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Optimization of Financial Performance in E-commerce

Ishmael Fleming
Walden University

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Walden University

College of Management and Technology

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Ishmael Fleming

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Walden University
2022

Abstract

Optimization of Financial Performance in E-commerce

by

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MS, University of Phoenix, 2009

BS, University of Maryland University, 2008

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

October 2022

Abstract

Financial performance is a challenge for business managers in the e-commerce industry that lack the knowledge to meet their operational objectives consistently. Business managers are concerned with poor financial performance due to the adverse impact on business sustainability. Grounded in total quality management theory, the purpose of this quantitative correlational study was to examine the relationship between working capital management (WCM), operating expense ratio (OER), and e-commerce financial performance. Archival data were collected from 107 small- to medium-sized publicly traded e-commerce businesses headquartered in the United States from 2019 to 2021. The results of the multiple linear regression were significant $F(2, 104) = 4.684, p < 0.001, R^2 = 1.000$. In the final model, WCM and OER were statistically significant with WCM ($\beta = -0.34, t = -9332835.434, p < .001$) accounting for a lesser contribution to the model than OER ($\beta = -1.016, t = -275081494.2, p < .001$). The key recommendation is for business managers to manage the cost of selling their produced product or service holistically together and not separately. The implications for positive social change include potentially helping business managers to increase profitability through WCM and OER optimization allowing organizations to invest in targeted vendors, communities, and valuable publicly traded company stock.

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Dedication

This study is dedicated to my dad and mom. Dad, losing you when I was at age 37 was tough, never got a chance to say thanks for the support, guidance, belief, and sacrifices. Mom, losing you when I was at age 5 was even more challenging, not knowing what your dreams were for me, not knowing if I agree or disagree with your perspectives on life, and not knowing what your voice sounds like to include in my thoughts. But nevertheless, we are here now, I am at age 39 and I just wanted to say “out loud” that I am doing it, I am being the change that I would like to see in this world. Hope to see you both in the next lifetime.

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Section 1: Foundation of the Study

Successful small businesses are a significant part of the U.S. economy by comprising 66% of private-sector employment in the country, employing over 1.2 million people, and generating over \$165 billion in revenue annually (Norze et al., 2019). Of the new small businesses created every year, only half survive their first 5 years of operation because of the lack of quality management (Bhandari et al., 2019). Quality management comes from the decision-making personnel of a company who are proactive, innovative, creative, and forward-thinking for the betterment of the business (Krikunov et al., 2020). The general business problem is that many unqualified managers do not manage their business's working capital and operating expenses effectively. The purpose of this quantitative correlational study was to examine the relationship, if any, between working capital management, operating expense ratio, and e-commerce financial performance.

Background of the Problem

The focus of the proposed study is quality business management. Traditional financial institutions consider E-commerce companies high-risk (Li, 2017). The perceived risks emerge from the fact that e-commerce companies usually require, initially, large amounts of capital to enter the respective markets (Li, 2017). In addition, the ability of competition to mimic services or products increases the lack of stability of many new e-commerce companies, thus increasing risk (Jie, 2016). As a result, e-commerce company startups traditionally utilize single source or private funding (Svatosova et al., 2018). The e-commerce market relies, at start-up, on immediately securing customer bases through continual marketing and product / service enhancement,

which are essential to e-industry operations but very costly (Li, 2017). While focusing on product development and marketing, many e-businesses operate with negative cash flow, hoping to sustain until profits can be made. However, because of risk factors after initial investment allocation, securing additional funding can become problematic (Yuejun, 2016; Yumin, 2020).

If managed effectively, the initial investments secured for a startup can often sustain an e-commerce business until profits are consistent. The business problem is that many unqualified e-commerce managers are in control of their business's working capital and operating expenses (Yuejun, 2016). This business problem deserves additional research because of the increased emergence of e-commerce businesses (Meiying, 2021). Numerous researchers, such as Kaushik and Chauhan (2019), examined the financial management of e-commerce companies.

Kaushik and Chauhan (2019) performed a study on 211 non-banking, financial, and information technology (IT) institutions solely focused on the relationship between working capital management and financial performance. The results indicated a significant positive association between working capital management and financial performance (Kaushik & Chauhan, 2019). In addition, studies such as Karno et al. (2018), focused on operation expense ratios. Karno et al. performed a study on four urban outer city schools in five different districts by determining if there is a relationship between operational cost and annual performance. The results of this study showed that an increase in the quality of education improved school participation, community participation, quality of teachers, and educational facilities (Karno et al., 2018). The need

to solve this applied business problem comes from organizations wanting to improve their annual financial performance. Analyzing, adjusting, and managing business operations holistically, instead of only focusing on independently improving each part of the business's operation is the concept of Deming's (1982) total quality management (TQM) philosophy (Duncan & Luchs, 2017, as cited in Kennedy, 2018).

This study is essential because of the need to focus on effective, holistic e-commerce management which contributes to an organization's annual financial performance (Karno et al., 2018; Kaushik & Chauhan, 2019). This study will include examination of whether a correlation exists between working capital management and operating expense ratios. The practice of optimization, historically, produces efficient, effective, and high annual performance results by analyzing operation systems (Precup et al., 2021).

Problem Statement

Annual e-commerce industry sales in the United States continue to grow at an increasing rate of (a) \$455 billion in 2017, (b) \$535 billion in 2019, (c) projected to reach \$600 billion by the end of 2020, and (d) will likely surpass \$1 trillion in 2027 (Barto & Guzman, 2018; Moagar-Poladian et al., 2017; Yu & Kim, 2019). While Wang et al. (2020a) reported that some managers continue to fail to capitalize on the available online revenue from the e-commerce industry's spectacular growth. The general business problem is that many e-commerce operation managers do not manage working capital and operating expenses at optimum levels. Consequently, ineffective use of financial resources can constrain e-commerce financial performance and the strategic decision-

making abilities of management. The specific business problem is that some e-commerce managers do not understand, if any, the relationship between working capital management, operating expense ratio, and e-commerce financial performance.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationship, if any, between working capital management, operating expense ratio, and e-commerce financial performance of e-commerce companies. The independent variables are working capital management and operating expense ratio. The dependent variable is e-commerce financial performance. The targeted population is e-commerce businesses that operate in the United States. The implications for positive social change include the possibility for business managers to be better equipped to ensure business sustainability, which can increase the ability to create additional economic opportunities in their local community. Equipping business managers with the tools to foster sustainability can increase local revenue sources to cycle into the local workforce, residents, vendors, and community.

Nature of the Study

There are three common research methods used to conduct studies. The qualitative research method is for exploratory research, interviews, and collecting intellectual data (Hu & Chang, 2017). The qualitative approach did not align with this study because the research results need to be numerically data-driven (Fang-Yi et al., 2020). The mixed methods research included both quantitative and qualitative research (Hu & Chang, 2017). The mixed methods research is not appropriate for this doctoral

study. Instead of interviewing several managers from e-commerce businesses, examination of profit-loss statements from e-commerce companies will be conducted to address the research inquiries.

The quantitative research method requires variables, tables, figures, and theories (Hu & Chang, 2017). Another positive factor for the quantitative research method was that this type of analysis methodology requires numerical data to be quantified to answer the research question and meet other objectives (Fang-Yi et al., 2020). The quantitative methodology is the most logical research method to address the research questions proposed.

The correlational design best suits the purpose of this doctoral study by examining the relationship between variables (Fang-Yi et al., 2020). The correlational design was used for the proposed study to assess the strength of the relationship between two or more variables (Hu & Chang, 2017). For this study, the correlational design is the most appropriate because the purpose of the study is to determine if any relationships exist between the independent and dependent variables (Fang-Yi et al., 2020). Furthermore, there are no intentions of controlling any of the variables, therefore ultimately making the use of the experimental design and quasi-experimental design inappropriate for this doctoral study.

Research Question

This research study examined, the relationship between the operating expense ratio found on the profit-loss statements and the management of working capital located on the balance sheets of all the selected sample e-commerce businesses. The one central

research question for this quantitative correlational study is: What is the relationship, if any, between the working capital management, operating expense ratio, and e-commerce financial performance?

Hypotheses

The proposed research study tests the following hypotheses:

H0: There is no statistically significant predictive relationship between working capital management, operating expense ratio, and e-commerce financial performance.

H1: There is a statistically significant predictive relationship between the working capital management, operating expense ratio, and e-commerce financial performance.

Theoretical Framework

A theoretical framework provides the context for conducting research and interpreting findings (Archer et al., 2017). Many different theoretical frameworks exist to evaluate levels of perceived value in a business. Deming's (1982) philosophy of continual improvement conceptualizes a business as a whole system instead of compartmentalized (Breja, et al., 2010, as cited in Breja et al., 2016). Deming was an American management consultant and professor in mathematical physics, mostly known for statistical process controls, operational quality, and management techniques (Duncan & Luchs, 2017, as cited in Kennedy, 2018). The TQM system has an organizational influence by teaching management to adopt principles that can increase quality, reduce costs, reduce employee attrition, and increase customer loyalty (Kennedy, 2018).

Deming's ideas articulate the belief that (a) when organizations focus on prices, the costs eventually often rise and quality often over time falls, and (b) when organizations focus on quality, the quality eventually usually rises and often cost over time falls (Breja et al., 2010, as cited in Breja et al., 2016).

Deming's (1982) TQM philosophy (Duncan & Luchs, 2017, as cited in Kennedy, 2018) was used as the theoretical framework for this study. The TQM theory aligns with the variables of the proposed study. Working capital and operating expense ratio can be examined through the lens of TQM because of the need for these two variables to be continuously adjusted to function at optimum levels in the evolving e-commerce industry (Breja et al., 2010, as cited in Breja et al., 2016).

Operational Definitions

Cash conversion cycle (CCC): This term represents the cash inflow and cash outflow of four primary business activities, which are (a) the purchase of inventory, (b) sale of products or services, (c) collection of revenue, and (d) payment of short-term liabilities (Kolias et al., 2020).

Ecommerce financial performance (EFP): This term signifies the measurement of a business's periodic output of profitability, efficiency, and effectiveness; EFP measures how well an online business can create a profit for its investors (Acikgoz & Kilic, 2021).

Operating expense ratio (OER): This term implies comparing and measuring different costs needed to run a business, OER also shows how much revenue exist for a profit or a loss (Chong et al., 2017).

Working capital management (WCM): This term infers managing short-term assets and short-term liabilities to maximize annual revenue through efficiency and effectiveness (Kolias et al., 2020).

Assumptions, Limitations, and Delimitations

Assumptions, limitations, and delimitations play a vital role in this doctoral study process by providing the reader with a certain level of understanding, logic, and expectation. Dean (2014) stated assumptions are self-evident truths, limitations are potential study weaknesses, and delimitations are limitations due to the research design. Moreover, Gallo and Clauter (2014) reported that: (a) an assumption is a particular event that happened without proof, (b) a limitation refers to a circumstance beyond the control of the researcher, and (c) a delimitation is a limitation imposed on the study that limits the generalizability of the results. In the following section, the topics of discussion are assumption, limitation, and delimitation.

Assumptions

The first assumption of the proposed study is that the information in the financial documents obtained for the 100 companies in the sample population is accurate. The second assumption is that all the organizations in the sample population prioritize financial profitability over philanthropy and over maximizing economic impact. Some companies do not focus on making a profit through operations; some businesses can better increase their stock value through philanthropy and brand awareness (Kenchington, 2019). Philanthropy and brand awareness make investors more money through capital gains, dividends, and a decreased tax rate (Kenchington, 2019). Some companies, such as

medical organizations, focus on providing cures for viruses and illnesses instead of providing products to treat those same viruses and other diseases, which is more profitable (Richterman et al., 2018). Klibanoff et al. (2018) stated that assumptions play an essential role in management decision-making when under uncertainty. Management assumptions can also be a source of variation in human behavior (Ravenelle, 2019).

Limitations

This study contains two scope-related limitations. The first limitation is in the omission of other profitability drivers while analyzing the relationship between working capital management, operating expense ratio, and e-commerce financial performance. The second limitation is only businesses with three consecutive years of operating profit will be included in the sample population. Companies that may have a positive relationship between WCM, OER, and EFP will be excluded from the sample population because the profits are not during three consecutive years of operations. Brown (2020) stated the quality of relevant information affects limitations; moreover, researchers should review their research studies for limitations from different perspectives (Rind, 2016).

Delimitations

This study contains two location-related delimitations. The first delimitation is that this study only includes e-commerce companies headquartered in the United States. The second delimitation includes only an examination of businesses that prioritize online e-commerce over traditional brick-and-mortar operations. The focus of this study is on e-commerce, so companies without an online presence did not participate in the study.

Significance of the Study

The importance of this study is to investigate the possible relationship between working capital management, operating expense ratio, and e-commerce financial performance. Performance measures the e-commerce business's profit percentage concerning surplus revenue (Acikgoz & Kilic, 2021). The significance of this study is to determine collectively, (a) if e-commerce businesses perform well when effectively utilizing a certain percentage of their working capital and (b) if e-commerce businesses perform well when efficiently utilizing a certain percentage of their operating expenses (Carswell, 2017; Hussain et al., 2020).

Damjibhai (2016) reported that the ideal *conservative* working capital ratio is 2:1 and the *current* liabilities listed on the balance sheet should total no more than 50% of the *current* assets listed on the balance sheet per calendar quarter. *Current* means assets available or liabilities due within one year (Damjibhai, 2016). Rafi et al. (2020) reported that the ideal operating expense ratio is between 60%-80%. This range of operating expense ratio means that the net operating profit should be between 20%-40% of gross revenue sales per calendar quarter; a *conservative* operation would utilize no more than 60% of operating expenses, and an *aggressive* operation would utilize at least 80% of operating expenses (Rafi et al., 2020).

Contribution to Business Practice and Implications for Social Change

The contribution to business practice findings, conclusions, and recommendations from this study could fill gaps in the understanding, effectiveness, and efficiency of e-commerce financial management practices (Svatosova, 2019). Examining potential

correlations between effective working capital management, efficient operating expense ratios, and e-commerce financial performance could be used to enhance the sustainability of future e-commerce businesses (Karno et al., 2018; Kaushik & Chauhan, 2019).

The potential social change implications are for this study to positively affect social change and improve the relations between individuals and organizations in local communities. Oprescu (2019) reported that the emergence of e-commerce and the development of e-commerce platforms removed the need for in-person interactions between buyers and sellers. This development may allow businesses in rural or urban communities to access more potential customers for increased revenue, company growth, and future success (Tzavlopoulos et al., 2019). Consequently, for e-commerce businesses, this study might improve the effectiveness and efficiency of operations. The study findings might also improve the relationship between other stakeholders such as individuals, vendors, and local communities of various e-commerce businesses.

A Review of the Professional and Academic Literature

The following literature review includes a critical analysis and synthesis of existing literature related to the TQM theoretical framework and three research study variables. The objective of this literature review is to examine prior peer-reviewed publications on the research topic; what is the relationship between working capital management (WCM), operating expense ratio (OER), and e-commerce financial performance (EFP) in small to medium-sized businesses. The review of the literature included the following major topics: (a) application to the applied business problem, (b) theoretical framework analyzation, (c) independent/dependent/measurement of variables,

and the (d) research topic's relation to the theory. This research topic aids in the solution of the general business problem, which is, many operation managers do not manage their working capital and operating expenses at optimum levels (Karno et al., 2018; Kaushik & Chauhan, 2019). Furthermore, this literature review includes the most current literature, historical literature, and relevant seminal literature on the covered topics. This literature review also provides journal articles and reports from small, medium, public, and governmental organizations.

Strategy for Searching the Literature

The professional and academic literature covered throughout this literature review came from Walden University's Library databases: (a) ABI / INFORM Collection, (b) EBSCOhost, (c) Emerald Management Journals, (d) ProQuest Central, and (e) SAGE Premier. The Google Scholar search engine identified many relevant sources during this literature review process. Of the 80 references in this study, 75 (93%) sources are peer-reviewed and published within 5 years of my anticipated graduation date. The remaining five (7%) non-peer-reviewed and older sources support the research study's prior historical framework. The search techniques include reviewing studies and articles found on the reference list of related articles during database searches. The initial investigation involved using keywords such as *financial performance*, *working capital management*, *operating expense ratio*, and *TQM theory*. Subsequent searches included additional keywords supplied by the initially reviewed sources. A list of initial and subsequent terms used while searching through the literature is below in Table 1.

