycle, P donates profitability, CS donates capital structure, D donates duration, ES donates enterprise size, β_0 donates the constant term, and i and t donate the sampled companies as well as the year respectively.

To test for robustness of the study, we propose the following models:

$$GC_{it} = \beta_0 + \beta_1 AR_{it} + \beta_2 P_{it} + \beta_3 CS_{it} + \beta_4 D_{it} + \beta_5 ES_{it} + \varepsilon_{it} \quad (Eq3)$$

$$GC_{it} = \beta_0 + \beta_1 IM_{it} + \beta_2 P_{it} + \beta_3 CS_{it} + \beta_4 D_{it} + \beta_5 ES_{it} + \varepsilon_{it} \quad (Eq4)$$

$$GC_{it} = \beta_0 + \beta_1 AP_{it} + \beta_2 P_{it} + \beta_3 CS_{it} + \beta_4 D_{it} + \beta_5 ES_{it} + \varepsilon_{it} \quad (Eq5)$$

$$GC_{it} = \beta_0 + \beta_1 CCC_{it} + \beta_2 P_{it} + \beta_3 CS_{it} + \beta_4 D_{it} + \beta_5 ES_{it} + \varepsilon_{it} \quad (Eq6)$$

5.4. Study variables

5.4.1. Dependent variable

The going concern is the study-dependent variable. It is symbolized by the glyph GC. The study adopted the growth rate model used to measure the foreseeable future of investment over time by (Ma, 2020) to measure the going concern of manufacturing firms in the Ghanaian setting. The

Table 1. Populations and sampling				
Large-scale manufacturing companies	Total number	List of large-scale manufacturing companies	Companies excluded	Final Sample
Listed manufacturing firms	26	Samba Foods Ltd, Cocoa Processing Company, Digidut Advertisement and Production Ltd, Enterprise Group Plc, Golden Star Resources Ltd, Produce buying company Ltd, Mega African Capital Limited, Meridian-Marshalls Holding, Clydestone (Ghana) Ltd, Alu works Ltd, Benso Oil Palm Plantation Ltd, Camelot Ghana Ltd, Dannex Ayrton starwen, Guinness Ghana breweries plc, Fan milk limited, Intravenous infusion PLC, Unilever Ghana PLC, HORDS Ltd, Sam Wood Ltd, AngloGold Ashanti Ltd, Pesewa one Ltd, Asante Gold corporation, GOIL Plc, Tullow Oil Plc, Total petroleum Ghana Plc, New Gold Issuer Ltd.	Samba Foods Ltd, produce buying company Ltd, Dannex Ayrton starwen, Alu works Ltd, Clydestone (Ghana) Ltd	21

(Continued)

Table 1. (Continued)

Large-scale manufacturing companies	Total number	List of large-scale manufacturing companies	Companies excluded	Final Sample
Unlisted manufacturing firms	41	Tobinco pharmaceuticals ltd, M&G pharmaceuticals, Unichem Ghana ltd, kinapharma, Ayrton drugs, Entrance pharmaceuticals, Ernest chemist ltd, New global pharmaceutical, Diamond cement Ghana ltd, Dzata cement company ltd, GHACEM, Interplast ltd, Sintex container Ghana ltd, PolyTank Ghana ltd, Qualioplast ltd, Ghana rubber product ltd, Key textiles company ltd, Tex styles Ghana ltd, Akosombo textiles, Tex styles Ghana ltd, Katenit textiles ltd, Lizdom Fabrice and garments, Association of Ghana apparel manufactures, Global garments and textiles, Aki ola ltd, Voltic mineral water ltd, Approaches ltd, krif Ghana ltd, Healthlife beverages ltd, SBC beverages ltd, GIHOC distilleries ltd, Vitamilk Ghana, Accra brewery ltd, Runjad company ltd, Steel brothers Ltd, Twellum industrial company, Premier steel ltd, Ghana metal and fabrication and construction ltd, Atomotive springs Ghana ltd, Ghana steel, Steel frames Ghana.	Dzata cement company ltd, Qualioplast ltd, Approaches ltd, Healthlife beverages ltd, Steel brothers Ltd, Atomotive springs Ghana ltd, M&G pharmaceuticals	34
Total	67		13	55

