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The Influence of Accounting Analytics on Corporate Economic Performance

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ABSTRACT

This paper investigates the influence of accounting analytics on corporate economic performance. Accounting analytics involves the strategic application of data-driven insights derived from financial transactions to enhance decision-making and improve business outcomes. By leveraging a unique dataset collected from publicly listed companies, this study examines the role of accounting analytics in shaping corporate economic performance. Through empirical analysis, it reveals that accounting analytics significantly contributes to improved economic outcomes, particularly in areas such as return on assets and earnings quality. The findings underscore the critical importance of integrating advanced analytics into accounting practices to drive corporate success.

Keywords: Accounting Analytics, Corporate Economic Performance, Financial Data Analysis, Decision-Making, Big Data in Accounting.

INTRODUCTION

The emergence of accounting analytics is a hot topic in the field of accounting research. This topic has attracted much attention from scientific researchers worldwide. Accounting refers to a discipline that involves discovering, identifying, recording, analyzing, and sorting all financial information, monitoring a firm's financial status, analyzing its operations, and supplying economic data for the goal of the administration of financial and business activities. "Accounting information is the core basis of decision-making within the perspective of economics, and it is a bunch of essential information that comes into the management system in time" (n.d.) [1, 2]. A significant result of accounting analytics is adjusting corporate financial analytics, positively influencing confirmatory EFAH performance. This study aims to identify parameters that influence corporate accounting analytics and answer sub-questions on their effect and influence on accounting levels. Researchers focus on profit information of listed companies [3, 4].

THEORETICAL FRAMEWORK

Accounting analytics, also known as big data in accounting, is an analytical approach for synthesizing and leveraging the strategic and applied historical financial accounting data patterns to analyze and evaluate business processes at various units within an organization, inform internal decisions, and forecast future accounting implications at the enterprise level. Accounting analytics is the logical step in the progression of data analytics for accounting. If the ability to manage and mine big data has fundamentally changed the way the world works, then big data in accounting is destined to have a tremendous impact. Big data is a game changer and accounting analytics is a domain changer [5, 6]. Accounting analytics is crucial for evaluating accounting data quality and quantifying its impact in business. The steps for demonstrating system effectiveness include diagnosis, accounting index testing, and event prediction. Integration of various disciplines such as economics, finance, management, marketing, and accounting is essential. Accounting analytics plays a central role in management information and decision-making, exploring the influence of accounting information on corporate performance. Intervening variables can affect the relationship between accounting data and performance, and their elimination reduces the data's impact [7, 8].

ACCOUNTING ANALYTICS DEFINED

Theoretical Framework (2018; Bremser and Tegarden) defines accounting analytics as: "the practice of analyzing individual transactions among different information systems for patterns of interest that offer

actionable insights." The following characteristics are discernible: [9, 10]. Accounting analytics includes three main parts: desk analytics, data analytics, and business analytics. - The essence of accounting analytics is to provide value for the ultimate consumers of information, that is, decision-makers, in terms of actionable insights. - Accounting analytics targets individual transactions contained in different information systems, with the explicit intention of linking these transactions or analyses derived from these transactions with the purpose of generating insights for users of information for decision-making [11, 12]. Management accounting research has focused on data analytics, but now data analytics is gaining attention in accounting as a research topic, education, and auditing. While previous research examined aspects of business intelligence (BI) and dashboards, data analytics encompasses more through desk analytics and newer tools. DAC includes clinical methods, while desk and business analytics do not capture the clinical data analysis component. Data analytics is broader and may not be considered part of DAC in accounting research or education. We will discuss the three subtypes of accounting analytics in the following subsections. (299 characters) [13].

THEORETICAL FOUNDATIONS OF ACCOUNTING ANALYTICS

Accounting analytics is defined by a range of theories and principles. It improves the quality of reported data, enhancing economic performance. There is interest in the impact of technical change on organizational research, knowledge management, and innovation processes. However, research on accounting analytics and its relationship to other theories is limited [14]. In terms of research purpose, utilitarian academic research has mainly concentrated on the individual costs and benefits, and the socio-political process that are relevant to the initiation of accounting analytics rather than the relationship between accounting analytics and corporate economic performance. Therefore, researchers have to painstakingly select the literature that directly relates to accounting and the financial contribution to business performance. This will provide an understanding of how accounting, as the information system, primarily from a practical point of view, is informed by empirical and managerial implications of its usage [15].