Table 1*Terms Used in Literature Review Search*

Initial terms	Subsequent terms
Financial Performance	eCommerce Financial Performance, E-retailing Financial Performance, Electronic Commerce Financial Performance
Working Capital Management	Working Capital
Operating Expense Ratio	Operational Cost, Operating Cost
Total Quality Management Theory	Deming's Continuous Improvement Theory, Deming's (1982) Efficiency Evolution Theory

Application to the Applied Business Problem

The purpose of this quantitative correlational study is to examine the relationship, if any, between working capital management, operating expense ratio, and e-commerce financial performance (Hu & Chang, 2017). The independent variables are working capital management and operating expense ratio. The dependent variable is e-commerce financial profit. The targeted population is e-commerce businesses that operate online for the benefit of customers in the United States (Yu & Kim, 2019). In this doctoral study, the goal is to test the following hypotheses:

H0: There is no statistically significant predictive relationship between the working capital management, operating expense ratio, and e-commerce financial performance.

H1: There is a statistically significant predictive relationship between the working capital management, operating expense ratio, and e-commerce financial performance.

Foundation of the TQM Theory

The TQM theory is the theoretical framework utilized for this study. The TQM theory is a set of management practices and techniques used to help organizations increase their productivity and quality (Agrawal, 2019). This comprehensive management approach works horizontally across every department of a business. Direct alignment exists within the business from entry-level employees and senior-level employees to the selection of vendors and the customer based (Watson, 2017b). Deming's (1982) organizational-wide continual improvement approach aimed to reducing waste, staff attrition, litigation, and rework while increasing client/customer retention (Agrawal, 2019). Variation is the key to the TQM concept.

All systems have variations and management's recognition of the difference between common variations and special variations are imperative (Castellano et al., 2016). Common variations are difficult to detect are due to changes in a system, design, or process but special variations are easy to identify because they are changes in personnel, equipment, or procedure (Castellano et al., 2016). There are numerous quality control systems used in business today, but TQM is the only method that provides a framework for implementing effective and efficient practices to increase competitiveness and profitability company-wide (Watson, 2017b).

Evolution of the TQM Theory

The historic evolution of the TQM theory is industry-altering and spans almost 100 years. In 1927, Shewhart's idea of common variations and special variations directly led to the creation of Deming's (1982) theory of management (Cunningham, 1994, as

cited in Lovitt, 1997). During the 1930s, Deming improved the management theory to include systematically increasing quality control (Deming, 1985, as cited in Petersen, 1999). In 1940, Deming tested this quality control technique company-wide (Deming, 1985, as cited in Petersen, 1999). Later, in 1947, Deming applied these quality management methods to Japanese businesses and helped them reach quality and productivity levels unseen at that time (Deming, 1985, as cited in Petersen, 1999). Finally, in 1982, Deming introduced the management theory to U.S. businesses, renamed the theory TQM, and refined the TQM theory concept to include the 14 principles listed in Table 2 below (Agrawal, 2019).

Table 2

Deming's 1982 14 Principals of Quality Management

P1 Create constancy of purpose for improvement of product & service	P8 Drive out fear
P2 Adopt the new philosophy	P9 Break down barrier between staff areas
P3 Cease dependence on mass inspections	P10 Eliminate slogans, exhortations, and targets for the work force
P4 End the practice of awarding business on the basis of price tags alone	P11 Eliminate numerical quotas
P5 Improve constantly & forever the system of production & service	P12 Remove barriers that rob people of pride of workmanship
P6 Institute training	P13 Encourage education & self-improvement for everyone
P7 Adopt and institute leadership	P14 Take action to accomplish the transformation

Note. Table adapted from data presented in Agrawal, N. M. (2019). Modeling Deming's quality principles to improve performance using interpretive structural modeling and MICMAC analysis. *International Journal of Quality & Reliability Management*.

Deming (1982) created the 14 principles of quality management as a cure for his *Seven Deadly Diseases* of management (Kilian, 1992, as cited in Moen & Norman, 2016). Moen and Norman (2016) stated that Deming's Seven Deadly Diseases of management, are the most serious obstacles and barriers that organizations face during

operation, these seven deadly diseases are; (a) lack of constancy of purpose, to completely plan out products and services, (b) emphasis on short-term profits, instead of long-term thinking, (c) evaluation of performance, merit rating and annual review creates competition and reduces collaboration and teamwork in the workplace, (d) mobility of management, management freely hopping from job to job with no continuity, (e) management paying too much attention to visible figures and very little attention to figures unknown or unknowable, (f) excessive medical costs, because of safety accidents, (g) excessive liability costs, due to lawyers, insurance, and safety precautions.

Unfortunately, in 2021, the TQM theory does not have wide acceptance because of numerous counter philosophies and a lack of buy-in from top executives (Agrawal, 2019).

Agrawal (2019) also reported that Deming's (1982) 14 principles remain in use by some managers to improve the overall performance of their organizations. Areas for further research that would prove beneficial is an analysis of long-term historical data on organizations that truly believe in Deming's TQM (Chassin et al., 2010, as cited in Upadhyay et al., 2019). This research should center around financial performance, productivity, and minimizing cost over a certain time period. The potential impact of this research over the next 3-5 years is an increase in followers and believers of Deming's 1982 TQM, and an overall improvement of man and machine in the workforce.

Alternative Management Theories

Analysis and critics of Deming's (1982) Theory of TQM exist throughout history. Critics challenged TQM, identified potential barriers, and developed alternative

philosophies. The growth in evolving demand for a profitable business increased the organizational need for innovation and quality decision-making skills from management for the benefit of the company's financial performance (Octavia et al., 2020). Managers use Deming's TQM theory to improve the financial performance of their business (Agrawal, 2019). But numerous philosophies that counter the TQM theory create challenges, barriers, and limitations for organizations that hinder growth in financial performance. Last, future research of the differences between the TQM theory and countering philosophies would prove beneficial and could positively impact organizations domestically and internationally.

Deming's (1982) TQM theory focuses on the continuous improvement of an organization but numerous counter philosophies, favored by some managers emerged over time. New philosophies avoid holistic business development, to instead focus on only improving respective individual aspects of the business. The most noteworthy counter philosophies are (a) Abilene paradox, (b) double talk, (c) pseudo work, and (d) strata levels of work (Bassole et al., 2020; Chen & Chang, 2018; Lopez & Ivanov, 2018; Wang & Chen, 2018). Acceptance of these counter philosophies could negatively impact both the production and service industries.

The Abilene Paradox

The Abilene paradox is a management paradox first identified by a management consultant and professor in 1974 named Harvey (Venzor & Ivanov, 2017). The management paradox exists when a person, group, or organization takes an action in

contradiction to what they want to do and therefore defeats the intended purpose (Yuksel, 2017).

Venzor and Ivanov (2017) reported that according to Harvey's (1974) Abilene paradox philosophy, people caught in the web of the Abilene paradox avoid speaking up because of the fear of separation from the group, fear of being fired, fear of being demoted, or fear of losing face. The inability to manage agreement is the essential symptom that defines organizations caught in the web of the Abilene paradox, not the inability to manage conflict (Yuksel, 2017). The inability to manage agreement is in complete contrast to the TQM theory, which promotes communication and direction (Agrawal, 2019).

Chen and Chang (2018) conducted a study about the effects, causes, and influences of the Abilene paradox, if any, on their elementary school; and this study involved twelve faculty members. In an organizational setting, conflict is inevitable; Yuksel (2017) defined conflict as a catalyst for an innovative process through an environment in which numerous views and ideas contend with each other. Abilene paradox casts light on the embeddedness of conflict and why managers in an organization are acting in contradiction to their very own original judgement; any other approach to conflict, other than a direct contradiction of original judgement, would be more feasible because conflict is a necessary process that an organization should manage rather than avoid (Yuksel, 2017). Results of this Abilene paradox study showed a negative effect on the school's operation, through poor communication, inadequate interaction, isolation, exclusion, and rising gossip (Chen & Chang, 2018). Subsequently, the use of the TQM

theory through communication, interaction, and teamwork allows conflict to be structured in a productive goal-oriented way (Agrawal, 2019).

Double Talk

Double talk is a philosophy created by Orwell (1984) and competing employees; Orwell's double talk is a lie with a malicious intention to hide the truth from others (Ivanov, 2017, as cited in Minas & Ivanov, 2017). For example, employee A asks employee B if they can sign up for advanced training that the organization offered. Employee B says that the training is probably full, but the truth is that the training is not full, and the organization prefers all employees take the advanced training in preparation for faster development for promotional advancement. Eventually when the truth emerges and the staff loses trust in the management and organization; then this loss of trust leads to a philosophy called pseudo work (Brown & Spang, 2008; Minas & Ivanov, 2017).

Brown and Spang (2008) conducted a double talk study in a Detroit, Michigan elementary school science class for 1 year. The study involved one teacher and 27 students (Brown & Spang, 2008). Lopez and Ivanov (2018) negatively defined double talk as talking with the intention to confuse, mislead, or manipulate an audience. Brown and Spang, contrastingly, positively used double talk during this study. Throughout the 1-year study, double talk transferred information through teaching and learning (Brown & Spang, 2008). Upon completion, Brown and Spang viewed their study as a success; because they felt that in life every speech interaction, whether good or bad, between two or more people always involve two things, the expressed and interpretive messages communicated to the listener. This study is another philosophy in complete contrast to the

TQM theory that encourages the use of concise objectives and clear motives to advance the organization (Agrawal, 2019). The connection of Orwell's (1984) double talk philosophy to this study is to show that many malicious competing employees waste valuable productive time in an organization, instead of using the TQM theory to continuously advance itself through partnership and teamwork.

Pseudo Work

Pseudo work philosophy comes from Greek origin, pseudo work is a negative experience that is defined as pretend work that gives the appearance of work, but is not productive (Wang & Chen, 2018). Minas and Ivanov (2017) stated that a person that does pseudo work eventually becomes less excited to come to work and then becomes less motivated to improve or create positive change in the organization once promoted to a higher position. In relation to the proposed study, managers' recognition of pseudo work enables implementation of subsequent intervention. Recognition and intervention foster improved production and efficiency.

A pseudo work study conducted at a U.S. company of about 150 employees, focused on the first year of a newly hired pseudo-transformational leader (Hughes & Harris, 2017). Hughes and Harris (2017) in this study, defined a pseudo-transformational leader as someone that is exploitive, creates unnecessary work, makes unnecessary organizational changes, power hungry, consumed by their self-interest, and acts with distorted moral values. Wang and Chen (2018) stated that research shows that the use of pseudo manipulation to conceal our true intentions over time, rarely produces anything other than negative results. The results of this study showed that the pseudo-

transformational leader within 1 year of arriving at the new organization made numerous changes for the sake of simplicity to make changes, there was no changes that improved the organizational efficiency or effectiveness in a substantial manner (Hughes & Harris, 2017). This pseudo philosophy is also a complete contrast to TQM, because pseudo work lacks positive change of the organization through management (Agrawal, 2019).

Strata Levels of Work

Jaques's (1989) philosophy of strata levels of work, also known as *organizational theory*, asserts that the higher a person's position in a hierarchy is, the longer that person could work productively to complete task without supervision (Minas & Ivanov, 2017). Furthermore, assumptions included that the individual possessed a corresponding level of cognitive complexity, acquired skills, and knowledge gained through experience, and the individual valued the assigned work (Ivanov, 2011). Jaques's strata levels of work philosophy create a visual representation of the different levels of work, but unfortunately one problem with this philosophy is that if the organization grows to too many levels, depending on the industry, various employee time spans would overlap in their hierarchy position; thus creating a situation where a manager would be in a position either too long or too short (Minas & Ivanov, 2017). Depending on the person in charge of advancement, ultimately an individual could lose interest in improving the organization and instead focus more on moving up the hierarchy ladder to the next position (Minas & Ivanov, 2017). The organizational theory represents potential hindrances to small business sustainability. Managers' ability to recognize and avoid ineffective approaches such as the organizational theory can help improve personnel decisions and task assignments,

thus avoiding loss of interest. Loss of interest is in contrast with the TQM theory which focuses on growth, development, and the integration of new innovative practices.

A strata level of work study, conducted with 5,235 participants over 47 organizations, this study was to identify whether certain issues occurred at all the different strata levels of an organization (Chan et al., 2019). Ivanov (2011) stated that employees and upper management that focus more on achieving the next strata level, and less focus on solving problems to improve the effectiveness and efficiency of the organization's workplace environment, eventually fail to their competitors that do figure out ways to improve effectiveness and efficiency of the workplace environment for the overall betterment of the organization.

The results of this study showed that bullying of 1 in 3 participants at every strata level in each organization; (a) at the high end of the strata level, males and females demonstrated signs of distress, and a majority of females reported complaints of bullying, and (b) at the low end of the strata level, signs of distress appeared in males and females, but participants did not complain of bullying even after admitting to being bullied on more than one occasion (Chan et al., 2019). Employees lose motivation when the same issue occurs at every strata level in an organization, regardless of the timespan spent at the previous position (Bassole et al., 2020). Proper management strategy identification, as proposed in the current study, can alleviate harassment in the workplace and improve overall company productivity, which fosters sustainability. This philosophy is in contrast with the TQM theory, which embodies the continual evolution of the organization to

improve the effectiveness and efficiency of every program, product, and personnel (Agrawal, 2019).

Additional Contrasting and Supporting Theories

Managers, historically, use several different theories and philosophical beliefs to grow organizations (Agrawal, 2019). Because of funding requirements needed to operate certain business tactics, the following are additional minor used contrasting theories of TQM: (a) short-term thinking, (b) management by results, (c) organizational deadly diseases, (d) performance-based pay / incentive pay, and (e) merit system (Minas & Ivanov, 2017; Venzor & Ivanov, 2017).

Short-term thinking is a big issue with management in some organizations; short-term thinking is an emphasis on immediate results and short-term profit, Deming once said that short-term solutions have long-term effects on an organization (Venzor & Ivanov, 2017). When management focuses on immediate results, the focus is on making the next quarter look good in terms of sales and customer services, which means that employees will do whatever is necessary to reach the short-term goals set, even if some employees must bend the rules to achieve it (Bassole et al., 2020). Management by results is also a big failure of many businesses, because managers choose to take up so much time fixing the immediate problems, instead of figuring out what the root of the problem is (Venzor & Ivanov, 2017). The connection to this study is that the short-term thinking and management by results philosophies stagnate the growth of the business and

is in contrast with TQM theory, which endorses long-term thinking and proactively solving problems before they occur (Agrawal, 2019).

Minas and Ivanov (2017) reported that Deming (1982) had a philosophy on two types of organizational deadly diseases called constancy of purpose and performance evaluations. Constancy of purpose is when an organization stays stagnant for years without any innovation and no improvements to its existing products and services (Minas & Ivanov, 2017). Performance evaluations are when an organization focuses so much attention on rating their employees' annual performance when employees only have 4% control of the organization and upper management has the other 96% control of the organization (Minas & Ivanov, 2017). If a performance issue arises, management can correct the issue, instead of rating each employee's ability to work through the issues (Octavia et al., 2020). The TQM theory shows businesses how to create an environment that ignites management innovation and forward-thinking (Agrawal, 2019). The connection to this study is the importance of organizations to continuously improve their operation through effectiveness and efficiency.

Deming (1982) stated that performance-based pay and incentive pay causes organizations to lose, because when companies focus too much effort on ranking and rating of employees from best to worst, the company lost sight of what the overall mission is and indirectly forces the company to compete with itself (Ivanov, 2015, as cited in Butt & Ivanov, 2017). Incentive pay is a common practice in organizations today when employees are rewarded for meeting certain quarterly/annual quotas and goals (Bassole et al., 2020). Deming 1982 reported that these types of merit systems should be

abolished, and instead a better organizational practice would be to work on a method for an overall systemic organizational improvement and not merit systems for individual improvement (Bassole et al., 2020). The connection to this study is that organizational deadly diseases, performance-based pay / incentive pay, and a merit system that focuses on internal employee competition, is in contrast with the TQM theory which advocates teamwork, collaboration, and information sharing for the betterment of the organization (Agrawal, 2019).