Table 2. Summary of study variables

Types of variables	Names of variables	Symbols	Descriptions	Expected Sign
Dependent variable	Going concern	GC	Current year growth of companies—previous year growth of companies/previous year growth of companies	
Independent Variables	Account receivables	AR	Percentage of total current asset on account receivables	-
	Inventory management	IM	Percentage of total current assets on inventory management	+
	Account payables	AP	Percentage of total current liabilities on account payables	+
	Cash management	CM	Time needed to transform cash outlets into cash flows	+
Control Variables	Profitability	P	Return on Assets (ROA)	+
	Capital structure	CS	Debt/equity used to finance a business	+
	Life span of the company	D	Life span of the companies in existence	-
	Enterprise size	ES	Total employees in the business	+

growth rate model defines the rate or extent to which a business or investment is anticipated to achieve. It determines whether the investment or business will increase or decrease in returns, profitability, or growth, automatically defining whether an investor will invest or grow.

Mathematically, to evaluate the compound annual growth rate of going concern that describes the geometric progression ratio that offers a steady rate of growth over time and in the future for businesses, can be computed as;

$$GC = \left(\frac{Y2}{Y1} \right)^{1/t} - 1 \quad (\text{Eq7})$$

Where; Y1 donates previous year growth, Y2 donates current year growth, t time in years, GC donates going concern.

5.4.2. Summary of study variables

5.5. Data processing

The study carried out analyses of correlation matrices as well as descriptive statistics. The most effective estimation technique was determined using a cross-sectional dependency (CD) test. The Pesaran CD test relies upon the generalized ordinary of the pairwise link coefficients across each department's regressors, also with the null hypothesis being the absence of cross-sectional dependence (Jijian et al., 2021). The study further tested the cointegration test to ascertain the long-term link among the study variables.

Table 3. Descriptive Statistics

Statistics	GC	AR	IM	AP	CCC	P	CS	D	ES
Mean	0.4448	0.4896	0.5349	0.5885	0.5738	0.6322	0.5340	142.45	1625.6
Median	0.456	0.54	0.554	0.6	0.564	0.648	0.564	29	800
Maximum	0.981	0.965	0.965	0.961	0.96	0.96	0.986	65	10400
Minimum	0.014	0.051	0.051	0.012	0.115	0.421	-0.252	22	43
Std. Dev.	0.2220	0.2311	0.2129	0.16790	0.1534	0.1173	0.2175	771.17	918.88
Skewness	0.2218	-0.2359	-0.3954	-0.9218	-0.5666	0.2995	-0.7390	1.0864	1.1937
kurtosis	2.0892	2.1925	2.9537	4.6021	4.0553	2.3394	3.1796	3.0864	2.2721
variance	0.0493	0.0534	0.0453	0.0281	0.0235	0.0138	0.04730	0.0321	40837
Observation	1155	1155	1155	1155	1155	1155	1155	1155	1155

The study employed the FE and RE estimators for the estimation techniques. By employing the FE estimator, all time-variant and unknown heterogeneity are eliminated, and it also measures group-specific interceptions between panels (Shabir et al., 2022), endogeneity issues may be avoided (Jijian et al., 2021). As a consequence, the results of the FE and RE algorithms offer crucial information to manufacturing firms in Ghana. Additionally, the study employed the dynamic panel data techniques balance using RE to test for the robustness of the study.

6. Empirical results and discussion

6.1. Descriptive statistics

The summary statistics in Table 2 revealed that the mean going concern of the sample manufacturing firms was 0.4448, with upper and lower values of 0.014 and 0.981 respectively. It implies that the majority of manufacturing companies in Ghana are having the capacity to foresee the existence of their future operation. Hence, it is demonstrated that there is a high degree of going concern for the manufacturing firms in Ghana. Additionally, the median value of 0.4560 to the mean of 0.4448 affirms that the dataset is partitioned symmetrically. Moreover, the extensive spread of the dataset's even distribution associated with the average is indicated by the standard deviation value of 0.2220. Table 3 present the summary of study variables.

Regarding the independent variables, account receivables revealed an average of 0.4896 and a median of 0.54, indicating a symmetrical distribution of the dataset. The upper and lower values of 0.965 and 0.051, respectively imply that there is a vast number of account payables (debtors) for the sampled manufacturing firms in Ghana. However, the dataset is away from the average, as shown by the standard deviation value of 0.2311, which is positive.