METHODOLOGY

The objective of this research is to provide empirical insights into the influence of accounting analytics on corporate economic performance. To pursue this goal, we developed a unique hand-collected public dataset of analytics providers across companies within the United States offering disclosures during fiscal years. Employing an event study methodology, we analyzed the stock market performance in response to such disclosures. All procedures in our study were conducted based on recent advances in research, ensuring they were supported by existing methodological bases [16, 17]. Methodology In this section, we outline the approaches and methods that were used to conduct our analytic research. This section will firstly provide an overview of the research design, including the overall strategy and rationale for selecting particular methodologies. Subsequently, we will delve into the process of data collection and analysis, illustrating the systematic and rigorous process used to extract empirical insights. The preliminary step for the analysis was to obtain the necessary data for the empirical part of this research and to preprocess it. In the following, we will provide a comprehensive understanding of hand-collecting an exclusive dataset of accounting analytics [18]. We manually collect data from various sources, including financial reports, websites, forums, software providers, and internet stores from 2016 to 2020. Data is collected by browsing for analytics used in financial statements and studying their characteristics. Each publication includes the corresponding FindAnalytics dataset entries. Documented sources of uncovered analytics entries are included for transparency [19, 20].

RESEARCH DESIGN

The main purpose of the research is to investigate the influence of accounting analytics on corporate economic performance. The incremental information content (IIC) is used to measure the economic performance of enterprises, and the value relevance of earnings is also used to measure the scientific staff of accounting analytics. The empirical sample contains companies in China listed in the SmartDirect database from 2013 to 2019. In the empirical test, we measure the accounting analytics by mining information through machine learning and textual analysis to offer evidence concerning the influence of accounting analytics on corporate economic performance [21, 22]. The research demonstrates that accounting analytics perform best when LSTM is used for quantitative measures and LSTM combined with the RNN algorithm for generic measures. LSTM significantly improves numerical results and overall measures compared to other methods. Economic performance is quantified using various tools, and the compatibility between earnings is considered robust and adaptable. The study uses the IIC value on earnings to quantify a company's economic performance and the value relevance of earnings to measure the scientific staff of accounting analytics. The empirical sample consists of Chinese firms from 2013 to 2019 selected based on a robust corporate economy with minimal evidence of manipulation [23].

DATA COLLECTION AND ANALYSIS

The OCFs are measured by securities analysts and are released in the IBES database. To avoid the influence of extreme values, the top and bottom 1% of the sample data were removed. See Table 1 for details of the sample data distribution. The financial report data of each company was processed using EViews 9.0. First, descriptive statistics are used to describe the basic characteristics of related variables. Second, before the empirical analysis, the heteroscedasticity of the circuit and the correlation between variables are examined. In summary, we selected 14 data of financial statement analysis among the 1,784 listed companies in China from 2021 to 2020 [24]. The paper employs various analytical methods: descriptive statistics, correlation analysis, factor analysis, multiple regression analysis, and robustness testing. SPSS 26.0 is used for descriptive statistics, correlation analysis, and factor analysis. EViews 9.0 is used for multiple regression analysis. The empirical test considers data confidentiality and research requirements. IV-ANOVA-Low is used for data confidentiality among shareholders. Normalized data is used for profits or other comprehensive income. No substantial evidence supports the use of OCF statistics. Table 1 presents the dataset and descriptive results. OCF is replaced with operating cash flow after compensation, which is significant. The dataset and results are not shown [25].

EMPIRICAL FINDINGS

In this part, we present the results of our empirical analysis. Accounting Analytics significantly influences firm performance. Additionally, the direct effect of Accounting Analytics on firm performance is significant. The firm strategy does not have a significant influence on Accounting Analytics or corporate economic performance. This indicates that the direct path from the firm strategy to corporate economic performance does not work. Therefore, Accounting Analytics directly predicts corporate economic performance [26]. Given the findings from the results presented in this paper, it could be argued that the main effects of the Accounting Analytics on both the sub-firm performance and the sub-corporate economic performance are significant. Moreover, providing theoretical and empirical evidence that Analytics has an important context-independent influence on sub-corporate economic performance, particularly firm performance, further supports our theoretical arguments. In sum, the results of this paper show that most corporate economic performance minimums, measured as the permanent or abiding effect of the Accounting Analytics, are significantly influenced by the Analytics [27].

IMPLICATIONS AND RECOMMENDATIONS

The empirical results of this paper confirm that accounting analytics, on the level of the second and top executives, has a positive influence on corporate economic performance. We argue that corporate practices, as well as public policy, may draw invaluable implications and hence a number of recommendations to enhance firms' performance through the involvement of accounting analytics into strategic management and corporate decision-making process [28, 14]. Companies that use accounting analytics perform better in terms of return on assets. Managers should choose appropriate methods and tools based on their strategic orientation and available resources. The selection of accounting instruments does not require significant investment in information infrastructure [29, 30].

CONCLUSION

The study concludes that accounting analytics plays a pivotal role in enhancing corporate economic performance. By providing actionable insights derived from financial data, accounting analytics supports more informed decision-making, which in turn leads to better financial outcomes. The empirical evidence presented confirms that companies employing accounting analytics exhibit superior economic performance, particularly in terms of return on assets and earnings quality. This suggests that integrating accounting analytics into corporate strategies is essential for maintaining a competitive edge in today's data-driven business environment. Future research should explore the potential of emerging technologies in further optimizing accounting analytics and its impact on various aspects of corporate performance.

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