Due to non-general acceptance, the following are sporadically used supporting theories of TQM: (a) profound knowledge, (b) collaboration, and (c) role of humor. Watson (2017a) stated that Deming (1982) devoted much time to developing a system of profound knowledge that would use statistical knowledge about process performance as the basis for critical thinking and decision-making; the essential components of this system would be four dimensions called appreciation for a system, knowledge about variation, theory of knowledge, and psychology. Organizations should promote collaboration rather than competition to avoid employee conflicts over pay, benefits, and job survival (Bassole et al., 2020). Deming also believes that collaboration in the workplace goes well with a sense of humor; Deming stated that joy in the workplace is an essential aspect of quality management and was related to both employee satisfaction and superior business performance (Carder, 2019). These three philosophies completely support the TQM theory, because they focus on team building, growth of knowledge, and the overall advancement of the organization (Agrawal, 2019). The need for this study is

to highlight the importance of a cohesive unit that maximizes organizational performance.

In conclusion, increasing uncertainties in the market create a competitive environment for businesses, therefore the TQM theory has an important role in the survival of these companies in such an unpredicted environment; moreover, Bolatan and Akgul (2019) stated that TQM is a philosophy that provides many benefits to aid in organizational longevity. Hedao and Sangode (2019) conducted a TQM study involving all employees of the organization in its continual improvement to achieve customer satisfaction; this study analyzed 21 manufacturing firms that implemented TQM principles. Organizations that utilize the TQM principles can continuously monitor environmental changes to learn and develop knowledge, Hsu (2019) then stated that they can better internally and externally use this knowledge to remold themselves to take advantage of opportunities to innovate and survive these environmental changes.

The results of this study revealed that all 21 manufacturing firms practiced TQM on a priority basis; data showed a consideration of 76% of customer feedback and implementation of 41% of customer feedback increased customer satisfaction and overall improvement of organizational performance (Hedao & Sangode, 2019). Honarpour et al. (2018) reported that by implementing TQM and managing the knowledge gained, organizations are then able to manage their operations efficiently and effectively to perform innovatively. The collection of contrasting and supporting philosophies justifies the need for the theoretical framework of TQM for this doctoral study, to determine if a correlational optimal level of effectiveness and efficiency exist between working capital

management, operating expense ratio, and e-commerce financial performance (Agrawal, 2019).

Future research of the organizations that utilized Deming's (1982) TQM theory would prove beneficial and could positively impact organizations domestically and internationally (Hung et al., 2011, as cited in Honarpour et al., 2018). Moreover, numerous researchers stated that there was a need to distinguish between quality management principles, systems, and techniques; and, a potential to standardize the quality management vocabulary (Kumar et al., 2018). Quality management is an integral part of the overall organizational movement due to the effort to achieve world-class product quality, service quality, and market success (Kumar et al., 2018).

Working Capital Management: The Independent Variable

As for almost any manager, working capital management (WCM) is a very challenging and demanding task, and to operate successfully requires policy, efficiency, and effectiveness (Mehta, 2017). In 2021, the vibrant business environment, the future, and survival of profitable firms are uncertain, due to businesses' inability to determine means of fulfilling short-term obligations; Kayani et al. (2019) noted that working capital is a short-term indicator that receives less than optimal attention from management, because management wrongfully considers working capital to be a routine matter with reversible related decisions. One issue related to the peculiarities of working capital for managers, is the insufficiently developed policies used to manage a business's working capital (Mann et al., 2018). Fulfilling short-term obligations is the sole purpose of this

independent variable, consequently, this study will determine if there is an optimal level of usage among the selected profitable businesses.

To improve working capital management in an organization, is a proper debt management policy would ensure the removal of bad debts from accounts receivables so that management will not overextend working capital (Asfawu, 2019). Working capital management was associated with profitability, because organizations irrespective of their size normally has a large portion of their cash blocked in the form of working capital, which means that an aggressive working capital management policy may lead to higher profitability (Singh et al., 2017). Past research indicates that the effects of aggressive working capital management policies are limited and short-term, Boisjoly et al. (2020) also reported that aggressive working capital policies proved to stabilize over time. Prempeh and Peprah-Amankona (2020) noted that an efficient working capital management policy plays an essential part in the overall corporate strategy to maximize shareholder value, while an aggressive working capital management policy can maximize organization performance.

Working capital management is a critical element of a businesses' day-to-day operational activities; Nastiti et al. (2019a) reported that to optimize the efficiency of working capital management, it is vital to analyze the determinants of working capital to help financial managers refine their strategy and technique. Some managers do not efficiently utilize their working capital management process other than to identify a firm's ability to manage the difference between short-term assets and short-term liabilities (Kayani et al., 2019). When analyzing and assessing the working capital

management process in business, two important elements should be added as a direct impact on the efficiency level of working capital (Zimon, 2020). These two elements are cost and revenue, which are the managers choice when creating strategies during the management process; additionally, by choosing the cost element some managers can operate the company with financial security and high liquidity, while other managers choose the revenue element that operates the company with high profitability and low liquidity (Zimon, 2020).

The lack of effective management is the main reason for the phenomenon of unavailable working capital and insufficient liquidity for many businesses (Mann et al., 2018). To enhance effective working capital management, Olanisebe and Ado (2019) suggested a proper ownership structure in which serves as a checks and balance mechanism to strengthen corporate governance. Businesses that are financially constrained have a lower optimal working level and businesses with a reduction of investments in working capital has a negative effect on organizational performance (Altaf & Shah, 2017). Therefore, this study will examine if the management of profitable e-commerce businesses effectively utilizes working capital or an aggressive working capital management.

Another major cause of organizational failure is liquidity shortages, because managers need to ultimately understand that the optimization of working capital is to reduce the reliance on the requirement of needing additional working capital to operate and instead realize the maximum available revenue (Kayani et al., 2019). During these times, Asfawu (2019) reported that a manager should consider utilizing short-term

financing, to immediately increase the available working capital to take advantage of profitable opportunities. The management of working capital plays a pivotal role in the success of a company, Shrivastava et al. (2017) discussed the importance of maintaining the most highly financially decisive person available in this position to maximize the impact of working capital on profitability. The connection to this study is to recognize the techniques and best practices of working capital through profitable e-commerce businesses in the selected population.

Working Capital Management: Measurement

The working capital management independent variable in this study regulates the assets, liabilities, and cash conversion cycle of an organization. The manager of working capital has the important task of deciding how much money to spend on current assets and liabilities; the more money a manager spends on assets the less liquidity the company has for emergencies, and the more money a manager spends on liabilities the less profitable the company is due to missed investments (Mehta, 2017). Olanisebe and Ado (2019) suggested that insolvency of a business can be attributed to poor cash flow and/or essential factors that lead to poor cash flow in business; these cash flow issues are related to inefficiencies in working capital management, which means the longer the cash flow cycle the poorer the cash inflow. Maenuddin et al. (2020) stated that conducting a measurement of an organization's performance measures its profitability; but the result of this measurement also plays an important role in management decisions regarding financial structure, divestment value, acquisition value, project direction, and employee

incentive. In this study, identifying the WCM measurement strategies helps to further the determination of a possible correlation with the e-commerce financial performance.

Prasad et al. (2019) reported that accounts receivables, inventory, and accounts payables are the major components of the operational noncash portion of working capital, and the success of the business is determined by the ability of the finance manager to optimally deal with these variables. Making appropriate sales and forecasts, actively managing the supply chain, granting, and taking proper discounts amongst other activities are undertaken to handle the optimal level of working capital throughout the business (Dorsman & Westerman, 2019). Furthermore, if a manager does not effectively and efficiently manage its current assets and liabilities, the company would be in jeopardy of becoming insolvent (Mehta, 2017). Businesses with shorter cash cycles invest more in research and development, participate in more acquisitions, have a higher valuation, and lower leverage; Jalal and Khaksari (2020) also stated that a business's ability to obtain materials on credit and effectively manage inventory plays a significant role in shortening their cash cycle. Consequently, this study will measure the annual usage percentage of working capital, to determine if a consistent level of utilization exists among the selected e-commerce organizations.

The cash conversion cycle is another approach used by managers to improve working capital; a cash conversion cycle is simply a measurement of how many days it takes a business to convert its inventory, investments, and other resources into cash from sales (Ng et al., 2017; Shrivastava, 2017). The cash conversion cycle is the process of converting accounts receivable and inventory into cash, this cash is then used to pay an

organization's accounts payable (Hussain et al., 2020). Le (2019) reported that a firm can increase its profitability by reducing its cash conversion cycle, because a lower cash conversion cycle is usually associated with a lower level of net working capital. The level of cash that a company maintains can be a good proxy for its liquidity position, but this strategy fails to fully account for its management of short-term capital (Jalal & Khaksari, 2020).

Managers use several different strategies to fine-tune their cash conversion cycle, working capital optimization, the evolution of their management team, and organizational policy. The faster a business can cycle and convert its cash, the more likely a manager will be able to be more effective with the business's working capital (Ng et al., 2017). Contingencies like culture, habits, rules, regulations, information technology systems, economic conditions, market, operational development, asset size, sales growth, solvency, and liquidity influence the increase and decrease of the cash conversion cycle (Dorsman & Westerman, 2019). Companies that manage their sales policies well will produce sufficient cash flows for their operating activities and over time to increase their profits (Nastiti et al., 2019a). Production of sufficient cash flows for operating activities is a sustainability strategy that managers can utilize to reduce negative working capital issues. An examination of study participants' sales policies can add to the body of research regarding effective management strategies, as intended in the proposed study.

Working Capital Management: Previous Research and Findings

A successful manager of working capital can be materially beneficial to the value placed on a business, but the research related to those highly successful tactics is

relatively less known (Bin et al., 2019). The relationship of this study to previous research on working capital management focuses on optimization and at what level, conservative or aggressive, is optimization realized. The need for accurate working capital management is very important, many tried to prove how optimal working capital management will increase profitability, without first proving if an optimal level of working capital exists (Hussain et al., 2020). For this study, a sample size of 107 e-commerce businesses headquartered in the United States from 2019 to 2021 will be used, while focusing on the correlation between working capital and financial performance.

Prior researchers produced numerous studies on working capital optimization, but none were specific to the e-commerce industry. These four prior studies are: (a) the Bin et al. (2019) study on identifying the optimal level of working capital use and determinants needed for working capital management, (b) the Hussain et al. (2020) study on the amount of working capital utilized in exchange rates and its effect on financial performance, (c) the Nastiti et al. (2019b) study on the effects of working capital management on profitability and sustainable growth, and (d) the Ng et al. (2017) study to test the impact of aggressive policies over the use of an organization's working capital. The results of these four prior studies were: (a) the Bin et al. study showed that an optimum level does exist and the determinants identified were used by businesses to operate above and below the optimum level, (b) the Hussain et al. study revealed a negative association between a longer cash conversion cycle and a lower return on assets. In addition to, (c) the Nastiti et al. study showed that sales growth and economic growth both determine the increase in working capital and the increase ratio only differs

depending on the size and age of the business, and (d) the Ng et al. study showed that aggressive investment policies had a negative effect on business income, and aggressive financing policies had a positive effect on business income.

These previous researchers did not place their efforts on identifying the existence of optimization. Kabuye et al. (2019) conducted a study that suggest effective working capital management is a significant predictor of financial performance, and internal control systems is not a significant predictor of financial performance. But eventually once an organization has an effective working capital management process in place, they have an adequate internal control system in place to enhance the company's financial performance (Jalal & Khaksari, 2020). In this proposed study, concentration is on working capital management optimization in the e-commerce industry and at what frequency is this working capital management optimal level being reached now by the selected companies in the e-commerce industry.

Working Capital Management: Relation to the TQM theory

The TQM theory of organizational continuous improvement and the operational goal of working capital optimization are both closely related. Considering that a business can only continuously improve itself until the point of optimization. Bin et al. (2019) suggested that evidence exists that supports the existence of an optimal level of working capital and also that optimization can help to maximize the value of a business. Baker et al. (2017) stated that development of working capital management is relatively neglected, because corporate management follows a moderate approach in which they constantly tradeoff between liquidity, profitability, performance, and value. Organizations should

promote best practices for maintaining optimal working capital investment levels to enhance their performance and sustain growth, and deviation from the optimal level of investments in working capital management affects the overall performance of businesses (Simon et al., 2017).

Sales growth and economic growth determine working capital management, but the effects of working capital management determinants differ depending on organizational size and organizational age (Nastiti et al., 2019a). Managers used several different techniques to improve the effectiveness of working capital. Some of those techniques include decreasing the company's inventory holding period (IHP), decreasing the accounts receivable period (ARP), and increasing the accounts payable period (APP) (Asfawu, 2019; Narwal & Jindal, 2018; Ng et al., 2017). Immediate action is imperative so that working capital management of a business can be improved, while at the same time it is important to also know the consequences of poor working capital management for that same company (Prasad et al., 2019).

Corporate governance and policy creation through board meetings, board independence, board ownership, audit committee, chief financial officer (CFO), or chief executive officer (CEO) help control and anticipate variables in working capital management to a certain degree (Tahir et al., 2019). A company's ability to manage working capital will not only increase their profits but also their growth; Nastiti (2019b) further talked about a concept of sustainable growth that indicates the possibility of an organization maximizing sales growth without having to change financing decisions. Moreover, a company cannot succeed with having more than one goal, a company's only

goal should be to maximize its value in the marketplace; because a business hyper-focused on solving a problem in the marketplace maximizes profits and the improvement of other financial performances in the business follows (Le, 2019).

Operating Expense Ratio: The Independent Variable

Despite the many improvements to operational cost efficiency, their still remains a number of business problems preventing managers from maximizing the benefits of an efficient operating expense ratio (Upadhyay et al., 2019). Carswell (2017) argued that management fees and ongoing compliance costs are some of the top factors in increasing operating costs on an organization's profit loss statement. Ewen and Carswell (2019) also talked about management's lack of quantitative information during decision-making as another reason for operational cost inefficiencies. In the proposed study, identification of strategies used by participating SMOs can help determine what specific techniques were used to avoid negative operational cost-efficiency.

The growth of technology caused some smaller organizations to fall behind in operational cost efficiency when compared to their peers (Setyawati, 2016). Such as Ewen and Carswell (2019), which stated that managers having to perform multiple tasks like coordinating programs in addition to their normal duty of managing day-to-day operations will have an indirect negative effect on operating costs. Because utilizing working capital on random operating expenses will influence sales revenue and profit margins in divergent ways (Upadhyay et al., 2019). This study will determine if optimal OER exists between operational expenses and financial performance.

Managers remain divided over reducing operating leverage by either substituting fixed costs for variable costs to lower operational costs during downtime or increasing longevity uncertainty by locking in minimum low fixed costs and higher variable costs during peak time (Aboody et al., 2018). The solvency of a business depends on the competence of management, and inadequate decision-making could eventually lead to high operating expenses because of the need to replenish a loss reserve of funds (Umanto et al., 2018). A higher operating expense ratio and low return on assets (ROA) have a significant impact on financial performance, which is indicative of inefficiency and among other specific variables, nevertheless, OER is an important determinant of profitability (Mohanty et al., 2018). While excessive consumption of executives' perquisites and poor investment decisions by management will cause an increase in any business operating cost, but a watchful role in monitoring those managers' expenditures would give organizations the ability to reduce over-investment in assets and liabilities (Jabeen & Ali, 2017).

Discontinuing one income stream operation fosters a decrease in organizational costs (Carswell, 2017). Discontinued operations benefit organizations, because of the manager's discretion when allocating expenses (Kaplan et al., 2020). Kaplan et al. (2020) stated that an income decreasing discontinued operation may be spun off, and when spun off, the discontinued operation would become a new stand-alone entity and lower the operating cost of the original business. Managers use several different methods to lower cost through green eco-friendly service and production, safety, size of operation, and operational leverage (Mao & Wang, 2019). Subsequently, this study will determine if

there is a consistent allocation of operational expenses among the selected profitable e-commerce business.