Moreover, inventory management reveals a mean of 0.5349 and a median of 0.554, showing a symmetrical distribution of the dataset. The standard deviation value of 0.2129 indicates that the dataset is extensively spread from the average. Moreover, the lower and upper values of 0.051 and 0.965, respectively, imply that there is a very high inventory management level in Ghana's sample manufacturing firms. Therefore, the middle's proximity to the mean implies the dataset's equitable distribution.

Account payables symbolized by AP recorded an average and median of 0.5885 and 0.6, accordingly, demonstrating symmetrically spreading of the data from each other. Additionally, the standard deviation revealed for account payables shows how the dataset is extensively disseminated from the average. However, account payables for manufacturing firms recorded upper and lower values of 0.961 and 0.012, which implies a correspondingly large number of account payables to the manufacturing firms in Ghana.

The cash conversion cycle recorded average and standard deviation values of 0.5738 and 0.1534, accordingly. It demonstrates that the standard deviation is extensively dispersed from the selected manufacturing companies' average. However, the median value 0.564 shows a close symmetrical spreading of the data from each variable. The upper and lower values of 0.96 and 0.115 respectively indicate that the cash flows for manufacturing firms are very encouraging.

Regarding the control variables, profitability recorded an average and median of 0.6322 and 0.648, accordingly, indicating symmetrically spreading of the data from each other. The lower and upper values of 0.421 and 0.96, accordingly imply that most sample companies make enough profit from their daily operations compared to the losses they incurred. However, the standard deviation value of 0.1173 demonstrates that the dataset is extensively disseminated from the average value. Capital structure, on the other hand, revealed an average and standard deviation of 0.5340 and 0.2175 accordingly, showing that the wide dispersion of the mean from the data results from the standard deviation. However, the lower and upper values of -0.252 and 0.986 accordingly were revealed. The results affirmed that most of the sampled manufacturing

Table 4. Spearman correlation matrix analysis and multicollinearity analysis

Variables	GC	AR	IM	AP	CCC	P	CS	D	ES	VIF	1/VIF
GC	1.0000										
AR	0.2057***	1.0000								1.04	0.960103
IM	0.4475***	-0.1142***	1.0000							1.16	0.863178
AP	-0.1188***	0.1165***	-0.0850**	1.0000						1.11	0.904544
CCC	0.4340***	-0.0886**	0.3617***	-0.0641	1.0000					1.28	0.780592
P	0.1632***	0.1009**	0.2177***	0.3528***	0.4128***	1.0000				1.26	0.794418
CS	-0.1325***	0.0371	-0.0659	-0.0160	0.0870*	0.1449***	1.0000			1.07	0.932934
D	0.1041**	-0.0592	0.1050**	-0.0261	0.0320	0.0074	-0.0912**	1.0000		1.04	0.958601
ES	0.0963**	-0.0028	0.0643	-0.0166	0.0510	-0.0480	-0.0280	-0.0577	1.0000	1.01	0.986262

*** = 1%, ** = 5%, * = 10%.

Table 5. Pesaran cross-sectional independence test

Variables	Pesaran CD
GC	54.696***
AR	15.576***
IM	29.838***
AP	2.09**
CCC	18.287***
P	6.506***
CS	2.024***
D	81.254***
ES	4.702***

*** = 1%, ** = 5%, * = 10%.

Table 6. Pedroni cointegration test

	statistics
Modified Phillips – Perron t	7.2549***
Phillips – Perron t	-2.5769***
Augmented Dickey – Fuller t	-2.5141***

*** = 1%, ** = 5%, * = 10%.

companies used the capital structure as the greatest capital for the daily routines of the business. The results from the median indicate the symmetric distribution of the dataset.

Firms' duration recorded a mean and median of 142.45 and 29, indicating the dataset's asymmetrical distribution. The lower and upper values of 22 and 65, accordingly, indicate that the duration of the firms is close to each other. The standard deviation recorded reviewed a wide dispersed mean from the dataset. Enterprise size revealed an average and standard deviation of 1625.6 and 918.88, accordingly, showing a wide spreading of the data from each other. The median revealed for the enterprise size of the sampled manufacturing companies showed the asymmetric distribution of the dataset to the mean.

