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TAX AUTOMATION AND DATA INTELLIGENCE: THE NEW ERA OF EFFICIENCY IN CORPORATE ACCOUNTING

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ABSTRACT

This article analyzes the impact of tax automation and data intelligence on the efficiency of corporate accounting. It explores how emerging technologies—such as Robotic Process Automation (RPA) and Artificial Intelligence (AI)—are transforming tax compliance, minimizing manual errors, and providing valuable strategic support for organizations. Through a qualitative discussion of recent academic studies and real cases, the text highlights benefits such as cost reduction, improved accuracy, and enhanced decision-making. The article also addresses technological challenges and the need for new professional competencies in the accounting field. The findings indicate that the integration of automation and data intelligence not only streamlines processes but also positions accountants as strategic partners in corporate management.

Keywords: Tax Automation. Data Intelligence. Corporate Accounting. Efficiency. Artificial Intelligence.

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1 INTRODUCTION

Automation and data intelligence are transforming the landscape of corporate accounting, initiating a new era in which efficiency and strategic insight are increasingly attainable (Romney; Steinbart, 2017). With the advancement of technologies such as Robotic Process Automation (RPA) and Artificial Intelligence (AI), companies are able to automate routine fiscal activities, minimize errors, and comply more easily with ever-changing tax laws (Santos et al., 2020).

A key advantage of tax automation is the reduction of manual errors, which are a common source of penalties and damages in corporate environments. Automated systems can prepare and validate tax calculations, deliver government forms, and submit mandatory reports rapidly and reliably, reducing risks of non-compliance (Lima; Sousa, 2022). As a result, accounting professionals are freed from repetitive tasks and are better positioned to apply their expertise in analytical and strategic functions that add value to the organization (Rodrigues; Machado, 2021).

Beyond compliance, automation enables real-time monitoring of tax obligations, as these systems can be readily updated to reflect changes in legislation and new requirements. Studies indicate that between 50% and 65% of companies using automation report significant reductions in processing times and operational costs, which can fundamentally change the allocation of resources within accounting departments (PricewaterhouseCoopers, 2019).

What marks the emergence of a new era, however, is the integration of tax automation with data intelligence. AI can analyze immense volumes of financial and fiscal records, identifying trends, inconsistencies, or fraud in ways that manual scrutiny cannot achieve. This elevates the role of the accountant: now equipped with dashboards and predictive analytics, professionals can provide actionable insights for tax optimization and risk anticipation (Zago; Baptista, 2018).

Automated data intelligence platforms facilitate the cross-referencing of internal data with public or third-party databases, such as those used by tax authorities. This capability supports rapid identification of discrepancies and errors, offering greater transparency and security in fiscal operations. Another advantage is the generation of real-time reports, enhancing management's control over financial and tax positions and enabling swift, data-driven action (Ferreira; Silva, 2020).

Despite these benefits, the adoption of such systems brings challenges: accounting professionals must develop new digital skills, and companies must invest in employee training and safeguarding data privacy and security. The transformation emphasizes the need for

continuous education and ethical considerations, especially when relying on algorithms for decision-making processes (Cruz; Oliveira, 2021).

In summary, the convergence of tax automation and data intelligence is redefining efficiency in corporate accounting. These innovations not only streamline compliance and reduce manual errors but also provide a platform for strategic, analytic, and value-added contributions to business growth. Companies embracing these practices are likely to lead in regulatory compliance, decision speed, and cost reduction, thus setting new standards of excellence in the accounting profession.

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