Green eco-friendly services and productions increase operating cost, but green eco-friendly businesses are an important aspect of an economy and attracts a lot of attention from consumers which increases revenue to overcome the initial increase in operating cost (Mao & Wang, 2019). Safety is another element that management can use to lower operation cost; because many customers care about safety and do not just simply buy products, they invest in the results that they confidently feel that the products will provide (Fiscor, 2020). Fiscor (2020) reported that safety in the service and production industry changed over the years, and to stay competitive a business must evolve with the industry. While individual investor ownership and self-management proved to be statistically significant drivers in lowering business operating expenses, Carswell (2017) found that academia still lacks adequate attention on teaching business operating costs.

OER is a commonly used efficiency indicator that has a significant effect on the operational self-sufficiency of an organization (Gonfa, 2020). Zia ul haq et al. (2020) stated that the investment activity risk is a major factor that determines value premium, which means that this same value premium is the compensation for operating leverage. Vagif (2020) stated that the task of making effective managerial decisions is becoming increasingly important for domestic enterprises and a special role in substantiating management decisions is assigned to marginal analysis; margin analysis is a link between various management functions that allow the ability to make effective management decisions about operational costs, service volume, and production volume in conditions

of increased competition. The increased efficiency of a business's operational cost is vital to longevity in the e-commerce marketplace (Setyawati, 2016). A clear understanding of OER can assist with the identification and classification of activities performed by participating managers to foster sustainability.

Operating Expense Ratio: Measurement

The definition of OER is operating expenses divided by net sales (Chong et al., 2017). OER is also a measure of costs to operate a business compared to the income generated, Chatterjee and Dhaigude (2018) suggested that internal control systems, OER, and business revenue per employee are some of the top factors of an organization's financial performance. By contrast, the essential function of the OER is to measure the efficiency of the organization's ability to use the smallest amount of expenses to generate the desired range of revenue (Patel et al., 2019).

Moreover, Krotov (2016) reported that unfortunately two important uses of operational cost are often plagued by poor understanding, which is that two of the main functions of an OER is to serve as a measurement of organizational spending and to control systematic size differences among multiple internal companies, departments, products, or services so that comparisons can be made. Last, Krotov concluded that operating expense ratios are often at the heart of important capital allocation decisions, because of the corporate critical need for efficient operational cost measures. Free cash flow is another tool used by management to mitigate revenue cost and other operational expenses, in addition to providing a fundamental understanding of firm adjustments to cost structure (Aboody et al., 2018; Chong et al., 2017).

Management reduces operating leverage and operating cost by substituting fixed costs with variable costs or vice versa (Aboody et al., 2018). Ni et al. (2012) reported that the OER positively correlates with company value; meaning when the OER goes down the financial performance increases, but when the OER goes up the financial performance decreases. Ultimately, finding an optimal asset size and consequent scale remains a critical challenge for the cost efficiency and profitability of management in a business (Srivastava & Upadhyay, 2019).

Operating Expense Ratio: Previous Research and Findings

Another improvement in OER would be the investment into intangibles, VanderPal (2015) stated that the findings from extensive research and analysis led to understanding the value of investments in intangibles. These intangibles are insignificant costs to the business and often increase revenue over time, thus decreasing the OER on the profit loss statement, ultimately allowing the company to momentarily enjoy competitive advantages in market power and financial outcomes (VanderPal, 2015). Aboody et al. (2018), conducted the first operational expense ratio study, focused on the cost structure choices that managers must make, because sometimes it is advantageous to select a fixed cost for an organization's expenses and in other times a variable cost structure is better. Maroof et al. (2017) conducted a study comparing the operating efficiency of different organizations pre-merger and post-merger.

Findings from Aboody et al.'s (2018) study concluded that in response to reductions in option-based compensations, managers elected to reduce operating leverage by substituting fixed costs with variable costs. The findings from Maroof et al. (2017)

concluded that post-merger organizations operating efficiency improved and the financial leverage risk decline, but unfortunately the total operating expense increased. The examination and identification of managers' strategies to optimize e-commerce financials can be viewed through the lens of the aforementioned studies: (a) investment into intangibles, (b) advantageous cost structures, and (c) operational efficiency (Aboody et al., 2018; Maroof et al., 2017; VanderPal, 2015). Examining managers' decision making regarding fixed and variable costs relates directly with the intentions of the study.

Chakraborty (2017) conducted a study in which indicated that OER and liquid ratio are significant predictors of solvency in a business. Grashuis (2019) performed a study comparing different forms of structured ownership managers with the percentage of different agency cost spent to run their organization. Kalinowski and Puziak (2018) conducted a study about the operating risk of operational leverage and states that each business entity that takes decisions on how to distribute resources is exposed to the risk of volatile conditions that affect the decision taken. Understanding how participating managers determined potential risks and accounted for said risks regarding operational leverage could be of significance. Analysis of the managers' actions and rationale can be used to support new or existing managers with improving sustainability.

The findings from Chakraborty (2017) showed that solvency positively related to organizational return on equity and liquid ratio. Findings from Grashuis (2019) recognized positive relationships of management size to agency cost and illustrate that there is a significant cost saving to the adoption of non-traditional management ownership by organizations. Kalinowski and Puziak's (2018) study results were negative

and found that to have comparable outcomes, management needs to understand that there is no one-size-fits-all and that applicable drawbacks and limitations do exist for each business entity differently. All these studies show in-depth research to reduce organizational costs but accepting and practicing the TQM theory still presents the best possibility of maximizing results through optimization.

Operating Expense Ratio: Relation to the TQM Theory

Managers use several different techniques to improve the efficiency of operational costs (Upadhyay et al., 2019). Business management can choose to level their business through financial leverage or operational leverage, the trade-off between these two are substantial; financial leverage is using the business as collateral to borrow money to purchase assets to improve operations and grow capacity, while operational leverage is using the asset being purchased as collateral through a notes payable contract to purchase assets to improve operations and grow capacity (Kumar & Yerramilli, 2018). VanderPal (2015) reported that innovation is another way to improve company efficiencies through creation of products, services, or processes which would diminish operating expenses. Yatsenko and Hritonenko (2016) reported that this initial increase in operating cost is in part due to businesses only knowing some approximate estimates of future changes in operational cost, which is another challenge to management's decision-making practice during asset adjustments like green eco-friendly replacement.

Upadhyay et al. (2019) discussed the importance of understanding the financial implications of operational spending. Managers use several different methods to control financial impact, increase solvency, ownership structure, and lower operation cost

through discontinued operations (Kaplan et al., 2020). Finally, VanderPal (2015) concluded that on average the impact of advertising expenses is only visible in the short-term, while corporate investment in intangibles like systems, processes, and research and development has a significant positive influence over a long-term operation. Furthermore, recommendations on the choice of replacement techniques, processes, and equipment should follow intensive research in the area being considered (Yatsenko & Hritonenko, 2016). These adjustments are some of the many ways an organization could enhance operational cost savings with the TQM theory acceptance and practice.

E-commerce Financial Performance: The Dependent Variable

Management started to realize that e-commerce allows them the opportunity to bring innovation to the market to increase their competitive advantage more effectively (Svatosova, 2019). The quality level assessment of e-commerce businesses is of grave interest, because quality links to customer satisfaction and customer loyalty, which in turn leads to improved sales, enhanced competitiveness, and profitability for active companies in the e-commerce industry (Tzavlopoulos et al., 2019). Moreover, Bhatt (2020) reported that the e-commerce industry includes a variety of products with different categories that attract consumers across the globe, which brings in sustained revenue. Managers improve their company's e-commerce position with product variety and diversification. The proposed study includes examination of whether participating managers utilized diversification and variety to attain improved profits.

E-commerce is high on the agenda of national competition policy (Weck, 2019). Personal parcels are goods sold through cross-border e-commerce, which does not need

to be registered when passing through China; thus, helping smaller foreign producers remain competitive when dealing with the United States, because product registration can be expensive and time-consuming (U.S. China Business Council, 2017). Weck (2019) reported that the interest of politicians and competition agencies alike is to make sure that competition in e-commerce remains authentic and that e-commerce contributes to the establishing single, unfragmented markets along national boundaries.

Managers use several different strategies to adjust to ongoing regulations, compliance policies, the evolution of the e-commerce industry, and consumer trust issues (Urbonaviciute & Maknickiene, 2019). In addition to performance risk, many other various types of risk strengthen uncertainty in management, like financial risk, psychological risk, and social risk that management must avoid mentally characterizing as inertia (Tzavlopoulos et al., 2019). When barriers to e-commerce are overcome, the benefits are substantial; Mbatha and Ngwenya (2018) revealed that high costs, lack of funds, and limited technical know-how are some of the barriers for small e-commerce businesses. The proposed study will include examination of examine strategies used by managers to avoid uncertainties in management. Identification and measurement of the impact of strategies used by managers can be of benefit for new and existing managers.

For businesses to succeed online, especially small businesses, they will need to first build trust with their customers through an ethical relationship (Kitukutha & Olah, 2018). Management's operational goal is to increase the organization's e-commerce financial performance efficiently and effectively to the highest point possible while utilizing the least amount of annual cost; moreover, an organization's performance should

routinely be investigated for both financial performance and strategic performance (Chung & Kuo, 2018). With all the benefits that online businesses present to the consumers and companies, it is in the best interest of the businesses to increase its trustworthiness with users (Kitukutha & Olah, 2018). E-commerce is one of the most important megatrends in the economy today, this dynamic growth requires management with tools and suitably to adapt to this ever-improving industry (Kawa, 2017). However, few studies exist that focus on how managers create dynamic growth.

Increased online sales benefit large retailers, but unfortunately also create undue pressure for small retailers (Bhatt, 2020). In 2015, 10% of 250 million Internet users purchased products and goods online, nowadays the e-commerce is a booming market with a far higher percentage of Internet users purchasing products and goods online (Huang, 2017). Errors or misuse of e-commerce cannot be avoided, laws and regulations have not accommodated the responsibilities of each buyer and seller involved in e-commerce transactions equally (Pranadita & Soeparna, 2020). Urbonaviciute and Maknickiene (2019) reported that growth over profits mentality brought a superficial understanding of business financial performance into the e-commerce industry; and for this reason, it is highly necessary for management to analyze and adequately evaluate their company's financial performance for longevity and profits.

E-commerce Financial Performance: Measurement

E-commerce sales grew rapidly after 2013, Urbonaviciute and Maknickiene (2019) noted that e-commerce sales increased from \$1.3 trillion in 2014 to \$2.3 trillion in 2017 and projects to grow to \$4.9 trillion by the end of 2021. The e-commerce market

grew by 30% from 2014 to 2019, and researchers also predict the e-commerce market to continue growing well into 2023 (Haryanti & Subriadi, 2020). Performance is the benchmark for business success, and management skills, business strategy, and management culture are the precursors to obtaining and improving desired goals in performance (Octavia et al., 2020).

Success requires either a management strategy or competitive advantage, management strategy is a set of commitments, decisions, and actions necessary for a company to reach competitiveness and obtain an above average rate of return on their investment (Witjara et al., 2019). But to simply remain in business, a company must effectively manage elasticity; elasticity is the ability to simultaneously use a variety of organizational solutions to increase the effectiveness of their operation (Bienkowska & Sikorski, 2016). Furthermore, Bienkowska and Sikorski (2016) reported that elasticity is the basis for the effective operation of a company, this concept requires management to have an in-depth understanding of its science, instead of assuming that elasticity is flexible in the market.

Management strategy is also an effective use of human resources, knowledge, reward system, and employee capacity (Kasasbeh et al., 2017). Human resource management is a vital part of an organization's culture because they deal with the management of employees, recruitment, training, and succession (Kasasbeh et al., 2017). Witjara et al. (2019) then continued that competitive advantage requires capabilities, core competencies, innovation, and alliances. E-commerce performance indicators also quantify the achievement of some company goals, they enable managers to take action by

making decisions to achieve the desired goal (Muntean et al., 2016). The previous studies mentioned indicate actions taken by managers, while the proposed study identifies the specific actions in relation to the company's success.

E-commerce performance indicators measure and monitor the likely success of key activities, Muntean et al. (2016) then recommended best practices of identification of up to 10 key e-commerce performance indicators pertaining to a specific activity.

Nonfinancial measures are another leading indicator for financial performance; businesses that compete in markets with a higher competition level tend to present a better overall performance when they adjust their operational leverage to maximize production usage (Da Silva Lourenco et al., 2018). Muntean et al. (2016) stated that it is very important to identify all the key e-commerce performance indicators, because they measure company success and provides appropriate context into the business ongoing performance.

E-commerce Financial Performance: Previous Research and Findings

Setyawati (2016) reported that several studies suggest that to improve the operating cost efficiency to the point of corporate profitability, there must be a significant investment in management quality as a prerequisite. Hua et al. (2019) conducted the first financial performance study that aimed to offer empirical insights on how investing in e-commerce capabilities affects the relationship between loyalty programs and financial performance to aid in identifying proper resource allocation strategies. Zia ul haq et al. (2020) conducted the second financial performance study which focused on determining the force behind the value in financial leverage and operating leverage; some say the

determining factor is financial risk distress and others say it is the potential investment risk compensation. All of these studies allow for companies to determine which areas of management quality they focus on to maximize profitability. Intentional and purposeful investment in management quality relates to the proper allocation of financial resources.

Hua et al.'s (2019) study results illustrated that proper allocation of company financial resources to e-commerce initiatives can help improve the impact of loyalty programs on financial performance. Findings from the Zia ul haq et al. (2020) study provided support that links financial performance with operating leverage and also concluded that investment activity risk seems to be the major factor that determines value. Haryanti and Subriadi (2020) reported that the e-commerce competition has also been increasing in line with the industry's growth, thus, for this reason there needs to be an increased research focus on this e-business sustainability.

E-commerce Financial Performance: Relation to the TQM Theory

The rapid development of e-commerce and the growing awareness of consumer consumption on the internet has induced many large retailers to develop their online store to sell products in addition to their traditional stores (Shi et al., 2018). The role of management's entrepreneurship mentality and ability to solve problems is an important component of economic development; and management's capability to understand customers, competitors, and coordinate other functions are essential to gain profit and maximize organizational performance (Octavia et al., 2020). Moreover, national economies have to also adjust and improve their current policies in the fields of regulation, infrastructure, and education to meet the modern requirements raised due to

the rapid development and spread of the e-commerce industry (Sepashvili, 2020). The rapid growth and opportunities in the e-commerce market suggest positive management trends. The proposed study seeks to identify the specific strategies and actions taken by managers of successful e-commerce to further contribute to the pool of research on the topic.

Managers use several different techniques to increase operational improvement, financial performance, profitability, and decrease risk (Hua et al., 2019). Reducing delivery cost to improve profitability is a big problem for many e-commerce businesses, some managers look elsewhere to replace the cost, while other managers look to strict time windows, limit customer requests in some areas, and accommodate varying customers' preferences in other areas (Vinsensius et al., 2020). Another problem that increases delivery costs with distribution departments is product returns, complex logistics, redundant logistic links, and blind spots (Zhou et al., 2020). The proposed study seeks to determine how participating managers address and circumvent such issues while maintaining sustainability.

Hua et al. (2019) reported that the competitive nature of e-commerce business requires companies to adopt strategies that highlight their core objectives and properly allocate resources in a way that maximizes their core strengths, because business decisions are simultaneous and continuous; and any business investment if proper, will ultimately increase revenue or decrease expenses through operational efficiencies. E-commerce strategy, sourcing, and governance are critical issues in a business requiring efficient planning, use, and control of information by managers; furthermore, Lipitakis

and Lipitakis (2017) also stated that the basic components for estimating strategic planning are formality, participation, thoroughness, and sophistication: (a) formality is the explicit and systematic creation of procedures, policies, and goals; (b) participation is the involvement of senior and middle management; (c) thoroughness is the extent in which the business uses its access to internal and external experience; and (d) sophistication is the use of a wide range of managerial techniques. Examination of strategies performed by managers, analyzed through the lens of strategic planning further adds to the research topic pool. An examination of strategies performed by managers adds to the pool of research on the topic by distinguishing industry-specific strategies that foster financial sustainability. This examination of strategies would be a contrast with previous studies that provide general examinations and suggestions without consideration of contextual nuances.

E-commerce businesses develop strategies to increase their effectiveness and sustainability to obtain financial performance goals, because typically they do not have a specific strategy and lack a conceptual strategic approach (Svatosova, 2019). Updating and maintaining the business and banking of e-commerce requires constant changes in the fields of regulation, economic development, infrastructure, skill, customer awareness, and technology (Sepashvili, 2020).