Regarding skewness and kurtosis, according to (Gronemus et al., 2010) and (Bryne & Wålinder, 2010), a dataset is deemed standard if the skewness and kurtosis fall between the ranges of 2 to +2 and -7 to +7, respectively. Given this, regarding skewness GC, P, D, and ES indicate positive values, which shows the symmetrical distribution of the dataset and is skewed to the right (positively skewed). Moreover, AR, IM, AP, and CS recorded negative values showing the asymmetrical distribution of the data and is skewed to the left (negative skewed). However, concerning kurtosis, all the research variables indicated a range between -7 to +7. This suggests that the dataset has been disseminated in a typical manner. Considering variance in general, all the variables recorded have slight variance, revealing that the data points are incredibly near to the mean and to one another.

6.2. Spearman correlation analysis and multicollinearity analysis

Table 4 shows the Spearman correlation matrix. The matrix displays a mixture of weak, moderate, and high correlations between the variable pairings. Table 4 reveals that D and P indicate the

lowest overall correlation of 0.0074, although IM and GC revealed the maximum overall correlation, of 0.4475. Table 4 present the Spearman correlation analysis and multicollinearity analysis.

Table 4 reveals that in regards to the independent variables, IM and CM posit positive and statistically significant correlations with going concern. Moreover, AR and AP's remaining independent variables reveal a negative and statistically significant correlation with going concern. Regarding the control variables, P, D, and ES, show a positive link with going concern. The positive link revealed a correlation that is statistically significant. The last control variable CS reveals a negative correlation with going concerned. According to (Agyemang, Yusheng, Kongkuah, et al., 2023), a regression model may show multicollinearity when the dataset exceeds 0.8. Hence, Table 4, reveals that there are no multicollinearity issues. This is because all the variables recorded correlation values less than 0.8. In this instance, multiple regression analysis will include the explain and explanatory variables.

6.3. Preliminary test

6.3.1. Cross-sectional dependency analysis

Several indicators, such as the intensity and nature of cross-sectional correlations, influence how cross-sectional dependency affects an accurate assessment (Jijian et al., 2021). A significant decrease in estimating accuracy might arise from ignoring cross-sectional dependency (Awad & Warsame, 2022). Table 5 displays the findings of the Pesaran CD analysis regarding cross-sectional independence.

The CD findings in Table 5 confirmed CD's existence. The findings showed that every parameter proved statistical significance at 1% level for all of them. As a result, we reject the null hypothesis that there is no CD and accept the alternative hypothesis that CD exists, indicating that any shocks to one manufacturing firm are probable to impact the other firms because the data for the variables exhibit cross-sectional dependency.

6.3.2. Cointegration test

The cointegration test assesses the connection over time between the study's dependent and independent variables (Twum et al., 2021). The absence of a cointegration test reveals no long-term association among the study variables (Pascalau et al., 2022), thereby eliminating the need for multiple regression analyses (Kwakye et al., 2018).

The Pedroni Trend cointegration test was employed to examine the long-term relationship among the variables with their relative trends. Table 6 shows probabilities for the several trend tests that are less than 0.01, indicating a 1% significant level. As a result, cointegration is accepted as an alternate hypothesis; however, cointegration is rejected as the null hypothesis. This implies a long-term link between the parameters considered in the integrated test analysis. Table 6 present the cointegration test for the study.

6.4. Estimation technique

The study employed the Fixed Effect (FE) and the Random Effect (RE) estimation approach for the estimation techniques to prevent the divergence of the regression findings caused by the adoption of an erroneous estimation approach. The FE and RE estimation carefully examined the regression to see whether the variables were cointegrated and robust to contingent stationarity (Jijian et al., 2021). As a result, the stationarity test was not conducted in the study. The FE estimator deals with unobserved heterogeneity inclination coefficients within group-specific intercept (Shabir et al., 2022). As a result of measuring group-specific interceptions, the FE estimator eliminates all time-invariant and unknown heterogeneity (Jijian et al., 2021). The RE estimator makes the underlying assumption that the group-specific interception is independent random factors chosen within an overall range. Even though it remains less effective compared to a FE estimator, it can manage time-invariant and unknown heterogeneity (Danso et al., 2021).

According to the Hausman Test in Table 7, after comparing the FE and RE estimators suitable for the estimation techniques, the results reviewed a Chi2 value of 19.08 which is statistically significant at 1%. This demonstrates that the null hypothesis of RE as the appropriate estimator for the estimation techniques is rejected and the alternative hypothesis of FE as the appropriate estimator for the estimation techniques is accepted. Therefore, the FE estimator is selected as the main estimator, and the RE estimator is selected as the robustness estimator employed for the estimation techniques. The Hausman Test is presented in Table 7.