Companies employ a variety of means to ensure survival and prosperity to offset the increasing competition in the digital industry (Purbasari et al., 2020). A company's competitive advantage needs to be constantly improved to succeed in the e-commerce market (Purbasari et al., 2020). Organizational innovative competitive advantage can be

formed through the integration of relationships, cooperatives, knowledge, management, and technology (Zheng et al., 2019). Lakhani et al. (2020) stated that advancements in information technology allows management to increase the speed of payment, reliability of data, and transparency of transfers. Yu et al. (2017) reported that logistics will cost e-commerce businesses 40% of their product price that customers pay. The proposed study seeks to determine the means by which managers address the stated logistical costs while maintaining sustainability.

A fundamental task of market segmentation is to group customers based on similarities in their needs and preferences, this is how e-commerce businesses utilize consumers' personal data entered into businesses' websites (Tiwari et al., 2018). Business-to-business (B2B) transactions in e-commerce grew substantially from 2000 – 2019, and some managers chose to be proactive by utilizing new technology when it is first available to replace outdated legacy systems, avoid catastrophes, and improve internal and external processes (Monroe & Barrett, 2019). While other managers choose to be reactive by adopting new technology later when the cost of that technology is obsolete (Monroe & Barrett, 2019). These studies provide a solid foundation for future research. The studies do not indicate relationships between the various new technologies and the company's sustainability. The proposed study examines the specific strategies used by managers and considers the lens of new technologies utilized and effectiveness of strategies.

Furthermore, the new e-commerce technology continues to revolutionize the way businesses conduct transactions both in business-to-business and business-to-consumer

contexts (Civelek & Ertemel, 2019). Rapid technological development significantly and continuously changes our everyday life, 21st century will be filled with limitless opportunities (Sepashvili, 2020). The growth in evolving demand for e-commerce business increased the organizational need for innovation and quality decision-making skills from management for the benefit of the company's financial performance (Lipitakis & Lipitakis, 2017).

Transition

Managers use several different techniques to grow profitability through effective working capital management and innovative operational cost efficiency (Wang et al., 2020a). Section 1 encompassed an extensive discussion of the business problem, that many e-commerce operation managers do not manage working capital and operating expenses at optimum levels. Also, in Section 1 was a critical analysis and synthesis of the literature conducted on variables: (a) working capital management, (b) operating expense ratio, and (c) e-commerce financial profit. Section 2 conducts a further review of the problem statement and justification for the study. Section 2 also contains an examination of the reliability and validity of the research study. Last, Section 3 covers the study findings, data results, and hypotheses. Section 3 also presents a recommendation for action, a recommendation for future research, and a study conclusion.

Section 2: The Project

This section details the use of correlation to examine the effects of working capital management and operating expense ratio on the e-commerce financial performance of e-commerce companies. Section 2 includes: (a) restatement of study purpose, (b) role of the researcher, (c) participants, (d) research method, (e) research design, (f) population and sampling, (g) ethical research, (h) data collection, (i) data analysis, and (j) study validity. This section also includes a discussion of instruments and techniques that are designed to examine the relationship between working capital management, operating expense ratio, and e-commerce financial performance of e-commerce companies. Last, this section concludes with a summary of Section 2 and an overview of Section 3.

Purpose Statement

The purpose of this quantitative correlational study was to examine the relationship, if any, between working capital management, operating expense ratio, and e-commerce financial performance of e-commerce companies. The independent variables were working capital management and operating expense ratio. The dependent variable was e-commerce financial performance. The targeted population was e-commerce businesses that operate in the United States. The implications for positive social change include the possibility for business managers to be better equipped to ensure business sustainability, which can increase the ability to create additional economic opportunities in their local community. Equipping business managers with the tools to foster

sustainability can increase local revenue sources to cycle into the local workforce, residents, vendors, and community.

Role of the Researcher

The role of the researcher in this quantitative study includes engaging in the design, organization, and interpretation of data by analyzing data, simplifying data, and presenting the findings as useful information. In the data collection process, the role of the researcher begins with using the research question as a guide, identifying the study population, and then selecting the sample size (Jutkowitz et al., 2019). In a quantitative study, the researcher works with publicly available archival financial reports without any human participant interaction to independently ensure that data sources are valid and reliable. Riswani et al. (2019) reported that the collection of secondary information is critical to enhancing the credibility of a quantitative correlational study. When using a large population in correlational studies, results should be able to be reproduced under an independent observer, with similar conditions, and similar objectives (McQuinn, 2021). During the research process, researchers must be aware of ethical issues to ensure bias mitigation, reliability, data consistency, and ethical standards (Hom & Van Nuland, 2019).

In all stages of this study, to prevent unethical implications the researcher must select secondary data, use accessible financial information, adhere to the Walden University guidelines, and secure approval from the Institutional Review Board (IRB) before commencing the study. No human participants participated in this study. The Belmont Report and the following were not necessary, because of no participants being in

this study: (a) participant protection procedures, (b) confidentiality protocol documents, (c) informed consent forms, (d) precautions for preserving participant integrity, and (e) precautions for preserving participant impartiality (Adashi et al., 2018). The Belmont Report consists of three main characteristics: (a) respect for persons with the right of self-determination, (b) beneficence with researchers ensuring the well-being of human subjects, and (c) justice with equitable distribution of benefits and burdens (Anabo et al., 2019). None of these Belmont Report characteristics and precautions listed above will be applied, because again no humans participated in the study.

Participants

Secondary data from the Walden University Library database served as the baseline data source for the study, instead of human participants. To access this secondary data, no permission was necessary, and all available data was free of charge. Small publicly traded e-commerce businesses throughout the United States constitute the target population for this study. Nawaz et al. (2021) suggested that 10% of a large population constitutes a substantial sample size. Naerde and Hukkelberg (2020) stated that sample selection and eligibility criteria improve both the validity and reliability of the study.

The selected sample was composed of 107 small- to medium-sized publicly traded e-commerce businesses, with the financial information gathered from the sample's official website and Walden University's Library database. The sample firms all met three eligibility criteria: (a) the first is balance sheets including documented working capital, (b) the second is itemized detail profit-loss statements, and (c) third the financial

statements contained 3 years of consecutive profits. Zeller et al. (2019) reported that organizations that used accounting ratios are normally in accordance with generally accepted accounting principles (GAAP). Davidyan and Waymire (2018) recommended the combination of generally accepted financial principles and accounting ratios to adequately portray financial information to their audience.

Research Method and Design

This quantitative correlational study included examination of the relationship, if any, between working capital management, operating expense ratio, and e-commerce financial performance of e-commerce companies. Crane et al. (2017) reported that academics perceive research methodologies as the standardized means of conducting professional and intellectual research. Kohler et al. (2017) published that analytical research views influence how and why researchers choose some research designs and methodologies over others. The reasons for selecting the quantitative method and the correlational design are highlighted in the paragraphs that follow.

Research Method

For this study, the quantitative methodology was the most suitable to identify relationships. Lago et al. (2019) reported that the goal of a quantitative study is to collect numerical data from a population, then sort, categorize, and plot the results according to the selected time. A quantitative study also methodologically compares data in a systematic manner to emphasize prediction, rationality, and objectivity (Cookson et al., 2021). A qualitative method was not appropriate for this study, because East and Peters (2019) published that a qualitative study prevents the defining of hypotheses and

variables before performing the research. Steel et al. (2019) also reported that qualitative studies answer research questions of how, why, and to understand experiences. This study does not use the mixed-method approach because the purpose of this research is to identify only if a relationship exists and not to understand the results of this study. De Allegri et al. (2020) stated that a mixed-method study minimizes the possibility of bias, while generating a synergy to build on findings from a single method. For these reasons, the study used a quantitative approach without the assistance of any other research methodology.

Research Design

The correlational design was more appropriate for this study via the use of regression analysis. Rezigalla (2020) reported that the correlational design identifies associations among two or more variables. In contrast, the focus of experimental research design is the random assignment of subjects to the control group to determine if a specific action will affect the result by manipulating the variables (Mital et al., 2021). The quasi-experimental design is when a researcher seeks to assess a degree of cause and effect and involves a nonrandom selection which is inappropriate for this study (Gianicolo et al., 2021). Researchers need to consider the advantages and disadvantages of correlational, experimental, and quasi-experimental designs when selecting.

Population and Sampling

The target population consisted of small publicly traded e-commerce companies throughout the United States. The justification for the selected population was all of the publicly available relevant data. Odjaremu and Jeroh (2019) stated that audited financial

reports are dependable sources. Oroian-Boca (2019) reported that an existing data set is appropriate and cost-efficient for answering research questions. The data set variables were working capital, operating expenses, and financial performance.

Convenience non-probabilistic sampling is the sampling method utilized in this study. Convenience non-probabilistic sampling is a technique that involves selecting units based on their convenience and availability (Benlidayi, 2019). Justification for selecting the convenience non-probabilistic sampling method is to generate a manageable subset of data that accurately represents the population. Azambuja et al. (2020) concluded that the convenience non-probabilistic sampling method is inexpensive, easily accessible, and allows for a quick analyzation of data. A limitation of convenience non-probabilistic sampling is the increased possibility of unconscious bias (Azambuja et al., 2020). Simple random probabilistic sampling is not appropriate for this study, because of the increased risk of inaccurate representation of the larger population after the sample selection (Benlidayi, 2019).

Bujang et al. (2018b) stated that when a sample size is less than 100 datasets for a research study, the total available population should be used instead to increase the reliability of the research. Conducted was a power analysis to determine an acceptable sample size. As shown in Figure 1, the power analysis shows that a minimum sample size for this study is 68 companies for a power level of 80% and an increased sample size of 107 companies for a power level of 95%. Sample size for this study utilized G*Power version 3.1.9.7 software to calculate the appropriate sample size numbers. The study will use the conventional significance level of 0.05, a statistical power of 0.80, and a medium

effect size of 0.15. Power calculations assist with avoiding Type I and Type II errors by utilizing an adequate number of observations (Zhan et al., 2021).

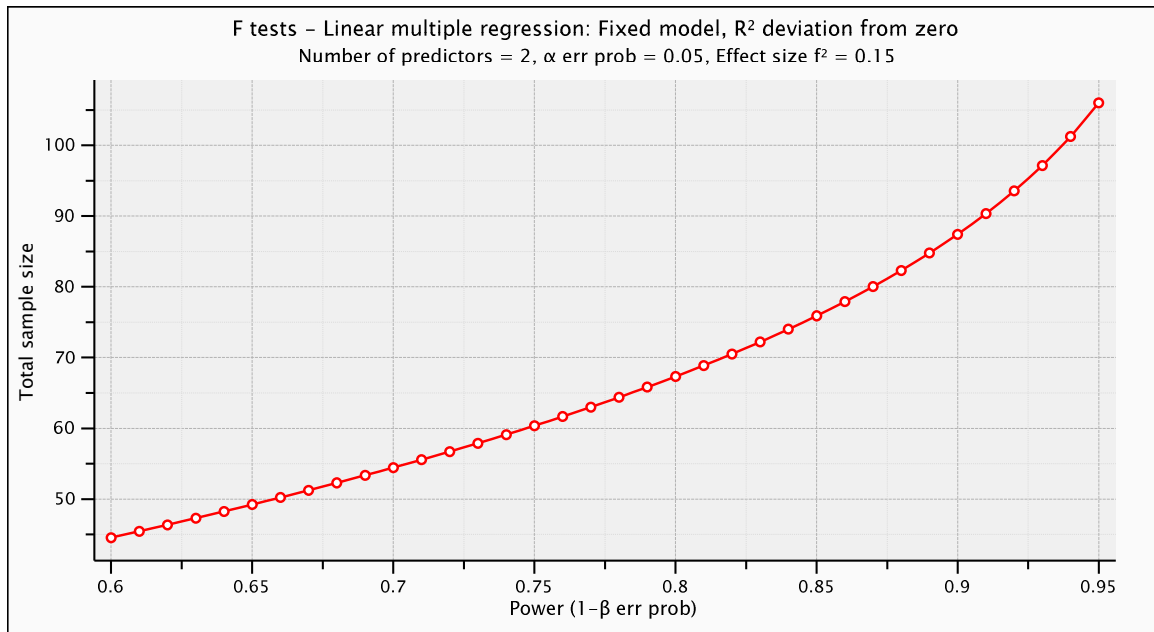


Figure 1. Power as a function of sample size.

Fasbender et al. (2019) reported that a 95% confidence level suggests that the null hypothesis has a 5% chance of not being true. A company eligible to be included into this study must meet the following criteria: (a) be a small- or medium size business, (b) have an online e-commerce operation, and (c) have a financial profit for three consecutive years (Porzsolt et al., 2019). The sample size exclusion criteria for this study is: (a) not being located in the United States, (b) not having a publicly available balance sheet, and (c) not having a publicly available profit loss statement (Porzsolt et al., 2019).

Ethical Research

Ethics is a vital component of doctoral research (Riswani et al., 2019). Hom and Van Nuland (2019) reported that ethical research does not unfairly violate privacy, confidentiality, and participant trust. The Belmont Report promoted research participant fairness, truth, honesty, standards, and respect (Adashi et al., 2018). The sample did not contain human participants, consequently, the potential for ethical threats were minimal and participant consent forms were non applicable. This quantitative study utilized secondary data which is publicly available and easily accessible from the Walden University Library.

To follow the ethical guidelines of the Institutional Review Board (IRB), researchers at Walden University must obtain proposal approval, gather, and analyze data to complete the doctoral study. The IRB then provided the approval number 04-11-22-1025775. Riswani et al. (2019) stated that a researcher ensures the credibility, trustworthiness, and reliability of their study. Hom and Van Nuland (2019) reported that ethics apply to every stage of a doctoral study, to prevent the inclusion or misinterpretation of sample data. Upon conclusion of the analyzed data, the sample data is: (a) transferred to a Universal Serial Bus (USB) flash drive, (b) encrypted password protected, and (c) destroyed after 5 years of the official doctoral study approval.

Data Collection Instruments

Instruments such as surveys, interviews, and questionnaires were not applicable in this study. Archival data was publicly available for the independent variables working capital management, operating expense ratio, and dependent variable financial

performance from the Walden University library database. To quantify the data associated with this study's independent variables and dependent variable is IBM SPSS Statistics Version 27 to code the sample's annual reports. When coding the sample's annual reports with Microsoft excel, the output range dimensions constitute a score from 0% - 100% of the business's annual revenue. Kim and Woo (2019) reported that there is no perfect score when coding output performance, because there is always room for improvement. Moreover, Precup et al. (2021) stated that business managers tend to base many of their decisions on their company's ability to perform efficiently and effectively. This relationship between previous studies and the current research is the understanding that coding may remain standard. However, the evaluation and determination of positive or effective outputs will need to be examined using the lens applicable to the overall business objective.

The first independent variable is working capital management, which will be measured by working capital from a business's balance sheet (*Working Capital = Current Assets – Current Liabilities*). Zhang et al. (2021) stated that measurement is the allocation of numbers to quantify a phenomenon. The second independent variable is operating expense ratio, which will be measured by operating expenses from a business's profit loss statement (*Operating Expense Ratio = Total Operating Expense / Gross Revenue*). Fisher et al. (2018) published that an instrument is a data gathering tool for developing, testing, and using data collection. The financial profit from a business's profit loss statement measures this study's dependent variable, financial performance (*Financial Profit = Total Revenue – Operating Expense*). Strifler (2018) reported that

financial profit is a good choice to measure the financial performance of a business. This all means that the evaluation of the organization's objectives needs to be tracked, examined, and measured through applicable tools.

Next, is the scales of measurement for variables which also appear in Table 3.

Nominal data is labeled data that is divided into various groups, Hunter-Thomson (2019) reported that this data is assigned to multiple groups and not measured. Ratio data is a form of numerical quantitative data collected in equal distance between adjacent values (Norman et al., 2017). Ordinal data is categorical data with a set order, whereas the distance between the categories is not known (Hunter-Thomson, 2019). Interval data is a form of numerical quantitative data, Norman et al. (2017) stated that this data has no true zero on a numerical scale.