The study utilized five models for the estimation techniques. Based on the Hausman Test, the study selected the FE as the main estimator at R1 and the RE as the robustness at R2 in all the models. The study then employed the stepwise regression analysis by introducing one of the independent variables each in Models 1 to 4, as shown in Eq. 3 to Eq. 6. In Model 5, all the independent variables were used by utilizing Eq. 2. The results of the estimation techniques are presented in Table 8.

The findings in the estimation techniques in Table 8 for Models 1 to 5 showed the Wald chi2 values of 384, 410, 320, 375, and 640 recorded in R2 for each Model accordingly. The strong Wald chi2 value discovered shows that the model is statistically suitable for the empirical investigation. However, the high adjusted R-square values of 0.562, 0.661, 0.528, 0.592, and 0.675, for each model demonstrate significant variance regarding how the variable affects each other. According to the results, the model adequately describes a more significant portion of the variety of ways in which the various explanatory variables affect the dependent component. Hence, the estimators accurately depicted the variations in which the variables in the various five models impact each other.

Firstly, by using the main estimator FE, the result shown in Model 1 at R1, regarding the link between account receivables and going concern, reveals a positive slope and statistically significant link. This suggests that a rise in the account receivables (customers) will increase the going concern of the sampled manufacturing firms by 0.0686 percentage points. However, the p-value is < 0.05 , affirming that the negative association is statistically significant at 5%. Thus far, the first hypothesis has been rejected.

Additionally, Model 2 at (R1), findings by the main estimator FE, reveal a positive association between inventory management and the going concern of the sampled manufacturing firms in Ghana. The positive link shows that a percentage increase in the company's inventory management will increase going concern by 0.1019 percentage change. The p-value recorded was < 0.01 , which affirms that the positive slope is significant at the 1% level. Hence, the study accepted the second hypothesis base on the FE estimator results.

Concerning the link between account payables and going concern in Model 3 at (R1), the results by the main estimator FE revealed a negative slope relationship between these two variables. This demonstrates that a unit increase in the sample companies' account payables will decrease the going concern of their operations by 0.4825 percentage change. However, the negative slope is at 1%, which is statistically significant. Hence, the third hypothesis is rejected since the results are not per the assumption.

Similarly, in Model 4 at (R1), the main estimator FE results posit a positive link between cash management and the going concern of the sampled manufacturing firms in Ghana. This affirmed that a unit increase in the company's cash inflows from their operating, investing, and financing activities would increase the manufacturing firms' going concern (foreseeable future) by 0.0802 percentage change. This influence to convert cash inflows to cash outflows will increase the possibilities of the sampled manufacturing companies to foresee their future existence. The positive slope link is statistically significant at a 1% level because the p-value < 0.01 . In line with the fourth assumption, the FE estimation techniques analysis result proves the assumption is accepted.

Table 7. Estimation technique										
Variables	Model 1		Model 2		Model 3		Model 4		Model 5	
	FE	RE	FE	RE	FE	RE	FE	RE	FE	RE
	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2
LNAR	.0686**	.0693**							.0696***	.0689***
LNIM			.1019***	.1132**					.0627***	.0734***
LNAP					-.4825***	-.4972***			-.4626***	-.4746***
LNCM							.0802***	.0839**	.0509*	.0582**
LNP	.0113***	.0155***	.0086**	.0111**	.0212*	.0238**	.0241***	.0284*	.0050**	.0025*
LNCS	-.0912***	-.0851**	-.0950***	-.0905**	-.0612**	-.0548**	-.0857**	.0791*	-.0703***	-.0646***
LND	-.0456	-.0346	.0484*	.0324*	-.0621*	-.0346*	.0461*	-.0417*	-.0546*	-.0542*
LNES	.0588	.0618*	.0631*	.0692**	.0475	.0540*	.0748*	.0784	.0550*	.0642**
R (2)	.645	.624	.693	.682	.613	.572	.648	.617	.748	.692
ADJ. R2	.562	.542	.661	.593	.528	.523	.592	.584	.685	.615
OBS	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155

***, **, * for 1%, 5% and 10% respectively.

Table 8. Hausman Test

Statistics	Probabilities
Chi2	19.08
Prob>chi2	0.0079

Regarding the RE robustness estimation test results for the various Models, account receivables recorded a positive and statistically significant pace at 5% in Model 1 at (R2). The results reveal that an upsurge in account receivables will indicate an increase in the going concern of the sampled manufacturing firms by 0.0693 percentage points. The findings of the FE estimator for the main estimation support the RE estimator results. Following the association between management of inventory and going concern according to the RE robustness test, the findings in Model (R2) posit a favorable and statistically significant link at a 5% level showing that an upsurge increase in inventory management will reflect in an increase in going concern by 0.1135 percentage-wise. The findings are in accordance with the FE estimator results in Model 2 (R1). Moreover, according to the robustness test performed by the RE estimator results in Model 3 (R1), a negative link exists between account payables and going concern. The negative link implies that any unit increase in account payables of the sampled manufacturing firms in Ghana will reflect a decrease in going concern of future existence by 0.4972 percentage change. The negative slope is at a 1% threshold of statistical significance. The conclusion of RE results supports the findings of primary FE results indicated in Model 3 (R1).

Similarly, using the RE robustness results in Model 4 (R2), a positive link exists between the cash management and going concerns of sampled manufacturing companies in Ghana. The results affirmed that an upsurge in the cash conversion cycle would reflect a significant increase in going concern by a 0.0839 percentage increase. The findings correspond with the results of the FE estimator test.

In Model 5, when all the variables were integrated with one model, the findings from (R1) were similar to the results for the models when one independent variable was included in Model 1 to Model 4. The results confirm that an increase in the sampled manufacturing firm's account receivables, inventory management, and cash management will cause an immediate percentage increase of 0.0696, 0.0627, and 0.0509 to firms going concern. Therefore, the results suggest that management should emphasize these three variables in the business settings to increase the possibility of going concern of future existence. The remaining independent variables AP posit a negative link with going concern with values of 0.4626. This confirms that a unit increase in the sampled manufacturing firm's accounts payables will decrease going concern by 0.4626 percentage change.

6.5. Post-diagnostic test

Table 9 Autocorrelation and Heteroskedasticity Test Analysis

The study utilized serial methods to test for autocorrelation for the variables. The findings revealed in Table 9 demonstrate that the correlation between the error terms for each parameter is nonexistent. Therefore, the alternative hypothesis is disproved, and the autocorrelation null hypothesis is accepted since the p-values revealed significant probability. Concerning the heteroskedasticity test, the study employed the Hetttest approach. According to the results, the variance reported is not different in the error term. Hence, the alternative hypothesis is rejected, and the null hypothesis is accepted. This implies that the approach is absent from heteroskedasticity. Moreover, the insignificant Probability>chi2 values demonstrate the absence of heteroskedasticity in the research variables. Therefore, the discrepancies in the error term are stable. Table 9 demonstrates the autocorrelation and heteroskedasticity test.

Table 9. Autocorrelation and Heteroskedasticity Test Analysis

Test	F (1, 28)/ Chi2	P – values
Autocorrelation	11.29	0.0057
Heteroskedasticity	1.20	0.2736

6.6. Discussion

Businesses in the world today need effective working capital management to increase income levels and profitability. In light of this, most manufacturing firms worldwide strive to achieve the greatest wish in companies' growth (Chowdhury et al., 2018). Hence, some studies have proposed ways to increase working capital management (Chasha et al., 2022).

Accounts Receivables are part of current assets and play the second-largest part in current operations after cash in the operational activities of a business (Herison et al., 2022). Receivables result from the supply of loans and the selling of products or services on credit to customers (Hajawiyah et al., 2020). According to the system management theory, account receivables form part of the business systems and unit that contributes significantly to the growth of the business. The growth of a business is mainly determined by the number of potential and actual customers (Amponsah-Kwatiah & Asiamah, 2021), as the cash conversion cycle theory proposes, who contribute significantly to the business in terms of profitability and growth. Many businesses worldwide strive to gain more customers to increase capital and sales (Jory et al., 2020). Account receivables positively affect sales Imhanzenobe (2022), sales increase the amount of capital achieved (Louw et al., 2022). Customers have been the mainstream of business and contribute significantly to the growth of the business. However, the customer's contribution to business has advised many firms, especially manufacturing firms, to emphasize gaining more customers. The increased number of account receivables negatively affects a firm's performance (Herison et al., 2022) since some receivables will be defaulters to the business.