Table 3

Variables and their Scale of Measurement

List of the variables	Nominal, Ratio, Ordinal, and Interval
Working Capital Management	Ratio
Operating Expense Ratio	Ratio
Financial Performance	Ratio

Surucu and Maslakci (2020) published that validity is the foundational premise of a measurement and that the instrument tool used, measures what it claims to measure. The validity and reliability of instrument tools are critical indicators of quality research. Thus, the use of audited financial reports of public businesses are reliable sources to help avoid missing data, computation errors, and sample inadequacy (Odjaremu & Jeroh,

2019). While Surucu and Maslakci (2020) promotes the importance of reliable, dependable, and consistent instrument tools used to measure variables.

Data Collection Technique

The research question of the quantitative correlational study is, if any, the relationship between working capital management, operating expense ratio, and financial profit. The datasets derived from the Walden Library database through an electronic system for 107 e-commerce businesses from 2019-2021. These financial statements include the balance sheet and profit-loss statement that contain data relating to annual financial profit of e-commerce businesses. Yilmaz and Guven (2019) stated that structured records are the preferred data collection technique for a quantitative study. Thompson et al. (2018) reported that this systematic collection of financial data is important to ensure relevant, consistent, and comparable data for rigorous analysis.

Secondary data has numerous advantages. Al-Roomy (2017) reported that secondary data is inexpensive to contain by retrieving data from existing web sources. Another advantage to using secondary data is (a) easy access, (b) centrally populated, and (c) and saves time (Thompson et al., 2018). Secondary data is also not without disadvantages. Cirjevskis (2020) stated that collecting data from archival databases is sometimes (a) incomplete, (b) not completely aligned with the study, (c) and suffer from self-reported bias. Yilmaz and Guven (2019) reported that secondary data sometimes do not reflect the current reality of the research question being studied. The limitations of secondary data usage are clear, however, utilizing secondary can be used to determine the need for future research or preliminary areas of focus.

Data Analysis

Multiple linear regression is the statistical data analysis suitable for this study. Beigzadeh et al. (2020) indicated that many scholars use multiple linear regression when determining the relationship between two independent variables and one dependent variable. Ge and Wu (2020) mentioned that the results from a multiple linear regression test range from -1, which is a negative correlation to +1, which is a positive correlation. The correlation values are identified as being (a) $r^2 \geq 0.61$ as strong, (b) $0.60 \geq r^2 \leq 0.35$ as moderate, and (c) $r^2 \leq 0.34$ as weak; moreover, Abdullah et al. (2020) also reported that a perfect correlation of -1, 0, and +1 is uncommon.

The statistical analysis technique depends on the number of variables, scale of measurement, and the research question (Hernandez & Mendez, 2020). The multivariate linear regression, analysis of variance (ANOVA), and simple linear regressions were not applicable for this study. Zhou and Wang (2021) stated that multivariate linear regression applies when studying multiple independent variables and multiple dependent variables. Mahboobe et al. (2020) reported that analysis of variance test focus on the effects of different group interventions on a dependent variable. Liaw et al. (2020) stated that a simple linear regression is relevant when studying one independent variable and one dependent variable. Overall, this justifies the selection of multiple linear regression as the statistical data analysis tool to answer this study's research question.

Moreover, Beigzadeh et al. (2020) indicates that the use of a multiple linear regression analysis may determine the existence of an independent and dependent variable relationship more accurately if the study contains a p-value < 0.5 to reject the

null hypothesis and a $r^2 \geq 0.35$ which shows a strong correlation. Ge and Wu (2020) reports that a r^2 is a measure of the variance in the dependent variable by the independent variable. This is why Abdullah et al. (2020) claims that a multiple regression analysis is the ultimate statistical test to determine a relationship between independent variables and dependent variable.

Discrepancies may arise in a study from missing data, editing data, and cleaning data. Missing data from a study can be unintentionally or intentionally omitted (Piech et al., 2020). Editing discrepancies in a study may occur from duplicate entries (Woolley et al., 2020). Discrepancies created during the study cleaning process is presence of invalid information in the dataset (Wang et al., 2020b). All these discrepancies can be avoided by using systematic checks in Microsoft Excel, IBM SPSS version 27, and manually reviewing data inputted after entry.

Study Validity

The correlation research design of this study examines the relationship, if any, between working capital management, operating expense ratio, and financial profit. According to Musa et al. (2021) internal validity verification is not common to correlational studies; therefore, internal validity was not considered for this study. Moreover, Krishnan (2018) stated that internal validity is only relevant in studies that employ an experimental or quasi-experimental design. This is relevant, because this current study contains an examination of secondary data sources in which to draw conclusions. Internal validity does not apply.

Threats to statistical conclusion validity are: (a) reliability of the instrument, (b) data assumptions, and (c) sample size. Jung et al. (2020) stated that Type I and Type II errors may inflate the statistical analysis findings. Type I errors occur when a null hypothesis is rejected during a hypothesis testing when the hypothesis should not be rejected (Jung et al., 2020). Type II errors occur when a null hypothesis is accepted during a hypothesis test when the hypothesis should be rejected (Jung et al., 2020). Statistical conclusion validity is about making an accurate assessment and appropriate use of statistics to arrive at accurate decisions about accepting or rejecting hypotheses and determining the strength of independent and dependent variables (Guetterman, 2019). An important step in producing high quality research findings is using many approaches and paying close attention to overcome threats to validity (Krishnan, 2018). The relevance here is the use of multiple secondary data sources for the current study assists with curtailing type I and type II errors in this study.

Jaghsi et al. (2021) reported that addressing the reliability of the instrument enhances the validity of the study and enables future replication of the research. The correlation coefficient (R) and the coefficient of determination (R^2) are indicators used in this study to determine the strength of the independent and dependent variable relationships. Bujang et al. (2018a) emphasized researchers have a tendency to evaluate internal consistency by calculating Cronbach's alpha (α), better known as coefficient alpha. While researchers like Musa et al. (2021) suggest that calculations with a coefficient alpha of (a) $\alpha \geq 0.7$ is good, (b) $\alpha \geq 0.8$ is better, and (c) $\alpha \geq 0.9$ is best.

Moreover, internal consistency reliability checks performed during this study validated the reliability of data.

Data assumptions were a vital component of this study (Tan et al., 2021). A power analysis was a key component utilized to determine a suitable sample size (Zhan et al., 2021). The computer software G*Power version 3.1.9.7 recommended a sample size of 107 e-commerce businesses for a power level of 95%. Jung et al. (2020) stated that the more samples used in a sample size, reduces the likelihood of a Type II error. While Bujang et al. (2018b) suggested researchers to use a sample size greater than 100 for better results.

A sample size of 107 e-commerce businesses enhanced the external validity of this study. Krishnan (2018) stated that when addressing the external validity, researchers must evaluate the effects of their research. Mathes et al. (2021) published a strategy to overcome external validity threats is an adequate sample size that is a representation of the population. Moreover, if the sample size is not an accurate representation of the population the major threat to external validity is selection bias, and unfortunately a researcher cannot generalize the findings of a biased sample (Krishnan, 2018; Murad et al., 2018). The higher the sample size representation of the population, the higher the confidence in the generalization of the results (Mathes et al., 2021). Krishnan (2018) suggested to use the validity section of a study to state the extent to which the research can be accurately measured. This current study meets the stated recommendations through use of the G*Power version 3.1.9.7 software. Participants accurately represent the target population and selection bias is not applicable.

Transition and Summary

Section 2 included examination of the: (a) role of the researcher, (b) participants, (c) research method, (d) research design, (e) population and sampling, (f) ethical research, (g) data collection instruments, (h) data collection technique, (i) data analysis, and (j) study validity. Section 2 included explanation of the rationale for selecting a quantitative method and correlational design study. Section 3 included the: (a) presentation of the findings and (b) applications to professional practice. Section 3 also included the: (a) implications for social change, (b) recommendations for action, and (c) recommendation for further research.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this quantitative correlational study was to examine the relationship, if any, between working capital management, operating expense ratio, and e-commerce financial performance of e-commerce companies. The independent variables were working capital management and operating expense ratio. The dependent variable was e-commerce financial performance. This section presents a presentation of the findings, descriptive statistics, statistical assumptions, inferential statistics, and theoretical framework analysis of the findings. The research question focused on whether a relationship exists between WCM, OER, and EFP within small/medium sized publicly traded U.S. e-commerce companies. The null hypothesis was that a significant relationship does not exist between WCM, OER, and EFP within small/medium sized publicly traded U.S. e-commerce companies. The null hypothesis was rejected and the alternative hypothesis was accepted. The analyzed secondary data showed that the working capital management and operating expense ratio significantly predicted e-commerce financial performance.

Presentation of the Findings

Overall, the findings indicated a statistically significant relationship between the components of WCM, OER, and EFP; $p < 0.001$, led to the rejection of the null hypothesis that there is no statistically significant relationship between WCM, OER, and EFP. The multiple linear regression analysis was the statistical test used to determine the relationship between the independent variables WCM, OER, and dependent variable

EFP. The independent variables WCM and OER showed a positive relationship when measured against EFP. A presentation of a combination of tables and figures describe the quality of the gathered data and validity of the used statistical model. Employment of a simple statistical model facilitates the replication of the study (Prasanna, 2018). Using a simple statistical model allows researchers to (a) easily corroborate secondary data, (b) assess measuring mechanisms, and (c) evaluate the results that emerge (Christiansen, 2019).

Figures 2, 3, and 4 reveals the working capital used for each company and the financial profit generated each year. Figures 2, 3, and 4 scatter plots also contain the same 107 small- and medium-sized e-commerce businesses, but different working capital amounts and annual financial profit amounts that changed from year to year. Converting the dataset dollars into percentages of revenue was necessary to view both small- and medium-sized companies on the same graph. In Figures 2, 3, and 4 the small- and medium-sized businesses both tend to use a lesser percentage of working capital to produce a product or service for sale, as the financial profit percentage increases.

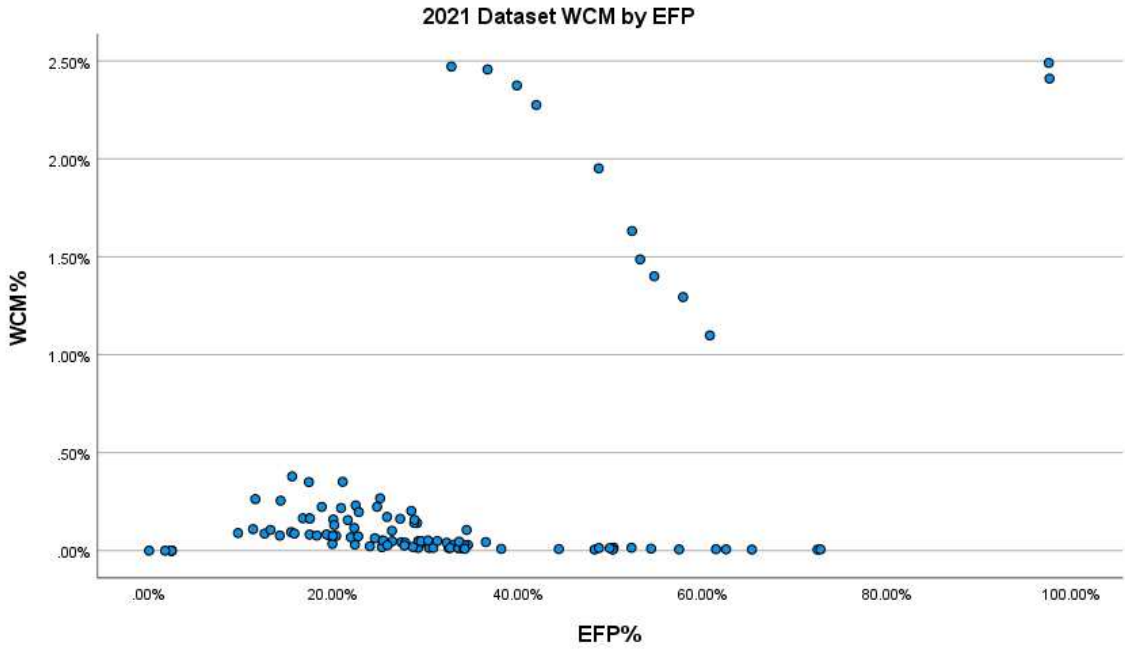


Figure 2. 2021 Scatter plot of WCM and EFP.

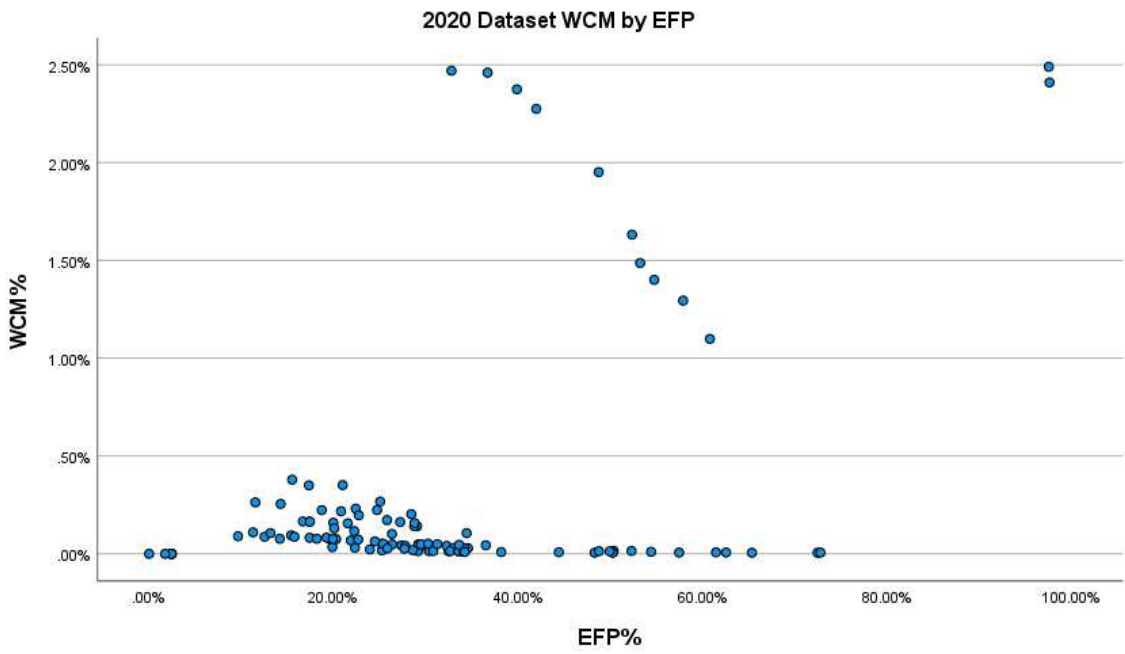


Figure 3. 2020 Scatter plot of WCM and EFP.

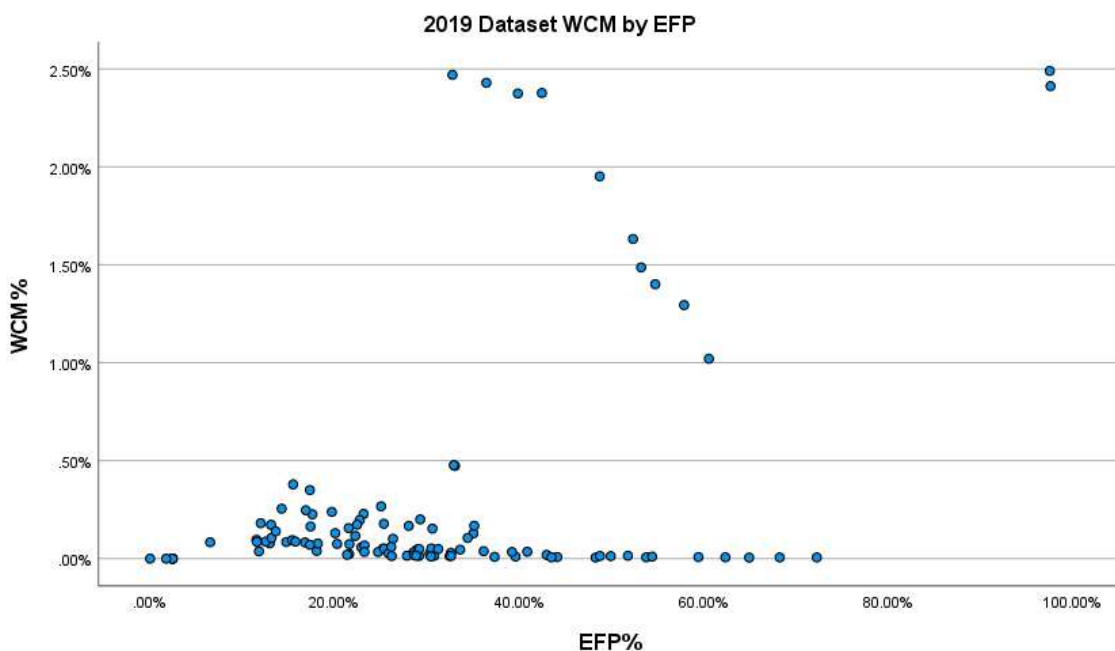


Figure 4. 2019 Scatter plot of WCM and EFP.