According to our findings, account receivables and going concern, there is a positive link between these two variables. The results affirm that an increase in account receivables is correlated with an increase in going concern of the sampled manufacturing firms in Ghana. In order phrase, the results mean that account receivables can increase the going concern of the sampled manufacturing firms in Ghana. The results from the estimation techniques demonstrate that account receivables have a positive link with going concern that is statistically significant at the 1% level. As a result, the first hypothesis is rejected. The results contradict with Mahmud et al. (2022), who identified a negative link between account receivables and a firm's performance. The results are also following the findings of Herison et al. (2022), who found a positive link between account receivables and levels of profitability in the Indonesia stock exchange.

Moreover, Inventory management is a vital component of a manufacturing company's supply chain. It is employed to strike an equilibrium between a manufacturer's supply and demand for products and services. A more efficient inventory management strategy may increase sales and profitability (Li & Mizuno, 2022). According to the system management theory, for a business to be competitive, management must play a crucial part since they set plans and objectives for the business (Yaser Saleh et al., 2023). For firms to reach economies of scale, the activities of that firm must match the transformation and adoption of new managerial styles and technological trends (Danso et al., 2021). This trend will encourage management to focus mainly on the management of inventories, which plays a crucial aspect in the growth of the business (Louw et al., 2022). The increased inventory management increases companies' capabilities by improving production, selling, and administration activities, thereby leading to gains into going concern. If a company focuses on stock administration in competing with other firms in the same industry, the firm can be the market leader since the stock management are accurately administered. However, with the

management of inventories, firms will be able to decrease the cost associated with inventories, thereby increasing profitability and the chance to going concern. The estimation technique results appeal to match the theoretical assumption. From the findings, inventory management positively affects going concern, revealing that an increase in inventory management increases going concern. The results supported the second hypothesis, which assumes a positive link between the two variables. Our findings align with Ushakov and Shatila (2021), who found a positive relationship between inventory control and cost minimization of Lebanese retail firms. Conversely, Jory et al. (2020) results did not match our findings. The results found a negative link between inventory management and firms' performance in the telecommunication industry.

To control production and avoid underproduction businesses need reliable suppliers Ushakov and Shatila (2021). By this, the firm can concentrate on producing quality and affordable goods for customers. Creditors of companies prove a crucial aspect of business operations as the system management cycle proposes (Andrew Agyemang A. A. Osei, K. Yusheng, A. E. Caesar, et al., 2019). This is because all materials for production activities depend mainly on suppliers. Account payables include parties that play a vital role in the success and failure of a business (Saad et al., 2021). The provision of resources and materials needed by manufacturing firms to enhance productivity and gain advantage to going concern is mainly provided by suppliers. Account payables may react favorably or unfavorably to the operation of the business (Sedevich-Fons, 2020). Account payables reacting favorably increases the operations of a business. For a business to remain competitive and enjoy both internal and external economies of scale, account payables should be considered in the planning process since they contribute to the growth of the business. They provide the business with loans, resources, technology, and capital for its formulation and operating activities. According to Feng et al. (2022), an increasing number of account payables will negatively affect the business's profitability. This is backed by Sedevich-Fons (2020), who found that if account payables increase, profitability will be reduced since all the firm's interest after tax will be used to pay debt or loans. According to our findings, account payables have a negative relation with the going concern of the sampled manufacturing firms. At a 1% level, the link is statistically significant. Hence, hypothesis three is rejected since the results are not per the assumption. This reveals that an increase in the sampled manufacturing firms' account payables (creditors) will decrease going concern of their operation. The results are in line with Singh (2022), who found a negative link between account payables and the reactions to hedge investing advocacy.

Finally, cash from operating, investing, and financing activities contributes significantly to the growth of the business (Thanh Liem, 2021). To transform cash outlets into cash inflows, companies must ensure that appropriate transactions are made and aligned with the international financial reporting standard IFRS and international accounting standard IAS regulation. In order to reach this peak, companies must apply these regulations to their operations and system to enhance adequate cash flows and going concern of future operations. According to the cash conversion cycle theory, the conversion of products into cash depends mainly on the activities of the business. Cash contributes significantly to the activities of the business since it determines the transactions that the business must make at a particular point in time (Al-Ebel et al., 2020). The period to convert cash outflows into cash inflows perform a vital role in gearing towards profitability, and going concern is the central idea of the cash conversion cycle theory. The cash conversion cycle plays a role in combining the future existence with the goals of the business in the long term. According to the estimation techniques, a positive slope link exists between the cash management and the going concern of sampled manufacturing companies in Ghana. The positive slope association is statistically significant at a 10% significant level. This reveals that an increase in cash management will cause an increase in the going concern of the sampled manufacturing firms in Ghana. The results also affirmed that manufacturing firms should emphasize the period to convert cash outflows to cash inflows for the generational operation of the business and enhance going concern. The study assumption was a positive relation. Therefore, the assumption is supported. The results are in accordance with Iqbal et al. (2022), who identified a positive association amongst the cash conversion cycle and valuing companies' performance in the Pakistan stock exchange market. Also, contrary to the findings of

Zeidan and Shapir (2017), who identified a negative link between the cash conversion cycle and value-added activities of companies' performance in Brazil.

7. Summary and conclusion

7.1. Conclusion

The advancement of managerial skills and strategies has invited many manufacturing firms to emphasize methods to control business operations. In both developing and developed economies, companies are placing strategies to lead the market in terms of production and services. Effectively controlling and managing working capital influence operations, profitability, and going concern and indirectly affects other competing firms. Working capital management among manufacturing firms has brought about a large increase in production and sales since account receivables, inventory management, cash, and bank balance contribute significantly to the going concern of business operations. The emergence of business failures is undoubtedly a problem for many manufacturing firms. Given this, working capital management is essential or effective prevention the failure of manufacturing businesses.

The study employed Secondary data for the empirical investigation using a quantitative approach. Due to data availability, the study only included 55 manufacturing companies. Data from 2002 to 2022 was obtained from the sampled companies' annual report and financial statements. An unbalance panel statistic was used for the empirical investigation. The proxy for the dependent variable (going concern) is the growth rate model. The study indicators for the dependent variables were account receivables and payables, cash, and inventory management. Lastly, the study selected profitability, capital structure, durations, and enterprise as the control variables. The study employed the FE estimator as the main estimation technique and the RE estimator as the robustness test. The findings by the FE estimator revealed the following major outcomes.

Firstly, a positive and significant link was found between account receivables and going concern of manufacturing firms in Ghana.

Secondly, inventory management and going concern was found to have a positive and significant slope link.

Thirdly, a negative slope was found between the link between account payables and going concern.

Finally, a positive and significant slope link persists between the cash management and the going concern of sampled manufacturing firms.

The robustness results by the RE estimator show similar results with the main estimator's findings in terms of account receivables and going concern, inventory and going concern, and cash management and going concern. However, account payables had a negative and significant association with going concern.

7.2. Recommendations

In improving the working capital management of firms, the following recommendations are proposed:

Firstly, it is recommended that measures including effective mobilization of inventories, cash, debtors, and creditors should be the main motive of management and owners of the business. To ensure the going concern of firms, working capital management should be considered when considering strategies for business growth and expansion.

Secondly, to ensure going concern, profitability, and maintain business credibility, there is the need to establish an effective working capital management system to take charge and control business operations and avoid business failures, as the results indicate.

7.3. Limitations and future studies

Firstly, due to data unavailability, the study selected 55 manufacturing companies in Ghana for the empirical analysis; future studies can observe more companies if data are available.

Secondly, the study used only large-scale manufacturing firms for the current study without considering small-medium manufacturing firms. Future study can consider a comparative study using small-medium manufacturing companies and large manufacturing companies.

Lastly, the study considered the effect of working capital management on the going concerns of manufacturing firms. Future studies can consider other factors that affect manufacturing firms going concern other than working capital management.

7.4. Policy implications

Working capital management reduces the risk of business uncertainties and business failures, thereby increasing the opportunity for the business to operate in the future. Given this, the following policy implications are proposed.

Firstly, policymakers, financial analysts, and management should ensure appropriate measures to manage working capital effectively to enhance the going concern of their operations. This is because, effective working capital management is the only way to avoid discrepancies.

Additionally, owners of businesses and management should ensure that rules and regulations governing working capital management according to International Financial Reporting Standard IFRS and International Accounting Standard IAS are adhered to and practiced in their respective companies to reduce business failures and enhance going concern.

Lastly, systematic adherence to firm regulations will impact the companies positively. Manufacturing firms in Ghana should implement strict measures and strategies concerning working capital management. Some of these strategies are effective inventory management, cash management, and control of account receivables. This in the long-run will promote going concern of the firms.

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Data availability statement

Data were extracted from annual report and financial statements of the sampled manufacturing companies in Ghana.

Correction

This article has been corrected with minor changes. These changes do not impact the academic content of the article.

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