Figures 5, 6, and 7 shows the operating expense used for each company and the financial profit generated each year. Figures 5, 6, and 7 scatter plots also contain the same 107 small- and medium-sized e-commerce businesses, but different operating expense amounts and annual financial profit amounts that changed from year to year. Converting the dataset dollars into percentages of revenue was necessary to view both small- and medium-sized companies on the same graph. In Figures 5, 6, and 7 the small- and medium-sized businesses both tend to use a lesser percentage of operating expense to sale the produced product or service, as the financial profit percentage increases. Upadhyay et al. (2019) stated that this systematic decreasing of operating expense is a management best practice, whereas payroll, advertisement, supplies, and other common operating expenses are budgeted at a certain percentage of the forecasted revenue.

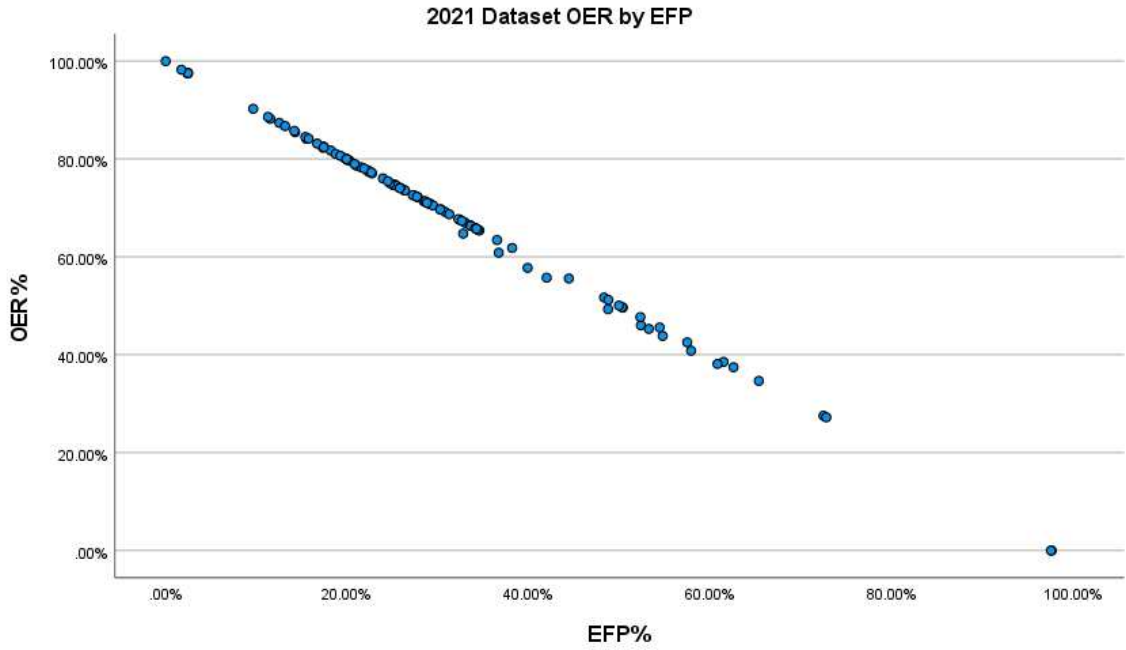


Figure 5. 2021 Scatter plot of OER and EFP.

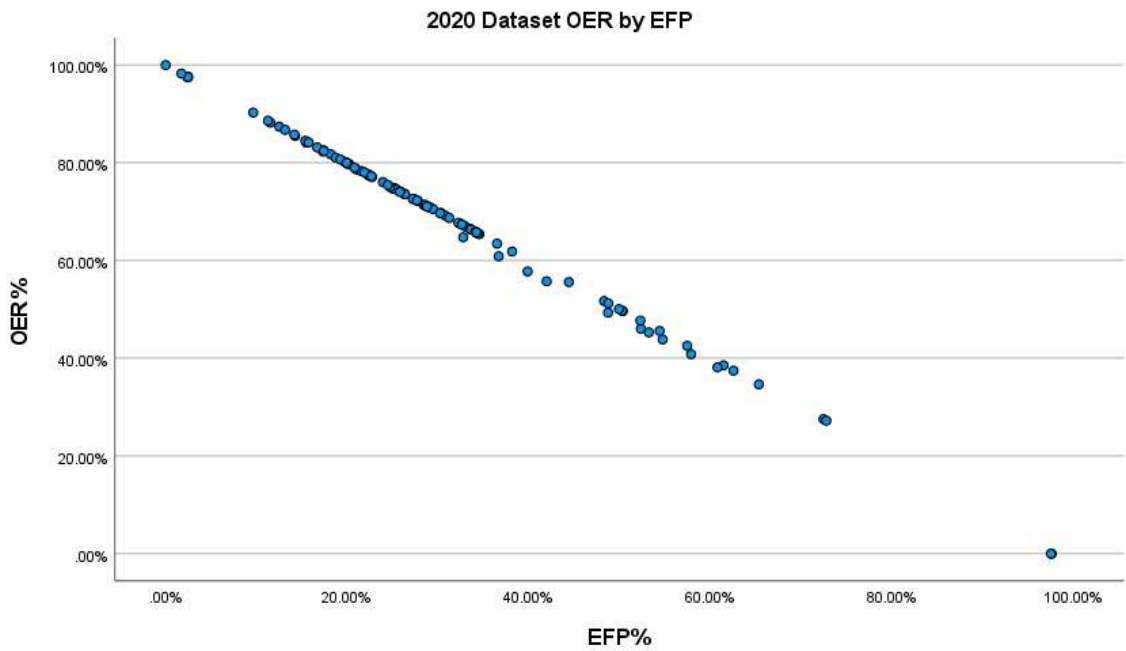


Figure 6. 2020 Scatter plot of OER and EFP.

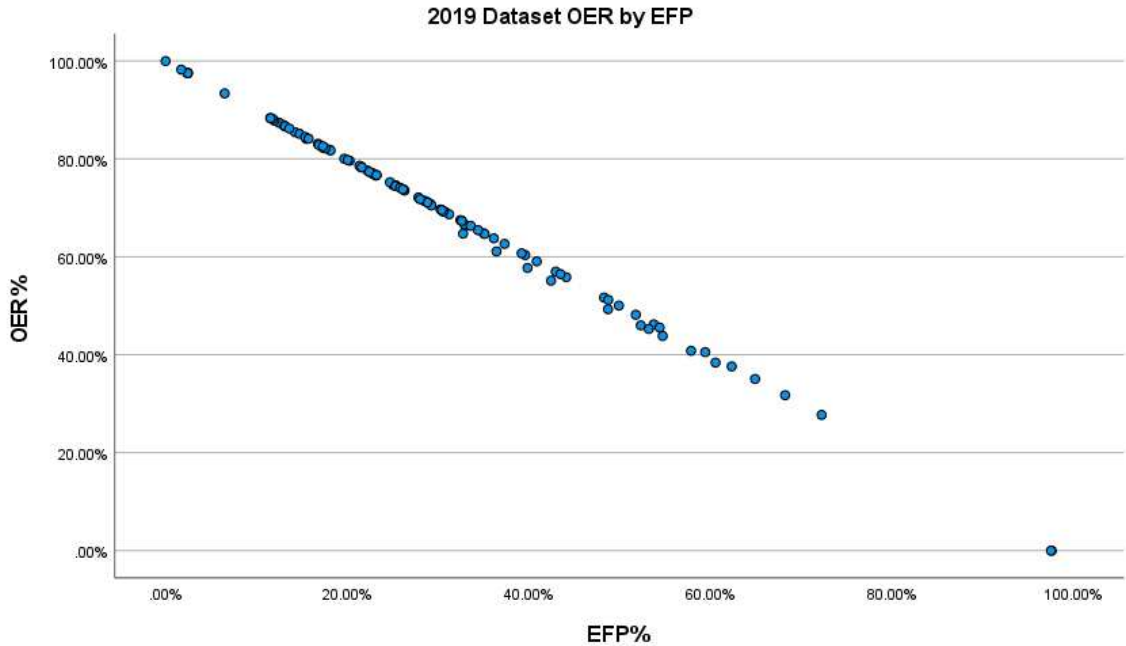


Figure 7. 2019 Scatter plot of OER and EFP.

Figures 8, 9, and 10 below reveals the revenue used for each company and the financial profit generated each year. Figures 8, 9, and 10 scatter plots also contain the same 107 small- and medium-sized e-commerce businesses, but different revenue amounts and annual financial profit amounts that changed from year to year. Converting the dataset dollars into percentages of revenue was necessary to view both small- and medium-sized companies on the same graph. In Figures 8, 9, and 10 the small- and medium-sized businesses are differentiated by their level of revenue. Most of the 107 dataset samples are small-sized ecommerce businesses with revenue ranging from \$20 million to \$3 thousand.

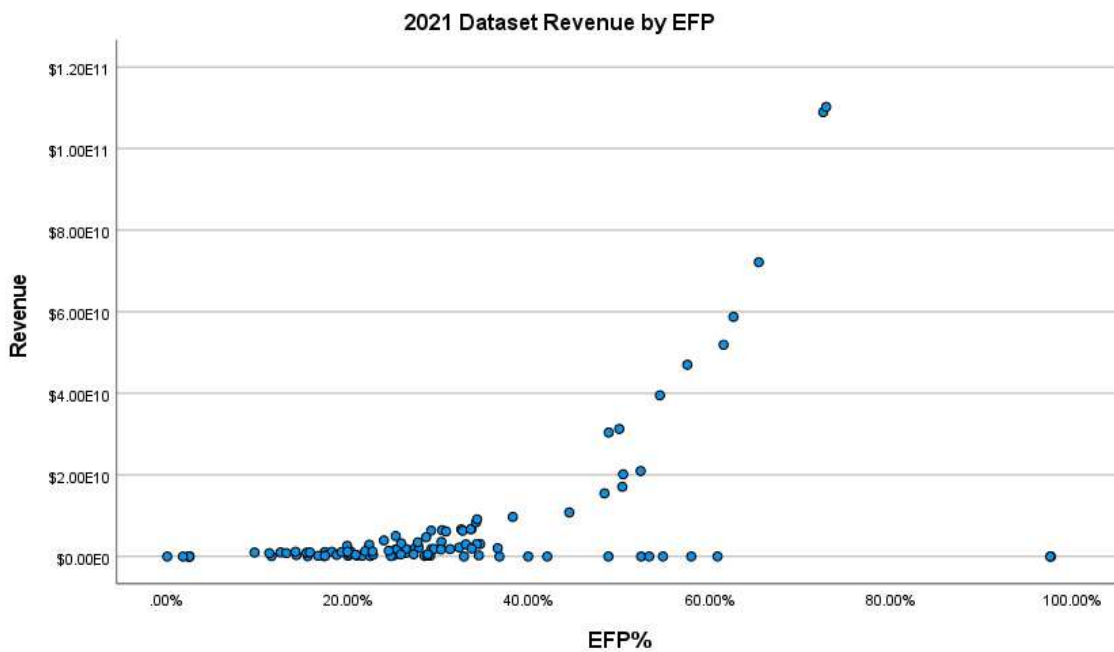


Figure 8. 2021 Scatter plot of Revenue and EFP.

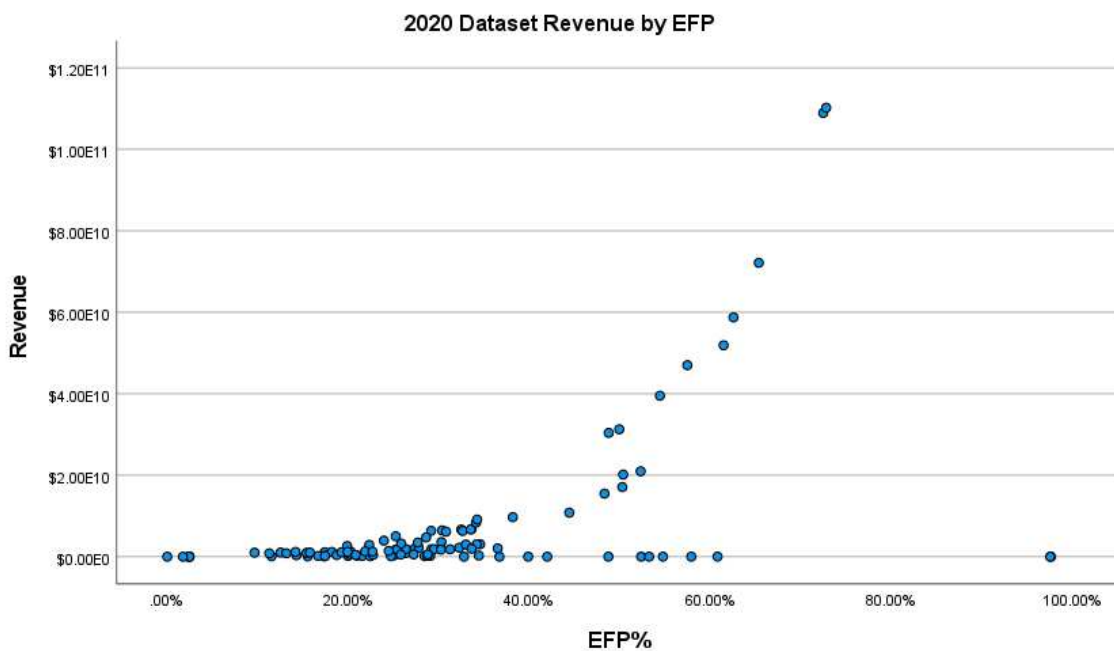


Figure 9. 2020 Scatter plot of Revenue and EFP.

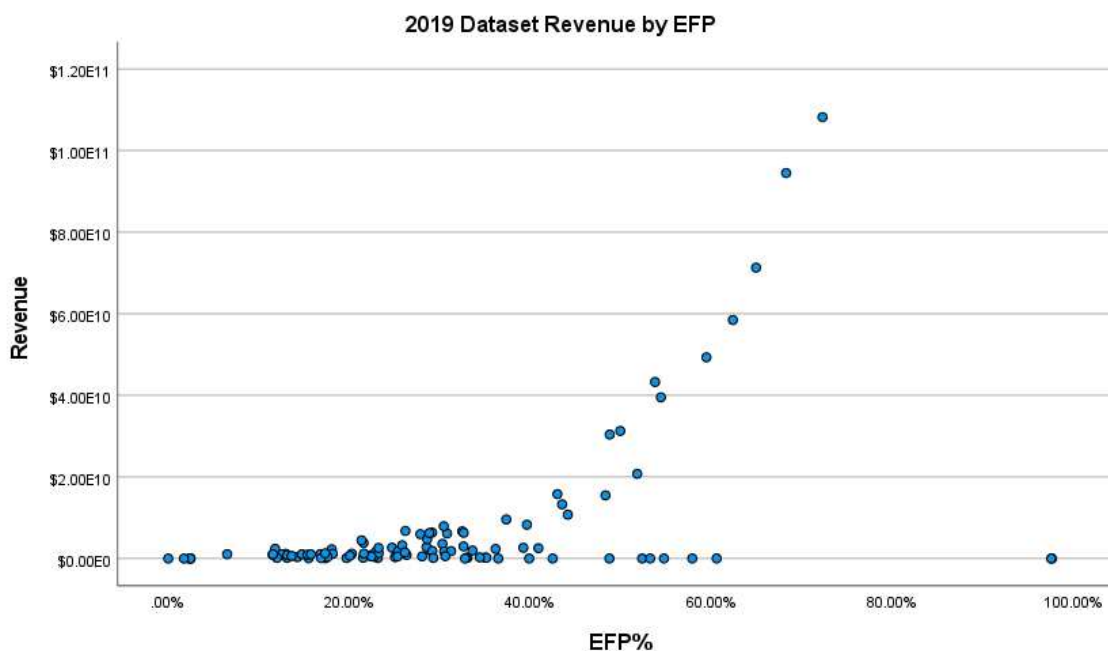


Figure 10. 2019 Scatter plot of Revenue and EFP.

Descriptive Statistics

Descriptive statistics allow researchers to present important statistics to serve as a foundation for further analysis (Nethmini & Ismail, 2019). Descriptive statistics explain the basic features of data in the study, such as the measures of variability and the measures of central tendency (Mishra et al., 2019). Prabhakaran and Karthika (2018) mentioned that companies with a profitability of 5% or higher constitute better investments. The statistical mean for this study surrounding profitability was (see Table 4) 31.04%, (see Table 5) 31.04%, (see Table 6) 30.47%, proving that the gathered datasets were suitable for this study. The data in Tables 4, 5, and 6 below includes 107 profitable e-commerce businesses covering the period 2019–2021. The tables below also

show the descriptive statistics surrounding the sample: (a) variables, (b) minimum, (c) maximum, (d) mean, and (e) standard deviation.

Table 4

2021 Descriptive Statistics for Quantitative Study Variables

Variables	Minimum	Maximum	Mean	Standard Deviation
WCM	0.00%	2.49%	0.29%	0.62%
OER	0.00%	99.97%	68.68%	18.30%
ERP	0.03%	97.59%	31.04%	18.02%

Table 5

2020 Descriptive Statistics for Quantitative Study Variables

Variables	Minimum	Maximum	Mean	Standard Deviation
WCM	0.00%	2.49%	0.29%	0.62%
OER	0.00%	99.97%	68.68%	18.30%
ERP	0.03%	97.59%	31.24%	18.02%

Table 6

2019 Descriptive Statistics for Quantitative Study Variables

Variables	Minimum	Maximum	Mean	Standard Deviation
WCM	0.00%	2.49%	0.30%	0.62%
OER	0.00%	99.97%	69.24%	18.42%
ERP	0.03%	97.59%	30.47%	18.13%

Test of Assumptions

The assumptions of homogeneity of variance and normality of data were evaluated by employing IBM SPSS version 27. The statistical test, tables, and figures presented in this section outlined the decision-making process which eliminated 11 organizations due to (a) five organizations missing data, (b) four organizations not having

consecutive years of profitable periods, and (c) two organizations not operating completely in e-commerce. The use of bootstrapping statistics was not needed during this study to combat any influence of assumption violations. Bootstrapping is used to estimate historical probabilities when accurate data does not exist for the period being studied (Begus, 2020). Muller (2020) reported that the use of bootstrapping statistics to estimate calculations of expenses may lead to researcher bias.

Inferential Statistics

For the purpose of this quantitative correlational study, a multiple linear regression model examined the relationship between WCM, OER, and EFP of 107 e-commerce organizations. This model significantly predicted profitability through a multiple linear regression, $F(2, 104) = 4.684, p < 0.001, R^2 = 1.000$, as shown in Table 7, 8, and 9. In the regression analysis summary, Table 10, both WCM and OER was highly statistically significant ($\beta = -0.34, t = -9332835.434, p < .001; \beta = -1.016, t = -275081494.2, p < .001$). Beigzadeh et al. (2020) mentioned that the use of a multiple linear regression analysis is to determine the relationship between two independent variables and one dependent variable. The p value for the study model was less than 0.05. The R^2 (1.000) value indicated that approximately 99.99% of variations in the financial performance is accounted for by the independent variables. This implies that the two independent variables are statistically significant. Since $p < 0.05$, the null hypothesis stating that there is no significant relationship between WCM, OER, and EFP is rejected. The R^2 value of 1.000 demonstrates that when measured against WCM and OER, EFP has a significant relationship. Abdullah et al. (2020) published that statistical models

capable of producing an R^2 between 0.35 and 0.60 showcase a significant level of relationship between independent and dependent variables, while 0.61 through 1.000 shows a highly significant relationship. As presented in Tables 7, 8, 9, and 10 below, the multiple linear regression model summary and analysis summary demonstrates that an effective and efficient implementation of WCM and OER at higher levels does equate to an increase in financial performance.

Table 7

2021 Model Summary

Variable	P-value	R	R^2
WCM	0.001	1.000	1.000
OER	0.001	1.000	1.000

Table 8

2020 Model Summary

Variable	P-value	R	R^2
WCM	0.001	1.000	1.000
OER	0.001	1.000	1.000

Table 9

2019 Model Summary

Variable	P-value	R	R^2
WCM	0.001	1.000	1.000
OER	0.001	1.000	1.000

Table 10

Regression Analysis Summary

Variable	β	$SE \beta$	β	t	p	B 95% Bootstrap CI
WCM	-1.000	0.001	-.34	-9332835.434	.001	[-1.000, -1.000]
OER	-1.000	0.001	-1.016	-275081494.2	.001	[-1.000, -1.000]

Note. $N=107$.

Theoretical Framework on the Findings

One of the most important parts of this study is Deming's (1982) TQM theory, which served as the theoretical framework on the findings. This section includes a description on, in what ways, does the findings confirm and extend knowledge of the theoretical framework on the relationship between WCM, OER, and EFP. As applied to this study, the TQM theory suggest that a strong correlation between WCM, OER, and EFP does exist. This discovery of a strong correlation emerged by comparing the findings with other peer-reviewed studies from the literature review, while simultaneously not allowing interpretations to exceed the data, findings, and scope of the study. Deming's (1982) philosophy of continual efficiency and effectiveness improvement, conceptualizes a business as a whole system instead of compartmentalizing each section of a business's operation (Breja et al., 2010, as cited in Breja et al., 2016). The central concept in Deming's (1982) TQM philosophy is that management can improve profitability through efficient and effective management of WCM and OER (Duncan & Luchs, 2017, as cited in Kennedy, 2018). This theory was optimal to explain the relationship between WCM, OER, and EFP.

The application of the TQM to business practice facilitated the identification, optimization, and implementation of a more robust and comprehensive approach to profit maximization. The theory predicts that efficiently and effectively analyzing, adjusting, and managing business operations holistically, increases the expectation of the company's performance (Duncan & Luchs, 2017, as cited in Kennedy, 2018). The multiple linear regression results that WCM and OER are significant predictors of firm profitability, is in line with the propositions of the TQM as a theoretical framework. Regarding the practical application of the TQM theoretical framework, managers must pay considerable attention to the efficient use of WCM (Kolias et al., 2020). Mohanty et al. (2018) stated that the effective management of OER involves the formulation and implementation of best business practices. The significant relationship between the TQM and firm profitability, shows that the primary focus of management is optimization of an efficient and effective business operation (Precup et al., 2021). Remember, rather than focusing on one or two factors, managers seeking superior financial performance may find it necessary to manage their business operation holistically (Kaushik & Chauhan, 2019). The findings in this study are consistent with the theory in this area.

Applications to Professional Practice

The findings of this study showed that WCM and OER, which apply to professional business practices in several ways, are significant predictors of firm profitability. These results first show that some managers of companies do understand the data, magnitude, and direction of the relationship between WCM, OER, and firm profitability (EFP). This evidence on the dynamic linkage between WCM and OER adds

to the existing body of knowledge written in the literature review on the subject matter. Secondly, the multiple linear regression results show that WCM and OER predict a stronger firm profitability at higher levels of revenue. For example, this study found that the WCM and OER made a better contribution to firm profitability when the selected companies produced a higher revenue. Furthermore, these findings indicate that small business managers should prioritize and identify components, WCM and OER, as critical predictors to achieve intended results. Eldomiaty et al. (2018) stated that the use of a selective approach to working capital optimization is practical and effective. Third, this study showed that the efficient and effective concepts of TQM provide the framework for key predictors, WCM and OER, to produce firm profitability. The applicability of this finding presents that small business managers should focus more on drivers of firm profitability (Assous, 2022).

Consistent with my expectations in this study, a positive relationship emerged from the analyzed statistical data. Yes, WCM and OER are a predictor of e-commerce financial performance. Fanti and Buccella (2018) found that the presence of a significant relationship creates a sense of competition among business managers, and promotes genuine socially responsible actions among small and medium sized organizations. Harjoto (2019) reported that business managers face the challenge maximizing operational profit, while simultaneously entertaining socially responsible demands of organization shareholders. These multiple linear regression WCM and OER findings show that after implementation of TQM, it is safe to assume that efficient strategies and effective initiatives could render positive correlation financial performance. Eldomiaty et.

al. (2018) stated that small business managers are responsible for aligning their organization direction with their operational requirements, revenue targets, and market expectations. Assous (2022) published that another important area of application is the need to use multiple measures of financial performance predictors to cater to organizational directives. Managers responsible for critical operational decisions should apply the knowledge gained from this study to drive operational efficiency, financial profitability, and revenue growth.

Implications for Social Change

The implications for positive social change include the potential to provide business managers with a better understanding of the relationship between WCM, OER, and EFP. The findings of this study confirmed that the WCM and OER are significant predictors of profitability, and provide managers with the necessary tools to identify and prioritize business practices critical to the benefit of social change. Improved knowledge of the different effects on firm profitability may help managers to find an optimal combination between conservative and aggressive utilization of WCM and OER (Morshed, 2020). The integration of sound business practices in WCM and OER is the foundation for long-term competitive advantage and potential social change (Bittar-Godinho & Masiero, 2019). In addition, the implications for positive social change include the potential to improve communities to the extent that they can attract capital, investment, better goods, and quality services for the benefit of society (Segovia-Vargas et al., 2021).

The implications for noteworthy social change include taking into consideration the development of socially responsible strategies used by individuals in their communities. As business managers optimize their WCM and OER, they may increase their investment into vendors located in the community. Profitable organizations may also invest in the infrastructure and cultures of which they market their businesses. Morshed (2020) stated that investments in internal organization capabilities and external organizational development may translate into significant social changes. Segovia-Vargas et al. (2021) reported that profitable businesses have a higher likelihood of providing better goods and quality services to the community. To achieve optimal social change, business managers must first understand effective and efficient investment into the targeted community. Increasing profitability through WCM and OER optimization is another key implication for social change. Publicly traded companies could benefit society through lower priced goods, employment opportunities, or valuable stock purchase. Bittar-Godinho and Masiero (2019) published that organizational managers must understand that some communities expect the implementation of socially responsible programs. Therefore, all of these positive actions contribute to a better quality of life in whole or in part to the community.

Recommendations for Action

Based on the findings of the study, the highly significant relationship discovered between WCM, OER, and EFP supports four recommendations for action. Seth et al. (2021) reported that small businesses frequently use an unsystematic and informal approach to WCM. The first recommendation for action is that managers of small and

medium sized organizations should pay close attention to the use of their WCM, because as revenue increases the percentage of WCM needed to produce products and services decreases. The second recommendation for action is to implement capital strategies that lead to efficient management of the OER, because operating expenses should not rise at the same rate as revenue. The third recommendation for action is to implement an effective organizational structure to involve all managers in the understanding that significant predictors of profitability, WCM and OER, can be used as strategic tools to maximize performance of the company. Morshed (2020) noted that sufficient information is available to suggest that certain levels of relationship between WCM, OER, and financial performance exists. The fourth and final recommendation for action is that business leaders should use the TQM philosophy as a theoretical framework to align all of their business operations as a whole to effectively and efficiently accomplish their organizational objectives.

Business managers may use data from this study as an analytical tool to predict the optimum use of WCM and OER on their business profitability. Corporate managers need to be mindful of the size of the firm that they are managing and examine the results of this study to determine which WCM and OER practices correlate with their business profitability (Morshed, 2020). The results of this study will be disseminated through publications in a peer reviewed journal. Ozemre and Kabadurmus (2020) suggested that publishing the results of a study allows a larger population access to the study findings, which may guide future strategic decisions. This study findings will also be disseminated through scholarly journals, business journals, workshops, and conferences.

Recommendations for Further Research

Four recommendations emerged from the data analysis process and data collection for future research and improvement, as this study was not without limitations. Further research on the relationship between WCM, OER, and EFP will significantly enhance current literature by creating a more diversified and in-depth study. The first recommendation is to use a sample comprised of international organizations, because samples used in this study was composed of only companies headquartered in the United States. Addressing a larger geographical area might provide more adequate data to analyze the significance of the variables under study fully (Ihantamalala et al., 2020). Also, researchers aiming to replicate and further this study should focus on large and mega-sized organizations to better compare and contrast the working capital optimization practices (Song et al., 2022).

The second recommendation for further research is to perform a qualitative or mixed-method approach to allow for a richer investigation of the dynamics surrounding financial performance. Future researchers should supplement financial records with a qualitative or mixed method approach for a more comprehensive picture of current WCM and OER practices and experiences. A mixed method approach would provide an opportunity to collect primary data and account for several internal and external factors that influence financial performance (Abriham, 2021). The third recommendation for further research is to examine different industries instead of ecommerce to focus on a comprehensive understanding of financial performance. This study was limited to only ecommerce businesses, therefore WCM and OER practices may differ in other industries

as optimization may depend on the management of other factors such as supply vendors and customers (Skoracka et al., 2018). Last, the fourth and final recommendation for further research is privately held companies. Unlike the publicly held companies used in this study, privately held companies are under far less pressure from shareholders to perform financially. Moreover, Murdoch et al. (2020) suggested that privately held companies are under less regulatory restrictions and financial reporting requirements.

Reflections

The determination to pursue a doctoral degree through this DBA program began with a lot of interest and little confidence. This DBA journey at Walden University has been rigorous, challenging, enlightening, rewarding, and life changing. To overcome the academic challenges at a doctoral level required a lot energy, time, and effort. The understanding and in-depth knowledge of WCM and OER on financial performance was thoroughly increased through this quantitative study. Previous experiences did not influence this study's results, because secondary archival data and a quantitative correlational design was used to overcome preconceptions of the relationship between WCM, OER, and EFP. Lear et al. (2018) suggest that researchers cannot reduce biases of which they are unaware. Moreover, Wassermann et al. (2018) acknowledged that a methodological approach to reduce the introduction of some forms of bias should be considered during data collection and other sections of the study.

Possible effects of this study could enhance current literature on the optimization business problem by utilizing the theoretical framework of TQM through a significant amount of consolidated peer reviewed articles that served as validation and foundation.

Nealon and Cook (2021) noted that some researchers use a single measurement when viable, whereas others use multiple measures to arrive at convenient and quick assumptions in business practice. Cheyne et al. (2021) published that mapping out multiple measures of data, offer more clarity and better support for the business problem under study. The information garnered after completing this study provided valuable insight for managers of ecommerce businesses and future researchers. Beliefs and perceptions were positively changed for the better after the completion of this study by using a sample of 107 organizations to produce a highly significant relationship between WCM, OER, and EFP.

Conclusion

The findings of this study confirmed that WCM and OER are highly significant predictors of firm profitability. The general business problem was that many e-commerce operation managers do not manage working capital and operating expenses at optimum levels. Therefore, the scatterplot in Figure 2 and Figure 3 shows that over time profitable businesses increase revenue, decrease working capital, decrease operating expenses, and increase financial performance. Unfortunately, Mwatsika (2021) noted that a lot of companies go out of business within 5 years before ever figuring out the correct optimization level. Ebabu (2021) published that achieving an efficient and effective financial performance remains an important objective for organizations to avoid operational failure. Hence, these two independent variables, WCM and OER, are used in this study to ignite strategic thinking among business managers, professionals, and fellow researchers to increase the longevity of an organization. Moreover, the theoretical

framework used to shape this study has helped to contribute to the current academic TQM literature in a positive manner. Small business managers should use the results of this study as a guide for assessing their WCM and OER to enhance their organization financial performance. Future researchers may benefit from the business managers that create critical thinking strategies to improve profitability measures from this study.

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